

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA _____ SITE NUMBER WHØ/
 DATE TRIP 17/9/98 RECORDERS NG, CK, OK
 DATE TRIP 16/8/1999 RECORDERS NG/GK/AW
 DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below

Road Location Lake Vinnar

Geographic Location	Latitude GPS Map Sheet	S Longitude Accuracy	E Altitude

Photograph	Name	Number
	<u>NG</u>	<u>25</u>

Topographic Position	(Circle the correct response)
Upland	Lower slope
Upper slope	Valley
Midslope	Washline

lakeside

2. SITE DATA Circle the correct response

Slope ☒ flat ☐ gentle ☐ steep Aspect N NE E SE S SW W NW

Surface Soil Sandy loam Depth to Rock over clay (brown/orange) Colour brown/orange

Exposed Rock type _____ % surface cover _____ size range _____

Litter 40 % surface cover _____ Depth (cm) _____

Bare Ground 0 % surface cover _____

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class 2-10% 10-30% 30-70% over 70%

LIFE FORM	TREES			MALLEES		
	over 15m	5-15m	under 5m	over 8m	under 8m	
			20-20m as below 			
COVER CLASS (%)			30-70%			
DOMINANT SPECIES			Cas. okosa			
LIFE FORM	SHRUBS			SHRUBS		
	over 2m	2m - 1.5m	1.5 - 1m	1-0.5m	under 0.5m	
COVER CLASS (%)				10-30%		
DOMINANT SPECIES				H. losaria indica		
LIFE FORM	GRASSES		HERBS	SEDGES	over 0.5m	under 0.5m
COVER CLASS (%)	770%	30-70				
DOMINANT SPECIES	*Avena *Vulpia Stipa eleg.	*Hypo glabra *Bonchus				

4. VEGETATION CONDITION

Comments

Cas okosa all young, diams of
~ 10cm. Some native herbs, see list
and patches of moss.
770% Avena / Vulpia cover

$$20 \times 20$$

Label each plant with plants number, site code, date and plant's name or working name if required

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 Identification check

same

				Column 4	Identification check						
TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
Casuarina obesa ✓	✓							Thysanotus paterson			
								Arctotheca calend	✓		
								Cotula australis hisp.	(JSP)		
								Gnephosis = Ixobrychium glaberr			
								Bulbine semibarb			
								Calandrinia (pink) arvens			
								Ralusnykia divaric			
								Hydrocotyle diantha			
								Lectrolepis cephaliformis			
								Isolepis margin	✓		
								Podothea gnaphaloides	(JSP)		
								Erodium aureum			
								Apium annuum			
								~~SEDGES~~			
								Scabaa ovata			
								Sagina apetala			
								Homeria miniata	(JSP)		
								Plantago es hisp			

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA _____ SITE NUMBER WHØ2
 DATE TRIP 17/9/98 RECORDERS GJK, NK, BJK
 DATE TRIP 16/8/1999 RECORDERS GK/AW/NG
 DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below

Road Location Lake Minnan

Geographic Location	Latitude GPS Map Sheet	S Longitude Accuracy	E Altitude

Photograph	Name	Number
	<u>NS</u>	<u>26</u>

Topographic Position	(Circle the correct response)
Upland	Lower slope
Upper slope	Valley
Midslope	Washline <u>lake side</u>

2. SITE DATA Circle the correct response

Slope	☒ flat ☐ gentle ☐ steep	Aspect N NE E SE S SW W NW
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Surface Soil	Depth to Rock	Colour
<u>clay (5cm)</u>		<u>red</u>

Exposed Rock	type	NA	% surface cover	size range

Litter	10 % surface cover	Depth (cm)
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Bare Ground	20 % surface cover
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Comments Degraded
Dead stags of *Cas. okesa*
Seedling *Helioscopia* (100's)

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No WH Ø2

Date 17/9/98

16 Feb - 1999

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

Label each plant with plants number, site code, date and plant's name or working name if required

Record on Sheet

- Column 1 plant name
- Column 2 plant number

TICK if species flowering

- Column 1 plant name
 - Column 2 plant number
 - Column 3 flowering time- TICK if species flowering
 - Column 4 identification check
- | No | Fl | ID | H |
|----|----|----|---|
|----|----|----|---|

SITE No 204

Date 17/9/98

16/8/1999

Column 1

Column 2

Column 3 flowering time- TICK if species flowering

Column 4 Identification check

TREES				SHRUBS (cont.)				HERBS (cont.)			
No	FI	ID		No	FI	ID		No	FI	ID	
MALLEES				GRASSES				SEDGES			
				<i>Panicum rigidum</i> <i>Prophlois incurva</i>							
SHRUBS				HERBS							
<i>Halosarcia indica</i>				<i>Cotula australis</i>				<i>Santals pulebr seeds</i>			
<i>Hal. halocnemoides</i>				<i>Spergularia rubra</i> <i>S. selvia</i>							
				<i>Cotula coronopifolia</i>							
				<i>Sonchus oleraceus</i>							
				<i>Triglochin mucronata</i>							

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA WH SITE NUMBER 03
 DATE TRIP 17-9-1998 RECORDERS NG/BK/AG/C
 DATE TRIP 16-8-1999 RECORDERS NG/GK/AW
 DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below

Road Location

Wongan Hills townsite Reserve

Geographic Location	Latitude GPS Map Sheet	S Longitude Accuracy	E Altitude
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Photograph	Name	Number
	<u>NG</u>	<u>27</u>

Topographic Position	(Circle the correct response)
<u>Upland</u>	Lower slope
Upper slope	Valley
Midslope	Washline

2. SITE DATA Circle the correct response

Slope	flat	<u>gentle</u>	steep	Aspect	N	NE	E	SE	S	SW	<u>W</u>	NW
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Surface Soil	sand	Depth to Rock	15cm	Colour	yellow
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Exposed Rock	type	latite	% surface cover	22	size range	pebbles
--------------	------	--------	-----------------	----	------------	---------

Litter	30/70	% surface cover	lvs, twigs	Depth (cm)	2-30
--------	-------	-----------------	------------	------------	------

Bare Ground	% surface cover	20/30
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BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Muir)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class 2-10% 10-30% 30-70% over 70%

	TREES			MALLEES	
	over 15m	5-15m	under 5m	over 8m	under 8m
LIFE FORM					
COVER CLASS (%)				L2	
DOMINANT SPECIES				<i>Euc. redunca</i>	

	SHRUBS				SHRUBS
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)	10/20	10-30			
DOMINANT SPECIES	<i>Alloc. camp</i> <i>Actinost. orenar</i>	<i>Dry. cirsioides</i>			

	GRASSES	HERBS	SEDGES	over 0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)	2/10				L2
DOMINANT SPECIES	<i>Amphip. turb</i>				<i>Ecd. cole...</i>

4. VEGETATION CONDITION

Comments

excellent - very good

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No WH 03

Date 17-9-1998

15-8-99

BUSHLAND PLANT SURVEY RECORD

Label each plant with plants number, site code, date and
Record on Sheet

- Column 1 plant name
- Column 2 plant number

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

SITE NO. 15-8-99				Date 17-9-1998				Column 3 Column 4				Flowering time- Ticker if species flowering				Identification check				HERBS (cont.)				No FI ID			
TREES				SHRUBS (cont.)				HERBS				No FI ID				HERBS (cont.)				No FI ID							
				Ceratophyllum demersum												* Arctostaphylos calendula											
				Lechenicea biloba												Phoradendron vittata											
				Prosera marantha												Prosera zonaria											
																Thysanotus patersonii				(USP)							
																Conostylis setigera											
																Thysanotus spathulatus											
																Lamandra suaveolens											
																Poreanthera microphylla											
																Prochaeta paniculata											
																* Ursinia anthemoides											
																Podolepis canescens											
																Celadenia hirta (pink)											
																✓ Drosera macrantha macrantha											
																SEDGES											
																Ecdicolea monostachya											
																Amphipogon herbicatus											
																Schoenus natus											
																Schoenus subbarbatus											
																Centropogon leptophyllus ssp. muricatus											
																Beroens sp. subfleur											
																Lepidobolus				A2 Frati							
																✓ Lepidospema angustata											
																Mesomelaena preissi				(USP)							
																✓ Lepidospema kneri											
																✓ Oxocarya = Dendrochloa asper											
																✓ Lepidobolus sp P1											
																✓ Daviesia triflora				16/8							
																Thysanotus patersonii				16/8							
																Vulpia myuros				16/8							
																Osteospermum clandestinum				16/8							

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA _____

SITE NUMBER

WH 074

DATE TRIP

17/9/98

RECORDERS

DATE TRIP

16/8/1999

RECORDERS

NG/GK/AW

DATE TRIP

RECORDERS

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below

Road Location

Rogers NR

Geographic Location

Latitude
GPS
Map Sheet

S Longitude
Accuracy

E Altitude

Photograph

Name

NG

Number

28

Topographic Position

Upland

Upper slope

Midslope

10 km

Lower slope

Valley

Washline

(Circle the correct response)

2. SITE DATA Circle the correct response

Slope

flat

gentle

steep

Aspect N NE E SE S SW W NW

Surface Soil

gravelly

Depth to Rock

Colour

orange

Exposed Rock

type

% surface cover

size range

Litter

90

% surface cover

Depth (cm)

1cm - 0.2m

Bare Ground

/

% surface cover)

Adapted from 'Bushland Plant Survey' written by B. Keighery (1994) and published by Wildflower Society of WA (Inc). PO Box 64 Nedlands WA 6008

Gravel
data
laterite

aspect

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class 2-10% 10-30% 30-70% over 70%

LIFE FORM	TREES			MALLEES	
	over 15m	5-15m	under 5m	over 8m	under 8m
					
COVER CLASS (%)					10-30%
DOMINANT SPECIES					<i>Euc. cadesmodora</i>
LIFE FORM	SHRUBS			SHRUBS	
	over 2m	2m - 1.5m	1.5 - 1m	1-0.5m	under 0.5m
					
COVER CLASS (%)			30-70%	2-10%	
DOMINANT SPECIES			<i>Allocas. camp</i>	<i>Mixed</i>	
LIFE FORM	GRASSES		HERBS	SEDGES	over 0.5m
					under 0.5m
					
COVER CLASS (%)					
DOMINANT SPECIES					

4. VEGETATION CONDITION

Comments

Some soil disturbance

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

Label each plant with plants number, site code, date and plant's name or working name if required

5. SPECIES PRESCENCE

SITE No WH 031X
Date 17/9/98
16/5/1999

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

16/8/1987												• Column 4 Identification check											
TREES				No	FI	ID	SHRUBS (cont.)				No	FI	ID	HERBS (cont.)				No	FI	ID			

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA Wongan Hills SITE NUMBER 5
 DATE TRIP 11/9/1998 RECORDERS NG/GK
 DATE TRIP 26/8/1999 RECORDERS NG/GK/AW
 DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below

NORM

Road Location Cadoux - Wongan Hills Rd

Geographic Location	Latitude GPS Map Sheet	S Longitude Accuracy	E Altitude
<i>NORM</i>			

Photograph	Name	Number
	<i>NG</i>	<i>31</i>

Topographic Position	(Circle the correct response)
☒ Upland ☐ Upper slope ☐ Midslope	☐ Lower slope ☐ Valley ☐ Washline

2. SITE DATA Circle the correct response

Slope	Aspect
☒ flat ☐ gentle ☐ steep	N NE E SE S SW W NW

Surface Soil	Depth to Rock	Colour
<i>clay</i>	<i>>1m</i>	<i>grey-brown</i>

Exposed Rock	type	% surface cover	size range
		<i>0</i>	

Litter	type	% surface cover	Depth (cm)
<i>Twigs</i>	<i>logs</i>	<i>10/20</i>	<i>2cm</i>

Bare Ground	% surface cover
	<i>30/50</i>

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below), and dominant species in each layer.

Cover Class	2-10%	10-30%	30 - 70%	over 70%
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			TREES		MALLEES	
			over 15m	5-15m	under 5m	over 8m
LIFE FORM						30m 10m
COVER CLASS (%)						2-10
DOMINANT SPECIES						Euc.
SHRUBS			SHRUBS		SHRUBS	
over 2m			2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM						2m 1m
COVER CLASS (%)	< 2	30/50				
DOMINANT SPECIES	Mel. uncinata	Mel. undulata Mel. agath Microcybe				
GRASSES		HERBS		SEDGES		
				over 0.5m		under 0.5m
LIFE FORM						1m
COVER CLASS (%)	< 2	2				
DOMINANT SPECIES						

4. VEGETATION CONDITION

Comments

excellent

(smooth white bark, 4m

20x20 x Euc. erythronema

VSP

Mallee 6m - 8m
rough grey bark basal 1m
smooth grey above

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESENCE

SITE No Wangan Hills S

Date 11-90-1998

26-8-1999

Label each plant with plants number, site code, date and

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

No FI ID

HERBS (cont.)

No FI ID

TREES

No FI ID

SHRUBS (cont.)

No FI ID

HERBS (cont.)

No FI ID

MALLEES

Eucalyptus flocktoniae

flor

GRASSES

Vulpia myuros

Stipa elegantiss

SHRUBS

Melaleuca undulata

" adnata

" uncinata

Microcybe pauciflora

Enchylaena tomentosa

Rhagodia preissii preissii

multiflora var multiflora

VSP

HERBS

Blennospora drummond

Trachymene cyanopetala

Eremophyllum ramosum

Wahlenbergia preissii

Caladenia pulchella

Grassula pedicellata

" colorata

Calotis hispidula

Rhodanthe laevis

Podolepis andersonii

Mesembryanthemum nodiflorum

Arctotheca calendula

Centrolepis

Waitzia acuminata

26/8/1999

Hypochaeris glabra

Goodenia berardiana

Thysanotus manglician

Pterostylis sp (st-rosell)

SEDGES

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA Wongan Hills SITE NUMBER 6
 DATE TRIP 11/9/1998 RECORDERS NG/GK
 DATE TRIP 26/8/1999 RECORDERS NG/GK/AW
 DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below

Norm

Road Location Cardoux - Wongan Hills road.

Geographic Location	Latitude GPS Map Sheet	S Longitude Accuracy	E Altitude
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Photograph	Name	Number
	<u>NG</u>	<u>32</u>

Topographic Position	(Circle the correct response)
Upland	
Upper slope	
Midslope	
	Lower slope
	<u>Valley</u>
	Washline

2. SITE DATA Circle the correct response

Slope	Aspect
<u>flat</u> gentle steep	N NE E SE S SW W NW

Surface Soil	Depth to Rock	Colour
<u>loam</u>	<u>>1m</u>	<u>fawn</u>

Exposed Rock	type	% surface cover	size range
	<u>0</u>		

Litter	% surface cover	Depth (cm)
<u>logs, twigs</u>	<u>10/20</u>	<u>5-20</u>

Bare Ground	% surface cover)
	<u>30/70</u>

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

	TREES			MALLEES	
	over 15m	5-15m	under 5m	over 8m	under 8m
LIFE FORM					
COVER CLASS (%)					10-20
DOMINANT SPECIES					<i>Euc. erythronem</i> " <i>redunca</i>
	SHRUBS			SHRUBS	
	over 2m	2m - 1.5m	1.5 - 1m	1-0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)	2-10			2-10	
DOMINANT SPECIES	<i>Mel. uncinata</i> " <i>undulata</i>			<i>Acacia acutana</i>	
	GRASSES		HERBS	SEDGES	
				over 0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)	10		20/30		
DOMINANT SPECIES	<i>Amphipogon st</i> <i>Stilpa</i> <i>Orichop</i>		<i>Borja nitida</i> annuals		

4. VEGETATION CONDITION

Comments

very good, some scattered weed clumps

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No Wbngan H. 6

Date 11-09-1998

26-8-1999

Label each plant with plants number, site code, date and plant's name or working name if required

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

				• Column 4 Identification check							
TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
								<i>Brachycome iberidifolia</i>			
								<i>Urbina anthemoides</i>			✓
								<i>Velleia cynopos</i>			✓
								<i>Trachym cyanopus</i>			✓
								<i>Thysanotus speckii</i>			
				<i>var marginata</i> (USP)				<i>Chthonocephalus pterocarpus</i> (USP)			(USP)
MALLEES				<i>Aira caryophylla</i>				<i>Ptilotus</i>			
<i>Eucalyptus erythronema</i>	✓			<i>Bromus rubens</i> (USP)				<i>Hyalospora glutinosa</i>			✓
" <i>rectumna</i>	✓			GRASSES				<i>Cassula colorata</i>			
<i>subangusta subangusta</i>	✓			<i>Spartochloa scirpioides</i>				<i>Paranthera microp</i>			
				<i>Avena sativa</i>	✓			<i>Arctotheca calendula</i>			✓
SHRUBS				<i>Bromus madritense</i>	✓			<i>Brachycome perpusilla</i>	✓		usp
<i>Acacia acutaria</i>	✓			<i>Ehrharta longiflora</i>	✓			" <i>ibridifolia</i>	✓		usp
<i>Melaleuca uncinata</i>	✓			<i>Stipa trichophylla</i>	✓			SEDGES			
" <i>agath</i>	✓			<i>Vulpia myuros</i>	✓			<i>Desmodium asper</i>			✓
				<i>Amphipogon strict</i>	✓			26/8 <i>Calandrinia granulifer</i>	26/8		
				<i>Pentastemonis airoid</i>	✓			<i>Ptilotus gaudichaudii</i>			
				<i>Danthonia</i>							
				HERBS							
				<i>Borja constricta</i>	✓			<i>Wahlenberg preiss</i>			
				<i>Lamprocarpa davenportii</i>	✓			<i>Peratogyne oblonga</i>			✓
				<i>Waitzia acuminata</i>	✓						
				<i>Hypochaeris glabra</i>	✓			<i>Hydrocotyle pilifera</i>	✓		sub
				<i>Erodium cygnorum</i>	✓			<i>Exemphyllum ram</i>	✓		
				<i>Osteospermum clandestinum</i>	✓			<i>Drosera zonaria</i>	✓		
				<i>Podolepis lessonae</i>	✓			26/8/99			
				<i>Rhodanthe mangaliensis</i>	✓			26/8 <i>Actinobola uliginosa</i>	✓		
				<i>Caladenia radialis</i>	usp			26/8 <i>Caladenia varians vulgata</i>	✓		
				<i>Drosera bulbosa</i>	✓			26/8 " <i>radialis</i>	✓		
				<i>A. lineopholis pusilla tamisiensis</i>	✓			26/8 <i>Drosera glandularis</i>	✓		
				<i>Centrolepis incana capillaris</i>	✓			26/8 <i>Gondwana interaction</i>	✓		
				<i>Schoenus nanus</i>							

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA Wangan Hills SITE NUMBER 7
 DATE TRIP 11-9-1998 RECORDERS NG/GK
 DATE TRIP 27-8-1999 RECORDERS NG/GK/AW
 DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below

NORM

Road Location

Mannamanning Dam NR

Geographic Location

Latitude
GPS
Map Sheet

S Longitude
Accuracy

E Altitude

Photograph

Name

NG

Number

33

Topographic Position

Upland

Upper slope

Midslope

Lower slope

Valley

Washline

(Circle the correct response)

2. SITE DATA Circle the correct response

Slope flat

gentle

steep

Aspect N NE E SE S SW W NW

Surface Soil

clay

Depth to Rock

>1m

Colour

grey

Exposed Rock

type

0

% surface cover

size range

Litter

twigs, bark, lvs

% surface cover

30/50

Depth (cm)

2-5cm

Bare Ground

% surface cover)

20/30

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

3. VEGETATION STRUCTURE AND COVER
For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

For each layer record - appropriate life form, cover class (see below) and dominant species					
Cover Class		2-10%	10-30%	30-70%	over 70%
TREES					
	over 15m	5-15m	under 5m	MALLEES over 8m	under 8m
LIFE FORM					
COVER CLASS (%)	2/10				2-10
DOMINANT SPECIES	<i>Euc. Salmon</i> <i>Euc. salub</i>				<i>Euc. gracilis</i>
SHRUBS					
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	SHRUBS under 0.5m
LIFE FORM					
COVER CLASS (%)		2			10/20
DOMINANT SPECIES		<i>Santalum acum</i> <i>Dodon viscos</i>			<i>A. erinacea</i> <i>Olearia muelleri</i> <i>Erem. vronic</i> <i>Enchylaena</i>
GRASSES		HERBS	SEDGES	over 0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)		20			
DOMINANT SPECIES		mixed			

4. VEGETATION CONDITION

Comments

very good
cut over ca 50 yrs ago

20x20

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

Label each plant with plants number, site code, date and plant's name or working name if required

SITE No Wangan Hills 7

Record on Sheet

Date 11-09-1998

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

Euc. salmonophloia

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
Euc. salubris	✓			27/8/1999				Hypochaeris glabra	✓		
				Pterostylis sp. mutica				Daisy sp			
				Osteospermum planifolium				Lepidium rotundum	✓		
				Acacia (fls) sclerophylla				bipinnata	27/8		
				Avena fatua				Cotula (australis) bipinnata	vsp		
				Goodenia berardiana				Platytus holoserice	27/8		
				Chobelia				Hydrocotyle (medicaginis)			
MALLEES				Vulpia myuros				Pantago aff hisp			
✓ Euc. gracilis	✓	vsp		GRASSES				Triglochin calcitrapa	27/5		
				Stipa elegantissima	✓			Orthocentrus (paterson)			
				Stipa/Danthonia				Hydrocotyle pilifera	11/9		
SHRUBS											
✓ Grevillea huegelii	✓	vsp		Bromus madritense	✓			SEDGES			
✓ Olearia muelleri	✓			drummondii (vsp)				27/8/1999			
✓ Acacia erinacea	✓							✓ Pterostylis nana (hairy)			
✓ Fremophila tomentosa	✓							sp. Inula			
✓ Santalum acuminatum	✓			HERBS							
✓ Enchylaena tomentosa	✓			Arctotheca calendula	✓						
✓ Acacia merrallii	✓			Brassica tournefortii	✓						
✓ Sclerolaena diacantha	✓			Rhodanthe laevis	✓						
Maireana ? planifolia				Crassula colorata	✓						
Maireana (trichoptera)	✓			Trachymene cyanopetala	✓						
Wilsonia humilis	✓			Bulbine semibarbata	✓						
				Podolepis capillaris	✓						
				✓ Eremophyllum ramosum	✓			Senecio			
				Calotis hispidula	✓						
				Senecio glossanthus	✓						
				✓ Calandrinia (faint)	✓						
				Hydrocotyle rugulosa	✓						
				Mesembryanthemum nodiflorum	✓						

Sep. incurva

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA Wangan Hills SITE NUMBER 8 (8)

DATE TRIP 11/9/1998 RECORDERS NG/GK

DATE TRIP 27-8-99 RECORDERS NG/GK/AW

DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below

Norm

Road Location norm / Manning NR

Geographic Location	Latitude GPS Map Sheet	S Longitude Accuracy	E Altitude
<u>norm</u>			

Photograph	Name	Number
	<u>NG</u>	<u>34</u>

Topographic Position	(Circle the correct response)
Upland	<u>Lower slope</u>
Upper slope	Valley
Midslope	Washline

2. SITE DATA Circle the correct response

Slope	flat	<u>gentle</u>	steep	Aspect	N	NE	E	SE	S	<u>SW</u>	W	NW

Surface Soil	<u>gravelly sand</u>	Depth to Rock	<u>50cm</u>	Colour	<u>yellow</u>

Exposed Rock	type	<u>0</u> % surface cover	size range

Litter	<u>twigs, lvs</u>	% surface cover	<u>10/30</u>	Depth (cm)	<u>2-5</u>

Bare Ground	% surface cover)	<u>30/50</u>

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class 2-10% 10-30% 30-70% over 70%

TREES			MALLEES		
	over 15m	5-15m	under 5m	over 8m	under 8m
LIFE FORM					
COVER CLASS (%)					
DOMINANT SPECIES					

SHRUBS				SHRUBS	
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)	10-30			10/30/50	
DOMINANT SPECIES	Allocas camp			Hakea circum Hakea invag	

GRASSES		HERBS		SEDGES	
	over 0.5m		over 0.5m		under 0.5m
LIFE FORM					
COVER CLASS (%)	2-10	2-10	20/40		2-
DOMINANT SPECIES	Amphipozon Neerachne calop	Brya constricta	Ecdeicola monostady		Schoenus Lepidobol rhaet Mesomel. preis

4. VEGETATION CONDITION

Comments

excellent

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No Wangan Hills 8

Date 11-9-1998

~~26~~-27-8-1999

Label each plant with plants number, site code, date and plant's name or working name if required

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

[illegible]

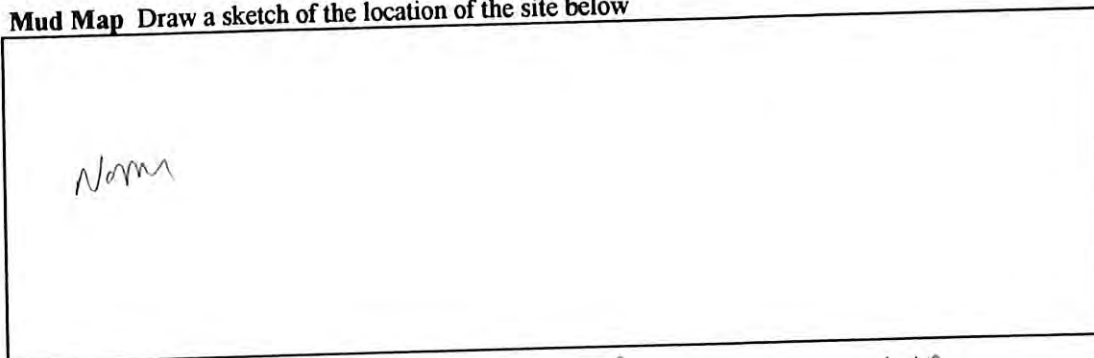
✓ *Dampiera* altissima 11/9/98
Melaleuca leptophylla (young) 11/9/98

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA Wangan Hills SITE NUMBER 9
 DATE TRIP 11/9/1998 RECORDERS NG/GK
 DATE TRIP 27/8/99 RECORDERS NG/GK/AW
 DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below



Road Location Namoi Manning NR.

Geographic Location	Latitude GPS Map Sheet	S Longitude Accuracy	E Altitude
<u>Namoi</u>			

Photograph	Name	Number
	<u>N/G</u>	<u>36</u>

Topographic Position	(Circle the correct response)
<u>Upland</u>	Lower slope
Upper slope	Valley
Midslope	Washline

2. SITE DATA Circle the correct response

Slope	Aspect
<u>flat</u> gentle steep	N NE E SE S SW W NW

Surface Soil	Depth to Rock	Colour
<u>sand</u>	<u>30-50cm</u>	<u>yellow</u>

Exposed Rock	type	% surface cover	size range
		<u>10</u>	<u>latite</u>

Litter	% surface cover	Depth (cm)
<u>twigs, stems</u>		<u>2-10</u>

Bare Ground	% surface cover
	<u>30/50</u>

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

3. VEGETATION STRUCTURE AND COVER
For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class	2-10%	10-30%	30 - 70%	over 70%
-------------	-------	--------	----------	----------

TREES				MALLEES	
	over 15m	5-15m	under 5m	over 8m	under 8m
LIFE FORM					
COVER CLASS (%)					10-30
DOMINANT SPECIES					<i>Euc. borracoppin</i>

SHRUBS				SHRUBS	
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)		20/20		20-30	2-10
DOMINANT SPECIES		<i>Dryad.</i> <i>Leptospermum erub.</i>		<i>Beaufortia</i> <i>Dry. cursiad</i> <i>Vertic. roei</i> <i>Melaleuca</i>	<i>Drummondia</i> <i>Lysinema</i>

GRASSES		HERBS		SEDGES	
	over 0.5m			over 0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)	L2	L2			10-20
DOMINANT SPECIES					<i>Desmodium asper</i> <i>Schoenus</i> <i>Lepidosperma</i>

4. VEGETATION CONDITION

Comments

excellent

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No Wondan Hills 9

Date 11-09-1998

27-8-1999

Label each plant with plants number, site code, date and plant's name or working name if required

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
				Verticordia picta				Crossida pedicellata			
				Halcania ~~laeviflora~~				Paterosia drum drum			
				Gompholobium obcordatum				Millotia tenuifolia			
				Petrophile shuttleworthii				Wahlenbergia preiss			
				Passonia ~~infriflora~~ 11/9				Thysanotus spartea			
MALLEES				GRASSES				Rhodanthe laevis			
Eucaly burracoppinensis				Neracomo alopec							
SHRUBS											
Verticordia insignis ssp. ~~compta~~ (usp)				Nyctiflorae ~~sepugriflorae~~ (usp)							
Acacia (weeping as WH 9)				interstans				SEDGES			
Beaufortia ~~schauinslandii~~				caotlanoides				Schoenus ~~flat WH 9~~			
Leptospermum erubescens (usp)								Desmodium asper			
Dryandromyrtus hassellii								Schoenus ~~et globosus~~ sp			
Dryandra ~~erubescens~~								Lepidosperma			
Melaleuca (red grey lvs)				HERBS							
Lysimachia ciliatum				Drosera pallida							
Nemcia reticulata (usp)				Levenhookia ~~stylioides~~							
Psammomoma chaetroid				stylidium ~~repens~~							
Micro myrtus racemosa (usp)				Glennospora drummondii							
Perobonia (nata) angustiflora (usp)				Levenhookia pusilla							
Eremaea ~~padellifera~~				Hypochaeris glabra							
Melaleuca (H) ~~flus~~ ~~rycal~~				Cratogeomys ~~obionoid~~							
Petrophile ~~et erubescens~~ ~~imbricata~~				Levenhookia ~~stipitata~~							
Verticordia ~~et roli~~ ~~erubescens~~				Podotheca angustiflora							
calytrix brachyphylla				Caladenia ~~varians~~							
Dryandra ~~fruticosa~~ ~~adumata~~ (usp)				" ~~causiana~~							
Isofogon ~~Petro~~ ~~ret~~				Drosera ~~zohra~~							
Cassytha ~~pubescens~~				" ~~pallida~~ = m a k r a n t h a 27/8/99							

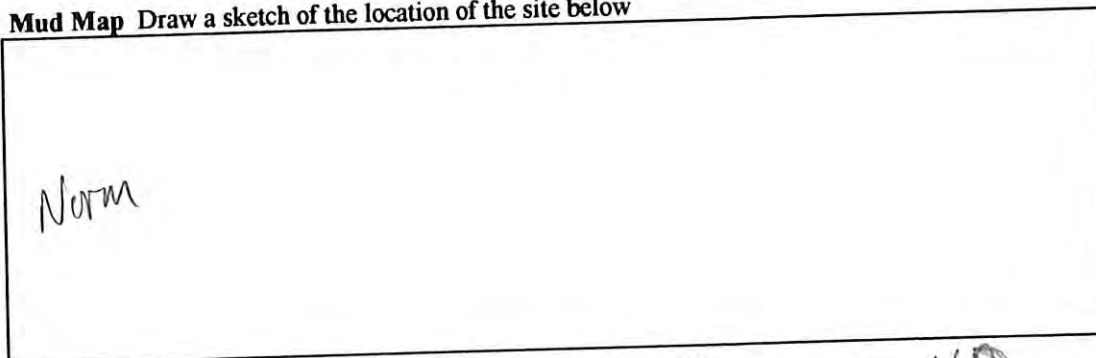
Isofogon scaberrimus (usp)

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA Wongan Hills SITE NUMBER 10
 DATE TRIP 11/9/1998 RECORDERS NG/GK
 DATE TRIP 22/6/99 RECORDERS NG/GK/AW
 DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below



Road Location Norm Manmanning NR.

Geographic Location	Latitude GPS Map Sheet	S Longitude Accuracy	E Altitude
<u>Norm</u>			

Photograph	Name	Number
	<u>NG</u>	<u>35</u>

Topographic Position	(Circle the correct response)
<u>Upland</u>	Lower slope
<u>Upper slope</u>	Valley
Midslope	Washline

2. SITE DATA Circle the correct response

Slope	flat	<u>gentle</u>	steep	Aspect	N	NE	E	SE	S	<u>SW</u>	W	NW
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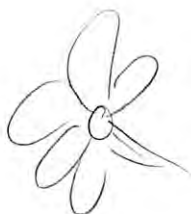
Surface Soil	<u>lateritic sand/clay</u>	Depth to Rock	<u>20-30</u>	Colour	<u>orange</u>
--------------	----------------------------	---------------	--------------	--------	---------------

Exposed Rock	type	<u>laterite</u>	% surface cover	<u>20</u>	size range	<u>pebbles</u>
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Litter	<u>lvs, twigs</u>	% surface cover	<u>70/90</u>	Depth (cm)	<u>2-5</u>
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Bare Ground	% surface cover	<u>10-20</u>
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Adapted from 'Bushland Plant Survey' written by B. Keighery (1994) and published by Wildflower Society of WA (Inc). PO Box 64 Nedlands WA 6008



BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Muir)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

		Cover Class				
		2-10%	10-30%	30-70%	over 70%	
		TREES			MALLEES	
		5-15m	under 5m	over 8m	under 8m	
LIFE FORM						
COVER CLASS (%)	20/30					
DOMINANT SPECIES	Euc. tranc " ? gardw					
		SHRUBS			SHRUBS	
		over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM						
COVER CLASS (%)	10/20		2-10		< 2	
DOMINANT SPECIES	Melal. uncin Allocas acutiv		Microcorys Hibbertia reana		Bossiaea siliocarpa	
		GRASSES	HERBS	SEDGES	over 0.5m	
LIFE FORM						
COVER CLASS (%)		< 0.1				
DOMINANT SPECIES						

4. VEGETATION CONDITION

Comments

excellent
cut over for fence posts ca
40 yrs ago

20x20 ditto

Euc. astringens —

27-8-1999

[illegible]

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA Wongan Hills SITE NUMBER 11

DATE TRIP 11-9-1998 RECORDERS NG/GK

DATE TRIP 27-8-1999 RECORDERS NG/GK/AW

DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below

Norm

Road Location Norm / Moonjin NR.

Geographic Location	Latitude GPS Map Sheet	S Longitude Accuracy	E Altitude
<i>Norm</i>			

Photograph	Name	Number
	<i>NG</i>	<i>37</i>

Topographic Position	(Circle the correct response)
Upland	<i>Lower slope</i> <i>Valley</i> <i>Washline</i>
Upper slope	
Midslope	

2. SITE DATA Circle the correct response

Slope	flat	<i>gentle</i>	steep	Aspect	N	NE	E	<i>SE</i>	S	SW	W	NW

Surface Soil	<i>gritty loam</i>	Depth to Rock	<i>> 1m</i>	Colour	<i>brown</i>

Exposed Rock	type	0 % surface cover	size range

Litter	<i>logs, twigs</i>	65 % surface cover	<i>20/90</i>	Depth (cm)

Bare Ground	% surface cover	<i>10/30</i>

(annuals in season)

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

3. VEGETATION STRUCTURE AND COVER
For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class	2-10%	10-30%	30 - 70%	over 70%
-------------	-------	--------	----------	----------

TREES				MALLEES	
	over 15m	5-15m	under 5m	over 8m	under 8m
LIFE FORM					
COVER CLASS (%)	2-10		10-30		
DOMINANT SPECIES	<i>Euc. loxophl</i>		<i>Acacia acumin</i> <i>Sant. spicat</i>		

SHRUBS				SHRUBS	
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)					
DOMINANT SPECIES					

GRASSES		HERBS		SEDGES	
	over 0.5m		under 0.5m		
LIFE FORM					
COVER CLASS (%)	2-10	30/50			
DOMINANT SPECIES	<i>Danthonia</i>	<i>Lawrence davenp</i> <i>Waitzia acum</i> <i>Podol. lesson</i>			

4. VEGETATION CONDITION

Comments

very good, logged, ? gzd in past
scattered to moderate weed invasion

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No Wangan Hills 11

Date 11-09-98

287-8-1999

Label each plant with plants number, site code, date and plant's name or working name if required
Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

27/8/99
20x20

same

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
Euc. loxophleba	✓			27/8/99 Stipa trichophylla	27/8			Trachymene ornata	✓		
Acacia lacumin	✓			Calandrinia calyptata	27/8			" cyanopetala	✓		
				Podotrocha anaphal	✓			Hydrocotyle pilosa	✓		
				Caladenia hirta rosea	27/8			Arctotheca calendula	✓		
				Goodenia berardiana	27/8			Podolepis lessonii	✓		
				Triglochin calcitrapa	27/8			Waitzia citrina	✓		
								Lomandra effusa	✓		
MALLEES								Nicotiana occident	✓		
				GRASSES				Arthropodium curvipes	✓		
				Neurachne alopecuroid	✓			Schoenus nanus	✓		
				Brija maxima	✓			Cratogeomys obionoides	✓		
				Eleocharis longifl	✓			Chthonocteph pseudovax	✓		
SHRUBS				Pentastichis air	✓			Gnephosis pusilla	✓		
Enchylaena toment	✓			Stipa elegant	✓			SEDGES			
Dampiera altissima	✓			Bromus madritens	✓			Grassula colorata	✓		
				Danthonia	✓			" pedicellulosa	✓		
				Hordeum leparinum	✓			" pedicellulosa	✓		
								Borja laciniata	✓		
				HERBS				Zalusnykia divaricata	✓		
				Goodenia berardiana	✓			Vellera cynopotam	✓		
				Erodium cymosum	✓			Calotis hispid	✓		
				Hypochaeris glabra	✓			Daucus gloch	✓		
				Senecio gloch	✓			Thysanot paterson	✓		
				Brassica hirta	✓			Podolepis canescens	✓		
				Laurenciella davenp	✓			Paranthera microphyll	✓		
				Waitzia acumin	✓			Gilbertia tenuifl	✓		
				Diastella revoluta	✓			Desmocladius asper	✓		
				Arthropodium capillip	✓			Levenhookia dubia	✓		
				Phyllanthium parviflor	✓						
				Utricularia anthemoides	✓						
				Rhodanthe manglesii	✓						
				Gonocarpus nodulos	✓						

Add Santalum species from worksheet.

✓ Calandrinia granulifera

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

Sample under dead tree

BUSHLAND AREA WONGAM HILLS SITE NUMBER WH 12

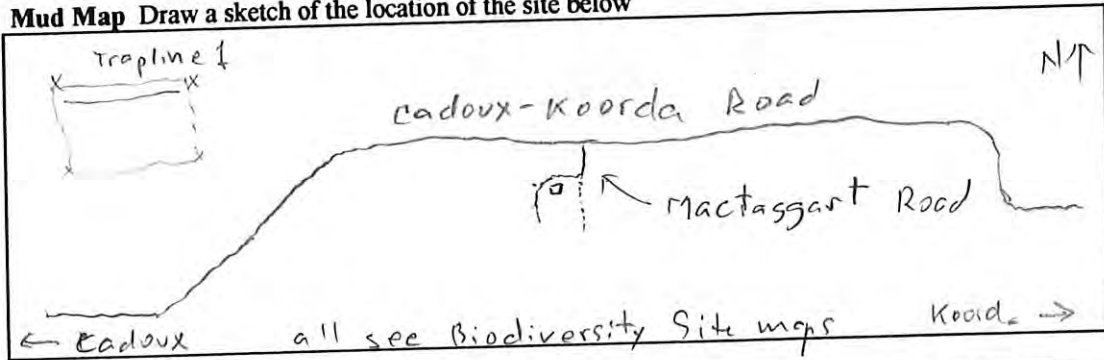
DATE TRIP 23 Sept '98 RECORDERS NG, ASW

DATE TRIP 26/8/1999 RECORDERS NG/GK/AW

DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below



Road Location SE of bend in Mactaggart Rd. ~200(?)m S. of Cadoux-Koorda Rd.

Geographic Location	Latitude <u>see frame sheet</u>	Longitude	E Altitude
<u>11°30</u>	GPS Tr. En. XL	Accuracy	
	Map Sheet <u>2336</u>	<u>(Koorda 1:100,000)</u>	

Walkwalkin NR.

Photograph Name N Gibson Number NG 16

Topographic Position (Circle the correct response)

Upland	<u>Lower slope</u>
Upper slope	<u>Valley</u>
Midslope	Washline

2. SITE DATA Circle the correct response

Slope flat gentle steep **Aspect** N NE E SE S SW W NW

Surface Soil clayey loam / **Depth to Rock** 15cm **Colour** yl. grey / grey (moist)

Exposed Rock type 0 % surface cover size range

Litter < 5 % surface cover Depth (cm)

Bare Ground 20-30 % surface cover

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Muir)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class					
	2-10%	10-30%	30-70%	over 70%	
TREES					
	over 15m	5-15m	under 5m	MALLEES	
				over 8m	under 8m
LIFE FORM					
	30m			10m	
COVER CLASS (%)					
DOMINANT SPECIES					
SHRUBS					
	over 2m	2m - 1.5m	1.5 - 1m	1-0.5m (<)	under 0.5m
LIFE FORM					
	2m				1m
COVER CLASS (%)				10-30	30-70
DOMINANT SPECIES				Halosarcia indica	? Frankenia (green) Sphyn shrub (grey) (Didymos)
GRASSES		HERBS	SEDGES	over 0.5m	
LIFE FORM					
	1m				
COVER CLASS (%)					
DOMINANT SPECIES	Bolium rig.	Cotula? coron.			
		Polygonum strick.			
		Hydrocotyle			

4. VEGETATION CONDITION

4-5 (out of 6)

Comments

All Melaleuca dead (salt affected?), and much weediness

(probably it was Mel. latifolia)

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No W14 12

Date 23 Sept. 98

NG, ASW 26/8/99

Label each plant with plants number, site code, date and plant's name or working name if required

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
								Isotoma scapigera	usp		
								Gnaphos. (wh. cotton balls)			
								Mecombry. nodiflora			
								Roselle, El. lavender etc.			
								Campanulaceae or Lobeliaceae			
								Calandrinia (med. ppl. etc.)	calyptrata		
MALLEES								? Calandrinia (small fl.)	granulifera	usp	
								Senecio. olivaceus			
								Senecio. luteus ssp. maritimus			
				GRASSES							
✓ Lawrencea squamata	usp			Lolium rigidum							
SHRUBS				Vulpia myuros							
				Perapholis incurva							
				Avena Rostraria pumila				Arctotheca calendula ADJ			
				Bromus carenatus	usp			SEDGES			
✓ Frankenia (green)											
✓ Halosarcis 3 indica (low)	budens										
✓ Halosarcis indica											
✓ Didymopanax roei											
✓ Spiny grey, non Frankia				Lawrencea squamata				26/8			
✓ Atriplex divaricata				HERBS							
Frankenia cinerea				Crassula calcarata							
				Trifolium 2 striatum				mucronata 26/8			
				Polygonum strictum							
				Cotula coronopifolia							
				(other cotula?)							
				Cotula cotuloides							
				Crassula calcarata							
				Hydrocotyle (sp.) diantha	usp						
				? Caryophyllus - small ppl.							
				(Spergularia)							
				Spergularia salina							

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA Nangan Hills SITE NUMBER 13
 DATE TRIP 11-9-1998 RECORDERS NG/GK
 DATE TRIP 26/8/1999 RECORDERS NG/GK/AW
 DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below

Norm

Road Location Norm / Moora-jin Soak NR.

Geographic Location	Latitude GPS Map Sheet	S Longitude Accuracy	E Altitude
<u>Norm</u>			

Photograph	Name	Number
	<u>NG</u>	<u>38</u>

Topographic Position	(Circle the correct response)
<u>Upland</u> <u>Upper slope</u> Midslope	Lower slope Valley Washline

2. SITE DATA Circle the correct response

Slope	flat	<u>gentle</u>	steep	Aspect	N	NE	E	<u>SE</u>	<u>S</u>	SW	W	NW

Surface Soil	<u>gritty loam</u>	Depth to Rock	<u>10-30cm</u>	Colour	<u>brown</u>

Exposed Rock	type	<u>granite</u>	% surface cover	<u>10-20</u>	size range	<u>20cm-60cm</u>

Litter	<u>twigs, lvs</u>	% surface cover	<u>2-10</u>	Depth (cm)	<u>2</u>

Bare Ground	% surface cover	<u>50/70</u>

(cover up to 20% by annuals)

3. VEGETATION STRUCTURE AND COVER

3. VEGETATION STRUCTURE AND COVER
For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class	2-10%	10-30%	30 - 70%	over 70%
-------------	-------	--------	----------	----------

TREES				MALLEES	
	over 15m	5-15m	under 5m	over 8m	under 8m
LIFE FORM			 		
COVER CLASS (%)					
DOMINANT SPECIES					

SHRUBS				SHRUBS	
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM	 				
COVER CLASS (%)				2-10	
DOMINANT SPECIES				<i>Verticordia grandiflora</i> <i>calytrix</i>	

GRASSES		HERBS		SEDGES	
	over 0.5m		under 0.5m		under 0.5m
LIFE FORM	 	  	 		 
COVER CLASS (%)	<2	10/30			
DOMINANT SPECIES	<i>Bromus rubens</i>	<i>Podolepis lessonii</i> <i>Borya constricta</i> <i>nitida</i>			

4. VEGETATION CONDITION

Comments

excellent

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

Label each plant with plants number, site code, date and plant's name or working name if required

SITE No Wangan Hills 13

Record on Sheet

Date 11-09-1998

28/8/1999

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

TREES				SHRUBS (cont.)				HERBS (cont.)			
No	FI	ID		No	FI	ID		No	FI	ID	
							<i>Lemooria burkittii</i> ✓				<i>Crassula colorata</i> ✓
											<i>Schoenus nanius</i> ✓
											✓ <i>Levenhookia stipitata</i> ✓
											✓ <i>Hydrocotyle callicarpa</i> ✓
											<i>Cherlanthes austro-ten</i> ✓
											✓ <i>Rutidosia multif</i> ✓
											<i>Actinobole ulig</i> ✓
											✓ <i>Erodium () botrys</i> ✓ vsp
											<i>Zalusnykia divaric</i> ✓
							<i>Bromus madritens</i> ✓				<i>Drosera bulbosa</i> ✓
							<i>Pentaschistis aroid</i> ✓				<i>Chthonocroph pseud</i> ✓
							<i>Aristida contorta</i> ✓				<i>Calandrinia (pink) calyptata</i> ✓
							<i>Bromus rubens mod</i> ✓				<i>Quinetia urvillei</i> ✓
							<i>Avena barbata</i> ✓				SEDGES
											<i>Gnephosis pusilla</i> ✓
											<i>Prasophyllum micr</i> ✓
											✓ <i>Podolep ~~gramen~~ tepperi</i> ✓
											<i>Triglochin calcitrap</i> ✓
											<i>() koetopsis gramin</i> ✓
											<i>Vellera cyclopot</i> ✓
											<i>Ceratogyne lobibono</i> ✓
											<i>Potentilla cella latif</i> ✓
											<i>Diuris recurva</i> ✓ vsp
											<i>Rhodanthe mangles</i> ✓
											<i>Brassica tonaf</i> ✓
											<i>Arctotheca caledula</i> ✓ vsp
											<i>Millotia tenuifolia</i> ✓
											<i>Hydrocotyle pilifera</i> ✓
							<i>Erodium cygnorum</i> ✓				
							<i>Chthonocrophalus pseudovax</i> ✓				
							<i>Hyalospermum glutino</i> ✓				
							<i>Gnephosis</i> ✓				

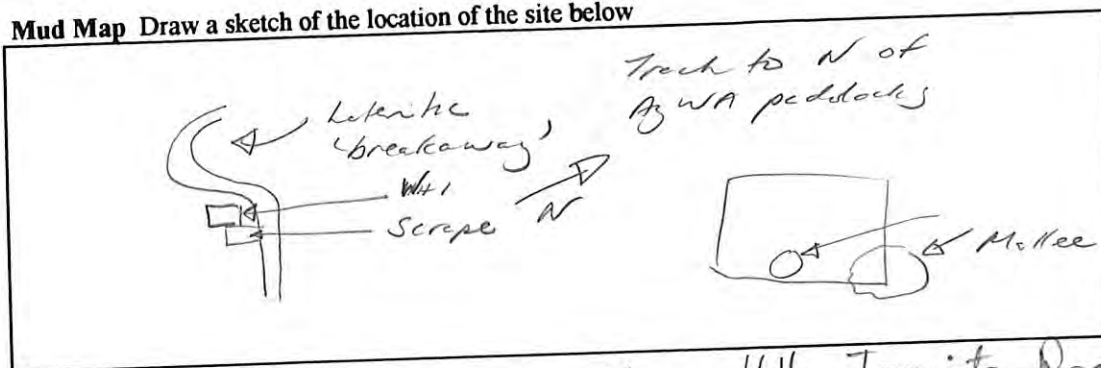
Gynopholis *(chemorei barkittii)* vsp

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA _____ SITE NUMBER WH 14
 DATE TRIP 18/9/98 RECORDERS BJK, NG, GJK
 DATE TRIP 16/8/1999 RECORDERS NG/GK/AW
 DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below



Road Location Wongan Hills Townsite Res

Geographic Location Latitude 30° 51' 30.9" Longitude 116° 41' 56.4" Altitude 471222
 GPS Accuracy 6586020
 Map Sheet

Photograph Name NG Number 29

Topographic Position (Circle the correct response)
 Upland ☐ Lower slope ☐
 Upper slope ☒ Valley ☐
 Midslope ☐ Washline ☐

2. SITE DATA Circle the correct response

Slope flat ☐ gentle steep ☐ Aspect N ☐ NE ☐ E ☐ SE ☐ S ☐ SW ☐ W ☐ NW

Surface Soil sandy gravel Depth to Rock to 15 cm over gravel Colour yellow

Exposed Rock type _____ % surface cover _____ size range _____

Litter 80 % surface cover _____ Depth (cm) 1 cm

Bare Ground 0 % surface cover _____

Adapted from 'Bushland Plant Survey' written by B. Keighery (1994) and published by Wildflower Society of WA (Inc). PO Box 64 Nedlands WA 6008

AMG
471222
6586020

gravel
rock
data
laterite

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

3. VEGETATION STRUCTURE AND COVER
For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.					
Cover Class		2-10%	10-30%	30-70%	over 70%
TREES			MALLEES		
	over 15m	5-15m	under 5m	over 8m	under 8m
LIFE FORM					 30m 20 x 20m as below 10m
COVER CLASS (%)					2-10
DOMINANT SPECIES					Euc sp
SHRUBS			SHRUBS		
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM		Occ <i>Mel. uncin.</i> 			 2m 1m
COVER CLASS (%)			> 70%		
DOMINANT SPECIES			<i>Mel. undul.</i> <i>Mel. acum.</i>		
GRASSES		HERBS		SEDGES	
				over 0.5m	under 0.5m
LIFE FORM					 1m
COVER CLASS (%)					
DOMINANT SPECIES					

4. VEGETATION CONDITION

Comments

(Pristine to excellent)

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No WH 14

Date 18/9/78

16 / 8 / 1999

Label each plant with plants number, site code, date and plant's name or working name if required

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

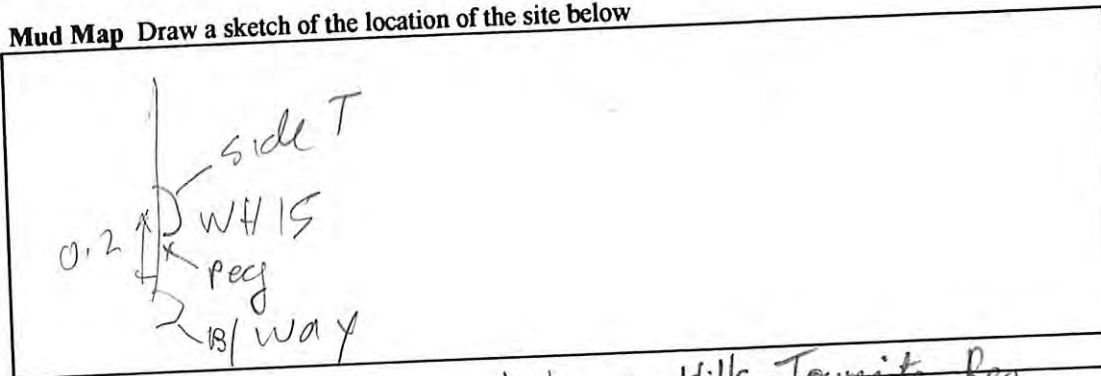
• Column 4 Identification check											
TREES				SHRUBS (cont.)				HERBS (cont.)			
No	FI	ID		No	FI	ID		No	FI	ID	

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA WH15 SITE NUMBER WH15
 DATE TRIP 18/9/98 RECORDERS BK/GK/NG
 DATE TRIP 16/8/1999 RECORDERS NG/GK/AW
 DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below



Road Location Wongan Hills Townsite Res.

Geographic Location Latitude 30° 51' 30.5" S Longitude 116° 42' 02.5" E Altitude 30
 GPS Accuracy Map Sheet

Photograph Name NG Number 30

Topographic Position (Circle the correct response)
 Upland ☐ Lower slope ☒
 Upper slope ☐ Valley ☒
 Midslope ☐ Washline ☐

2. SITE DATA Circle the correct response

Slope flat ☐ gentle ☒ steep ☐ Aspect N NE E SE S SW W NW

Surface Soil yellow sandy loam over gravel Depth to Rock _____ Colour _____

Exposed Rock type ☐ % surface cover _____ size range _____

Litter twigs, lvs _____ % surface cover 50/70 Depth (cm) 2-5

Bare Ground _____ % surface cover 20/30

AMG
 471385
 6586031

04.2
 used as.

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class	2-10%	10-30%	30 - 70%	over 70%
-------------	-------	--------	----------	----------

TREES				MALLEES	
	over 15m	5 - 15 m	under 5 m	over 8m	under 8m
LIFE FORM					
COVER CLASS (%)					10/30
DOMINANT SPECIES					

SHRUBS				SHRUBS	
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)		30/70			
DOMINANT SPECIES		<i>Phoebea grandis</i> <i>Baeckea grandis</i> <i>Meh. uncinata</i> <i>Allor. camp</i> <i>Baeckea crispifl</i>			

GRASSES		HERBS		SEDGES	
	over 0.5m	under 0.5m		over 0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)		2 - 10			
DOMINANT SPECIES		<i>Trachym. orn</i>			

4. VEGETATION CONDITION

Comments

excellent - very good

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No WH 15
Date 18/9/1998
16/8/1999

Label each plant with plants number, site code, date and plant's name or working name if required

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

TREES				SHRUBS (cont.)				HERBS (cont.)			
No	FI	ID		No	FI	ID		No	FI	ID	
Euc 1.			Grey smooth bark	Exocarpos			spontans	Crassula			colorela
			grew. bark					Caladenia			drum.
Euc 2			dillo.					X Hypo.			glebra
								Psittia			acuminata
								Poranthera			microphylla
								Ceratogyne			obionoides
MALLEES				GRASSES				SEDGES			
Euc.			sp. 1.								
Euc			sp. flack flack 2								
SHRUBS				HERBS							
Melaleuca			uncinata								
Lasiopetalum			molle (VSP)								
Baeckea			grandiflora (VSP)								
"			crispiflora (VSP)								
Cassytha			pubescens								
Acacia			I motacilla (VSP)								
"			Leptospermoides (VSP)								
"			II bidentata (VSP)								
(VSP) Stenanthemum			confertum (VSP)								
Dodonaea			bursaria								
Melaleuca			scabra								
Bossiaea			triocarpa (VSP)								
Melaleuca			fraduta laxiflora								
Grevillea			III hakeioides (VSP)								
Hypocalymma			angust								
Phebalium			filif (VSP)								
Allocas.			campestris								
Leptospermoides											

Acacia multisperma of multisperma 18/9
?virgata 85L

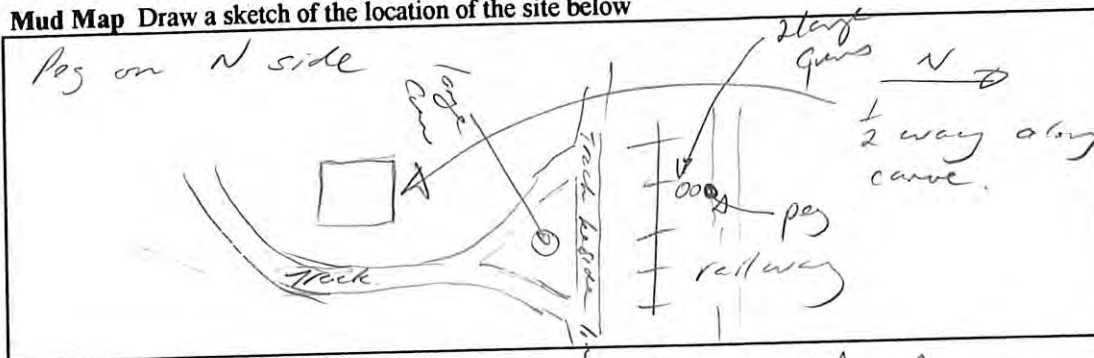
ADD Melaleuca wongensis 9THNS 2898 //

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA _____ SITE NUMBER WH 75 16
 DATE TRIP 18/5/78 RECORDERS BOK, GJK, NG
 DATE TRIP 16/8/1999 RECORDERS NG/GK/AW
 DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below



Road Location

Wongan Hills townsite Res.

Geographic Location

Latitude 30° 51' 9.18" S
 GPS
 Map Sheet

Longitude 116° 42' 42.7" E
 Altitude
 Accuracy Rel. p 2.0

30° 51' 55.1"
116° 42' 25.6"

Photograph

Name NG

Number 31

Topographic Position

Upland
 Upper slope
 Midslope

Lower slope
Valley
 Washline

(Circle the correct response)

2. SITE DATA Circle the correct response

Slope flat gentle steep

Aspect N NE E SE S SW W NW

Surface Soil 10cm (2cm) Depth to Rock

Colour pale brown

Exposed Rock type over pink clay % surface cover

size range

Litter 60 % surface cover

Depth (cm) 0.5cm

Bare Ground 5 % surface cover

Adapted from 'Bushland Plant Survey' written by B. Keighery (1994) and published by Wildflower Society of WA (Inc). PO Box 64 Nedlands WA 6008

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Muir)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class 2-10% 10-30% 30-70% over 70%

LIFE FORM	TREES			MALLEES		
	over 15m	5-15m	under 5m	over 8m	under 8m	
		20x20m as below plus scattered Melaleuca 	Smooth stocking 4m tall. 	grey bark to 1.5m 		
		30-70%				
COVER CLASS (%)						
DOMINANT SPECIES		Euc. salubris Euc. salmon				
LIFE FORM	SHRUBS			SHRUBS		
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m	
						
		2-10		2-10		
COVER CLASS (%)						
DOMINANT SPECIES		Santal. acumin Mel = WH14 adnata		Ac. eriacea		
LIFE FORM	GRASSES		HERBS		SEDGES	
	over 0.5m		under 0.5m		over 0.5m	
						
			30-70%			
COVER CLASS (%)						
DOMINANT SPECIES			Eremophil Daisy sp			

4. VEGETATION CONDITION

Comments

Very Good & Excellent
Few weeds, not in layer.

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

Label each plant with plants number, site code, date and plant's name or working name if required

SITE No *WAH 16*

Record on Sheet

Date 18/9/98

- Column 1 plant name

- Column 2 plant number

• **Column 3** **flowering time-** TICK if species flowering

- **Column 4** identification check

16 JUL 1999

[illegible]

after drive from Perth

#1

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA Wongan Hills SITE NUMBER WH17

Salmon Gum
- Gimlet

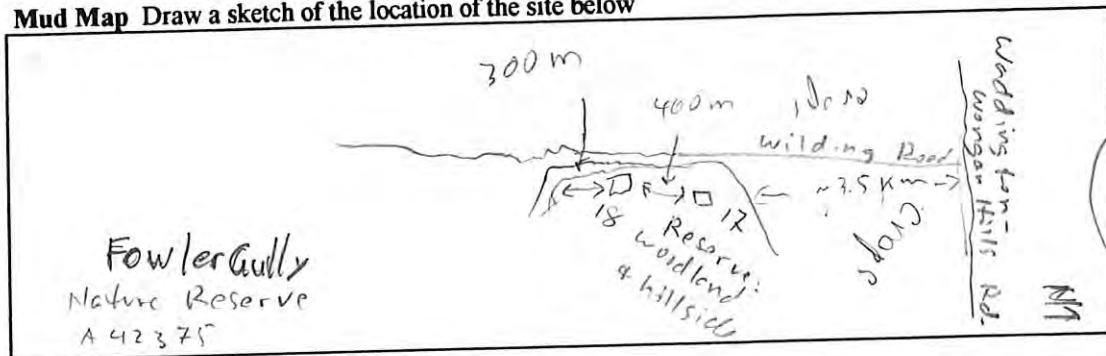
DATE TRIP 22 Sept '98 (Tues) RECORDERS ASW, NG

DATE TRIP 16-8-1999 RECORDERS NG/GK/AW

DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below



Road Location Wilding Rd. ~3.5 km S. of Wadd.-Wng. Hills Rd.

Geographic Location Latitude 30°51.584' S Longitude 116°37.233' E Altitude 30°51'35.0"
GPS Tr. En. XL Accuracy 2.8 116°37'13.9"
Map Sheet 2236 (Wongan 1:100,000)

Photograph Name KL Gibson Number NG10

Topographic Position (Circle the correct response)
Upland Lower slope
Upper slope Valley
Midslope Washline

2. SITE DATA Circle the correct response

Slope flat gentle steep Aspect N NE E SE S SW (W) NW

Surface Soil clay loam over hard clay Depth to Rock ? Colour red-brown (moist)

Exposed Rock type ironstone % surface cover > 60% size range 2-10mm + gravel
< 2% outcrop - granitic?

Litter 30-40 % surface cover Depth (cm) < 5 (- > 10)

Bare Ground 20-30 % surface cover

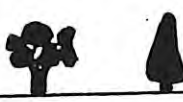
Adapted from 'Bushland Plant Survey' written by B. Keighery (1994) and published by Wildflower Society of WA (Inc). PO Box 64 Nedlands WA 6008

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Muir)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class	2-10%	10-30%	30-70%	over 70%
-------------	-------	--------	--------	----------

LIFE FORM	TREES			MALLEES	
	over 15m	5-15m	under 5m	over 8m	under 8m
		 30-40	 60%		 30m 10m
COVER CLASS (%)	< 2%	30-70	35-	-	-
DOMINANT SPECIES	Euc. salm.	Euc. salm.			
		Euc. salub.			
LIFE FORM	SHRUBS				SHRUBS
	over 2m	2m - 1.5m	1.5 - 1m	(->) 1 - 0.5m	under 0.5m
	 2m				 1m
COVER CLASS (%)	-	-	-	20-30	30-70
DOMINANT SPECIES				Rhagodia mel.	Scler. dic. (< 0.5) Acacia erinacea Maireana
LIFE FORM	GRASSES	HERBS	SEDGES	over 0.5m	
				over 0.5m	under 0.5m
					 1m
COVER CLASS (%)	< 2%	30-70			
DOMINANT SPECIES	Austrospora ele.	comp (not lsd. cap.)			
	Lolium	(Euphorbia) rara	xl. fld. O comp.		
		Cressula color. Calandrinia			

4. VEGETATION CONDITION

Comments

Logging down slope and adjacent; weeds from nearby farm

2

(of 6)

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No WH 17

Date 22 Sept 98

NG, ACW 16/8/99

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

Label each plant with plants number, site code, date and plant's name or working name if required

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

[illegible]

Tamm, n

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA Wongan Hills SITE NUMBER WH 18

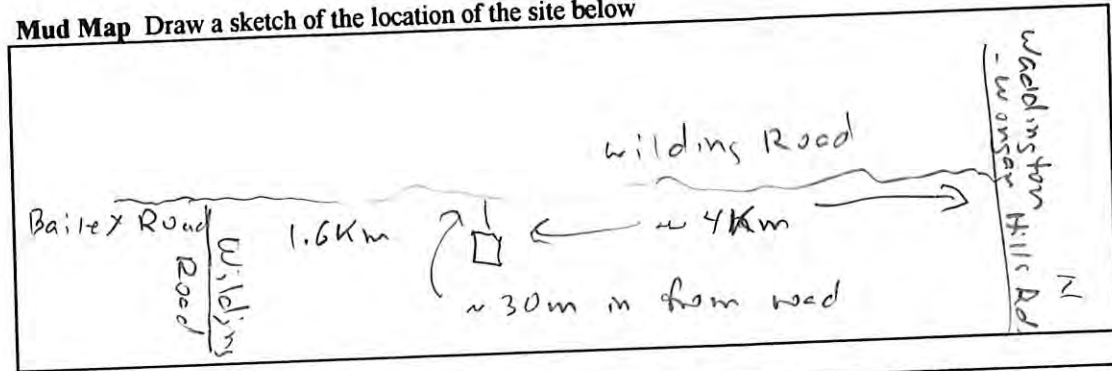
DATE TRIP 22 Sept '98 RECORDERS NG, ACW

DATE TRIP 16/8/1999 RECORDERS NG/GK/AW

DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below



Road Location Wilding Rd, ~4km S. of Wadd.-W.H. Rd, 4400m S. of WH17
300m N. of S. bdy of reserve 1.6 km N. of Bailey Rd.

Geographic Location Latitude 30°51'75" S Longitude 116°37'181" E Altitude 13:37
 GPSTR. En. XL Accuracy 3.0
 Map Sheet 2236 (Wongan 1:100,000)

30°51'45"
116°37'10.8"

Photograph Name N. Gibson Number NA11

Topographic Position (Circle the correct response)
 Upland _____ Lower slope _____
 Upper slope _____ Valley _____
 Midslope _____ Washline _____

2. SITE DATA Circle the correct response

Slope flat gentle steep Aspect N NE E SE S SW (W) NW

Surface Soil clay loam Depth to Rock < 50cm Colour red-brown (mvist)

Exposed Rock type granite % surface cover ~ 30% size range 2 - > 20cm + rocks

Litter > 70% % surface cover Depth (cm) < 1 - > 5cm

Bare Ground < 20 % surface cover

AMG
 463640
 6585563

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class 2-10% 10-30% 30-70% over 70%

TREES				MALLEES	
	over 15m	5-15m	under 5m	over 8m	under 8m
LIFE FORM					
COVER CLASS (%)	—	< 29%	—	—	—
DOMINANT SPECIES		Euc.			

SHRUBS				SHRUBS	
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)	> 50%	< 2%	—	—	< 2%
DOMINANT SPECIES	Allocas. camp.	Podolepis vis.			Boronia
	Caloth.				Hibbertia
	Mel. unc.				

GRASSES		HERBS	SEDGES	over 0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)	10-30%	30-70%			—
DOMINANT SPECIES	'? Poa'	Laurenciaea	dar.		—
	(tussock)	Haloragis			—
	Sporobolus	waitia acm			

Podolepis less. , Hypoch. glabra } mixed
Cheilanthes aust. (1-2) (of 6)

4. VEGETATION CONDITION

Comments

Many dead Allocasuarina branches and shrubs, perhaps old or due to drought

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No. W418
Date 22 Sept 98
NG, AS 16/8/1999

Label each plant with plants number, site code, date and plant's name or working name if required
Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

22/9/98

Thysanotus arbusculus
Lomandra integrum

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
20x20			X	Astoloma serotitolium 16/8			✓	Berya sphaerocephala			✓
Velv. Xoxo			X	Hybanthus floribundus 16/8			✓	Proserpinaca macrantha (usp)			✓
✓ Centrolepis aristata							✓	Parentucellia latifolia			✓
Gilbertia tenuifolia			✓	Calamia affodii			✓	Podolepis lessonii			✓
✓ Centrolepis cephaliformis			✓	Ptilotus declinatus			✓	Erodium cymosum			✓
MALLEES			✓	Crassula colarata			✓	Divisia porrifolia corymbosa (usp)			✓
20x20			✓	Rhodanthe citrina			✓	Hydrocotyle medeolifolia			✓
Int. 10x3ph (usp)				GRASSES				Medicago Hydrocotyle calcarata			✓
				Amphipogon debilis			✓	Trachymene cyanopetala			✓
				Poa (tussock)			✓	Arthropodium cepillipes			✓
SHRUBS				Spartochloa scirpioides (usp)			✓	Anagallis arvensis			✓
				Arthrocarph.			✓	Glischrocoryon aureum			✓
Allocas. Camph.			✓	Vulpia myuros			✓	Blennospora drummondii			✓
Calothamnus (homalophylla) (usp)			✓	Braha maxima			✓	SEDGES			
Met. uncinata			✓	Arthrocarph. elegant			✓	Rhodanthe mangrove			✓
Dodonaea visc. off.			✓	spinescens = Juncocarpus nodulosus 16/8			✓	Juncus bulbosus			✓
Hibbertia bumentana inconspicua (usp)			✓	HERBS				Schoenus nanus			✓
✓ Boronia coerulescens (usp)			✓	Lawrenciella davenp.			✓	Dracopis plumosus (usp)			✓
Leucopogon			✓	Cheilanthes austrotenuit			✓	Drosera subhirtella subhirtella (usp)			✓
Dampiera lavandulacea			✓	Trachymene ornata cyanopet			✓	Trachymene ornata			✓
			✓	Ewartia acuminata			✓	HERBS (cont.)			
			✓	Utricularia (? Bonocarpus)			✓	Sonchus oler.			✓
20x20 radula			✓	Levenhookia stipitata pusilla			✓	Thysanotus ? pat (mangl)			✓
✓ Met. Astedum			✓	Hypochaeris glabra			✓	Arctostaphylos candelaris			✓
Styphandra			✓	Goddensia berardiana			✓	Trifolium sub. schrum ADJ			✓
			✓	Ursinia anthemoides			✓	Medicago ADJ			✓
			✓	Mitrasacme Phyllang paradox			✓	Cyanicula gemmata ADJ			✓
			✓	Styphandra glauca			✓	Baccharis tour n. ADJ			✓
ADJ Baeckea crispiflora			✓	Arthropodium ? cepillipes			✓	Stygidium bulbifera ADJ (usp)			✓
			✓	Platysace cirrhosa			✓	Rho septentrionale			✓

yes

glabrata

16/8

usp

16/8

Disrupt
crum

ADJ - Calandrinia calyptrota

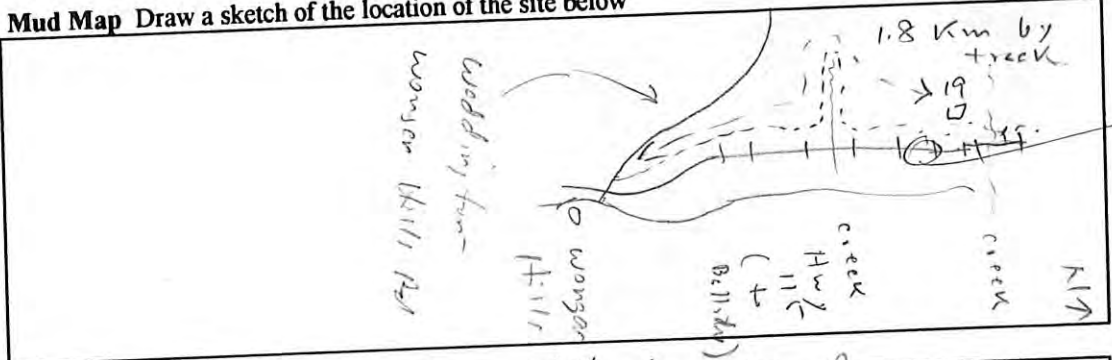
BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

York Gum -
5cm / Borya
(shallow
soil)

BUSHLAND AREA Wongan Hills SITE NUMBER WH 19
DATE TRIP 22 Sept 98 RECORDERS NG, ASW
DATE TRIP 16/8/99 RECORDERS NG/GK/AW
DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below



marker
on
rail line
is
(112) cm
white
peg

Road Location Wongan Hills townside Res.

AMG
473275
6584113

Geographic Location Latitude 30°52.50'S Longitude 116°43.225'E Altitude 15:15
GPS Tr. En XL Accuracy 4.5
Map Sheet 2236 (Wongan 1:100,000)

30°52'33"
116°43'13.5"

Photograph Name N. Gibson Number NG 12

Topographic Position (Circle the correct response)
Upland Lower slope
Upper slope Valley
Midslope Washline

2. SITE DATA Circle the correct response

Slope flat gentle steep Aspect N NE E SE S SW W NW
(40cm)

Surface Soil Gritty loam Depth to Rock < 4.5m Colour dark red-brown (moist)

Exposed Rock type 0 % surface cover size range

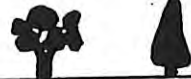
Litter < 20 % surface cover Depth (cm) < 5cm

Bare Ground < 1 % surface cover

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Muir)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class					
	2-10%	10-30%	30-70%	over 70%	
TREES					
	over 15m	5-15m	under 5m	MALLEES	
				over 8m	under 8m
LIFE FORM					
COVER CLASS (%)	—	10-30	($\leq$) 30-70	—	—
DOMINANT SPECIES		Euc. 10x.	Acacia acum.		
SHRUBS					
	over 2m	2m - 1.5m	1.5 - 1m	($\leq$) 1-0.5m	under 0.5m
LIFE FORM					
COVER CLASS (%)	—	$\leq 2\%$	—	2-10%	$\leq 2\%$
DOMINANT SPECIES		Mel. uncin.		Grevil. pan. Acacia ? tet.	? Damiera Mirabil. (y/l.) Acacia ? tetrag.
GRASSES		HERBS	SEDGES	over 0.5m	
LIFE FORM					
COVER CLASS (%)	$\leq 2\%$	70-100%		—	
DOMINANT SPECIES	? Neuzhu Platysache maxwelli	Borya Podol. less. Lawsonia		—	

~~maxwelli~~ (y/l.) Gilbertie ten. , operularis } Mixed
 62 (out of 6)

4. VEGETATION CONDITION

Comments

weeds est $\leq 5\%$ of cover

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

Label each plant with plants number, site code, date and plant's name or working name if required

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

SITE No W 19
Date 22 Sept '98
NC, ASW 16/8/99

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
				Herbs (Adj) Brachyscome ADJ			X	Velleia cynopos	16/8		
				? Podotheca ADJ				Drosera glanduligera			
Euc. loxophleb.				Nyssaea ? radicata ADJ				Levenhookia (small)			
Acacia acuminata				Dixit ? parrifolia ADJ				Crassula pedic.			
				Dianella revoluta ADJ				Trachymene cyanop.			
				Stinking Rose - Osteospermum	16/8			Podolepis capillaris			
				Crassula cataract	16/8		X	Caesia alfordii	16/8		
MALLEES			X	Calandrinia corn ADJ				Gilbertia tenuifolia	16/8		(usp)
				GRASSES				Erodium cygnetum			
Stylobasium australe	16/8			Austrostipa (small) trichophylla ADT				Chamoscilla corymbosa			
				Briza (major) maxima	16/8			Podolepis gardenii			
SHRUBS				Austrostipa elegantissima				Drosera (yl. climbing)			
				Neurachne alysicuroides			X	Ptilotus declinatus	16/8		
Grevillia paniculata biternata			(usp)	Amphipogon ? strictus				SEDGES			
Acacia ? det. acumin				Arca caryophylla				Centropus aristata			
				Avena fatua				Schoenus sp.			
Dampiera ? incana				Vulpia myuros				Centropus (small)			
				(Austrian)				Schoenus ? nanus			
Chorizanthe racemosa				HERBS Aristida contorta	16/8			Lepidosperma alb. pubesc.	sg. gran. (fue)		(usp)
Chorizanthe genistoides			(usa)	sphaerocarpa (usp)							
Scaevola spinescens	ADJ		X	Borja ? stricta (2 spp.)	16/8		X	Platysace maxwellii	16/8		
? Stylobasium	ADJ										
HERBS (cont.)				Podolepis lessonii							
Goodenia berardiana				Rhodentia mengler.				HERBS (cont.)			
Hydrocotyle medicag.				Laurenciella decomp.				Lomandra effusa	16/8		
Drosera (small)				Parentocellia latifolia			X	Arctotheca calendula			
Lomandra effusa				Mitrasacne				Anthropodium capillipes	16/8		
Orchid (small)				Hydrocotyle medic.			X	Cyanidula deformis			
Waltzia ? nitida				Borja sp. 2				Opereularia vaginata			
Gonocarpus modulosus	16/8			? Labelia (seedling)				Thysanotus ? acanth.			
Ursinia anthemoidei											
? Ptilotus				Trachymene ornata				Comesperma integr.			
				Ophioglossum lusif.							

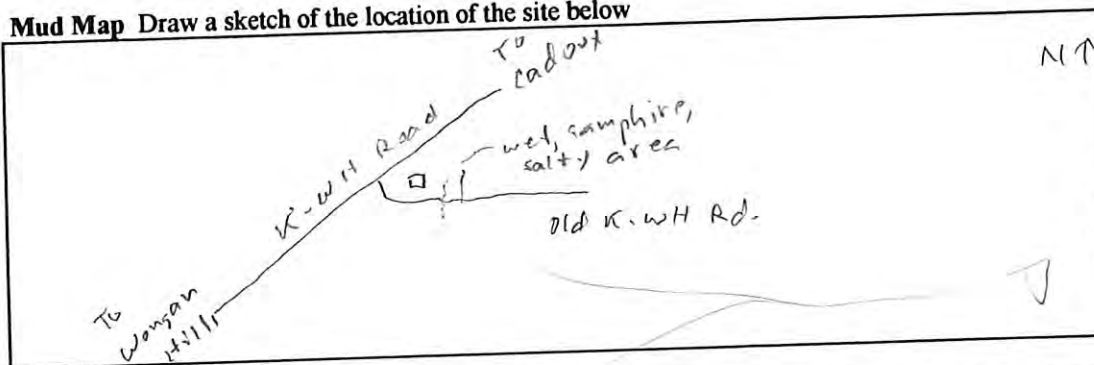
BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA WONGAN HILLS SITE NUMBER WH20
 DATE TRIP 22 Sept 98 RECORDERS NG, ASW
 DATE TRIP 16-8-99 RECORDERS Ng/GK/AW
 DATE TRIP _____ RECORDERS _____

Yorke Gum -
 Samphire

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below



Korda
 Wongan Hills
 rd

Road Location N. of Old Korda-Wongan Hills Rd. ca. 100m E. of Korda-Wongan Hills Rd.
a little past bend

Geographic Location Latitude 30°48.087' S Longitude 116°52.096' E Altitude 17.00
 GPS Tr. En XL Accuracy 3.9
 Map Sheet 2236 (Wongan 1:100,000)

30°48'05.2"
 116°52'05.7"

Photograph Name N. Gibson Number NG13

Topographic Position (Circle the correct response)
 Upland ☐ Lower slope ☒
 Upper slope ☐ Valley ☒ Flat ☐
 Midslope ☐ Washline ☐

2. SITE DATA Circle the correct response

Slope ☒ flat ☒ gentle ☐ steep Aspect N NE E SE S SW W NW

Surface Soil loam / loam Depth to Rock > 50cm Colour grey brown loam over orange loam

Exposed Rock type 0 % surface cover _____ size range _____

Litter 10-20 % surface cover mostly dec. branches Depth (cm) _____

Bare Ground < 20 % surface cover _____

Adapted from 'Bushland Plant Survey' written by B. Keighery (1994) and published by Wildflower Society of WA (Inc). PO Box 64
 Nedlands WA 6008

AWG
 487398
 6592383

3. VEGETATION STRUCTURE AND COVER

3. VEGETATION STRUCTURE AND COVER
For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

For each layer record - appropriate life form, cover class (see below) and dominant species in each					
Cover Class		2-10%	10-30%	30-70%	over 70%
TREES			MALLEES		
	over 15m	5-15m	under 5m	over 8m	under 8m
LIFE FORM		~~overhanging outside~~ w/ot-plot 	 		
COVER CLASS (%)	—	2-10%	—	—	—
DOMINANT SPECIES		Euc. 10x.			
SHRUBS			SHRUBS		
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM	 				
COVER CLASS (%)	dead JAM	—	—	< 2%	30-40% 2m
DOMINANT SPECIES				Halosarcis	Atroplex
				Atroplex	Halosarcis
GRASSES		HERBS	SEDGES	over 0.5m	under 0.5m
LIFE FORM	 	 	 		 
COVER CLASS (%)	30-70	30-70	—		
DOMINANT SPECIES	Austrostipa elae	Anaphalis			
	Lolium rigidum	Pogonolepis stratus			
	Bra...				

4. VEGETATION CONDITION

Comments

Comments Salt collected - species shift;
1 tree 1 rubs and trees dead - 2 live trees in
20x20 (adj.) -NNW and SSW of quadrat

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No W420

Date 22 Sept 98

NG, ACW 16/8/1999

Label each plant with plants number, site code, date and plant's name or working name if required

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
<i>Eucalyptus</i>	✓							<i>Gnaphosia tenuis</i> trident			
								<i>Cotula (australis) bipinnata</i>			
								<i>Cotula coronopifolia</i>			
								<i>Hypochaeris glabra</i>			
								<i>Anagallis arvensis</i>			
								<i>Arctotheca calendula</i>			
MALLEES								<i>Triglochin striatum</i>			
								<i>Mesembryanthemum nodiflorum</i>			
				GRASSES							
				<i>Austrostipa eleg.</i>							
SHRUBS				<i>Lolium rigidum</i>				<i>Podolepis capillaris</i> (yellow)			
<i>Atriplex vesicaria</i> veg	✓			<i>Bromus medritensis</i>				SEDGES (No Sedges)			
<i>Halosarcia? halocnemoides</i>	✓			<i>Parapholis incurva</i>							
<i>Rhagodia drummondii</i>	✓			<i>Lepidosperma</i>							
<i>Halosarcia pergranulata</i>	✓										
shrub (small) ADJ				HERBS							
				<i>Sanchois oleraceus</i>				HERBS (cont.)			
				<i>Triglochin minutissima</i>				<i>Carpobrotus</i>			
				<i>Centrolepis (sm) - hummillima</i>				1bns, narrow leaf,			
				<i>Calandrinia (single wh. fl.)</i>				sun purple flower			
				<i>Centrolepis 2 ataper. polygama</i>				ADJ			
				<i>Pogonolopia striata</i>				<i>Triglochin mucronata</i>			
				<i>Gnaphosia</i> - prostrata = <i>Hyalodrymonia glabra</i>				<i>Osteospermum elandest</i>			
				<i>Crassula colorata</i> var <i>acum.</i>							
				<i>Podotrocha? angustifolia</i>							
				<i>Senecio glassanthus</i>							

✓ *Triglochin minutissima* vsp -
- *Bradyana berfolia* 249.

16/8

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA WONGAN HILLS

SITE NUMBER WH 21

(Trophy Site
WH 6 B)

DATE TRIP 23 Sept. '98

RECORDERS AG, ASW

DATE TRIP 26/8/1999

RECORDERS AW/NG/GK

DATE TRIP _____

RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below

see WH 6 B

Cadoux -
Wongan Hills
rd

The NE corner is NE end of trophy fence; the E side of
quadrat is at the trophy

Road Location Koorda - Wongan Hills Road, between
W. of Cadoux

Geographic Location	Latitude	S Longitude	E Altitude
(see WH 6 B)	GPS Tr En. XL	Accuracy	
08:00	Map Sheet 2336	(Koorda 1:100,000)	

30° 45' 24.6"
117° 05' 25.7"

Photograph	Name	Number
	N. Gibson	NG14

Topographic Position	(Circle the correct response)
Upland	☒ flat
Upper slope	Lower slope
Midslope	Valley
	Washline

2. SITE DATA Circle the correct response

Slope	gentle	steep	Aspect	N	NE	E	SE	S	SW	W	NW
☒ flat											

Surface Soil	Depth to Rock	Colour
sand / clay at 10cm	> 50cm	Orange / Pale

Mottled
creamy yellow

Exposed Rock	type	% surface cover	size range
	0		

Litter	% surface cover	Depth (cm)
30 dead branches & needles		< 5cm (40-15)

Bare Ground	% surface cover
< 5	

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

3. VEGETATION STRUCTURE AND COVER
For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class	2-10%	10-30%	30 - 70%	over 70%
-------------	-------	--------	----------	----------

TREES				MALLEES	
	over 15m	5-15m	under 5m	over 8m	under 8m
LIFE FORM			 		
COVER CLASS (%)					
DOMINANT SPECIES					

SHRUBS				SHRUBS	
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	(>) under 0.5m
LIFE FORM	 	80-90 			
COVER CLASS (%)	—	> 70	—	—	< 2
DOMINANT SPECIES		<i>Allocas. camp.</i> (<i>mel. ? uncinata</i>)			<i>Baeckha. ? grandifl.</i>

GRASSES		HERBS	SEDGES	over 0.5m	under 0.5m
LIFE FORM	 	30-40   	  		  
COVER CLASS (%)	—	30-70	—		2-10?
DOMINANT SPECIES		<i>Borya</i> (<i>Laur. davey</i>) (<i>Podol. less.</i>)			<i>Schoenus</i> <i>nanus</i>

4. VEGETATION CONDITION

Comments

ments Good nick
Dead branches on ground

1-2

(of 6)

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

Label each plant with plants number, site code, date and plant's name or working name if required

SITE No WH21

Record on Sheet

- Column 1 plant name

Date 23 Sept - '98

- **Column 2** **plant number**

NG. ASW 26/8/99

• Column 3 flowering time- TICK if species flowering

- **Column 4** identification check

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
				26/8/99 Caladenia varians ✓				Blennospora drummondii ✓✓			
				26/8/99 Lawrenceella davenp ✓				? Lobelia ✓			
				26/8/99 Thysanotus mangrovi ✓				Levenhookia stipitata ✓			
				✓ 26/8/99 Cyanicula deformis ✓				Crascula colorata ✓			
				26/8/99 Arctotheca calendula ✓				Drosera rotundifolia (bulbosa) ✓			
MALLEES								Caladenia discolorata ✓			
20x20:								Caladenia roei ✓			
Eucalyptus ssp. subangusta ✓								Divaria (=whis) & porrifolia ✓			
5m smooth grey bark to base.	(bp)			GRASSES				Enochilus (leaves) - dilatatus 26/8 ✓			
the blot				Araucaryoxylum ✓				?Thysanotus spackii ✓			
SHRUBS				Alphitoea elegans ✓				Divaria recurva ✓			
Allocasuarina campostoma ✓				Pentastemon aeroides ✓				Divaria (pest fl.) ✓			
metallum & cuneata ✓				Nerine alopecurus ✓				Caladenia varians ✓			
				?Vulpia myuros ADJ ✓				SEDGES			
Baeckea grandiflora / megaphylla ✓								Schwebia nervosa ✓			
				HERBS							
sterophylla sterophylla ✓				Boronia constricta ✓							
?Rhodanthura ✓				?Crascula pedicellata ✓				HERBS (Foul-)			
Arcadia sclerosperma ADJ ✓				Podolepis laesonii ✓				Velleia cynopota ✓			
(>2m)				?Podolepis gardneri pepper ✓				?Podolepis (Veltaria) ✓			
Eriostemon ADJ ✓				Trachymenon eximium omata ✓				Drosera rotundifolia macrantha ssp ✓			
				Rhodantha laevis ✓				to >1m - macrantha 26/8 ✓			
				Rhodantha mungleri ✓				Hypochaeris glabra ✓			
				Weitzia acuta ✓							
				Nyctaginia demissa ✓							
Baeckea crispiflora (adj) ✓				Brachyane (f+?) perpusilla ✓							
				Millotis tenuifolia ✓							
				Hydrocotyle ? Indianth callicarpa ✓							
				Poranthus microphyllus ✓							

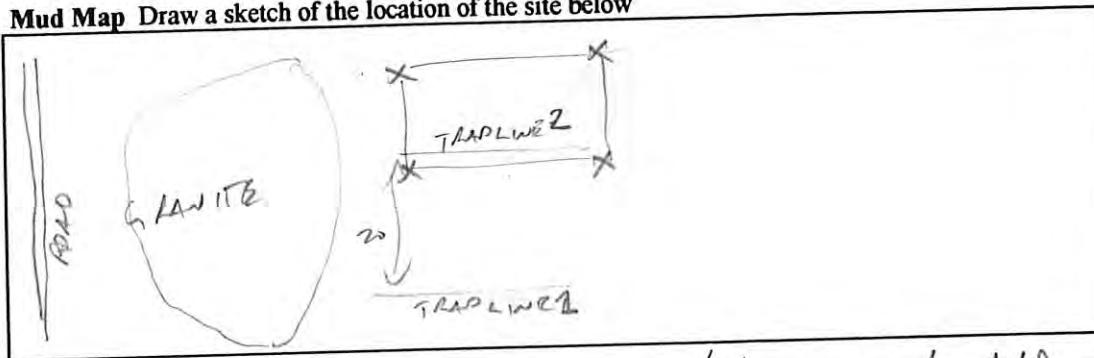
BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA Wongan Hills, Coolgardie SITE NUMBER WH22
 DATE TRIP 22/9/98 RECORDERS ASW NG
 DATE TRIP 26/8/1999 RECORDERS NG/GK/ANW
 DATE TRIP _____ RECORDERS _____

#6
Tammam
near granite
(133)

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below



Road Location Rabbit Proof Fence Rd / Noorajin Soak NR

Geographic Location	Latitude	S Longitude	E Altitude
11:00	GPS	Accuracy	
	Map Sheet	2336 (Koorda 1:100,000)	

30° 45' 15.7"
117° 14' 24.6"

Photograph Name NS 15 Number (M. Gibson)

Topographic Position (Circle the correct response)

Upland	below granite	Lower slope
<u>Upper slope</u>		Valley
Midslope		Washline

2. SITE DATA Circle the correct response

Slope flat gentle steep Aspect N NE E SE S SW W NW

Surface Soil Dk br loam Depth to Rock 50cm + Colour dark brown (moist)

Exposed Rock type 0 % surface cover granite rubble size range

Litter 2 % surface cover — Depth (cm)

Bare Ground 2-10 % surface cover

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

3. VEGETATION STRUCTURE AND COVER
For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer					
Cover Class		2-10%	10-30%	30-70%	over 70%
TREES					
	over 15m	5-15m	under 5m	over 8m	under 8m
LIFE FORM		(ADJ) 			
		2-10			
		<i>Allocas hugh</i>			
COVER CLASS (%)					
DOMINANT SPECIES					
SHRUBS					
	over 2m	2m - 1.5m	1.5 - 1m	1 - 0.5m	under 0.5m
LIFE FORM					
		2-10		10-30	
		<i>Allocas camp</i>		<i>Grewia panic</i> <i>Pod. visc</i>	
COVER CLASS (%)					
DOMINANT SPECIES					
GRASSES		HERBS	SEDGES	over 0.5m	under 0.5m
LIFE FORM					
	22	>70			
	<i>Avena fide</i>	<i>Podolepis graph</i> <i>Wolffia alen</i>			
COVER CLASS (%)					
DOMINANT SPECIES					

4. VEGETATION CONDITION

2

(out of 5 or 6)

Comments

Some wedy grones

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

SITE No WH22 (13B)
Date 23 Sept 98
NG, ASW 26/8/99

Label each plant with plants number, site code, date and plant's name or working name if required

Record on Sheet

- Column 1 plant name
- Column 2 plant number
- Column 3 flowering time- TICK if species flowering
- Column 4 identification check

Herbs:

✓ Actinobole uliginosa — YES

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
Alloea huegelii (20x20)				Herbs:				Vallera cyano-bat			✓
26/8/1999 Caballera dimidiata			✓	Chthacephale pseudovax			✓	Podolepis gardenii tepperi			✓
" " roei				OphioGLOSSUM lusit.			✓	Podolepis capillaris			✓
" Podotrocha gnaphaloides			✓	Phyllanthum divergens	usp		✓	Grewia ? pedunculata			✓
" Vulpia myuros				Calandrinia sp (not a Pseud)	ADT		✓	Hyalospermum glutinosum			✓
" Crassula colorata								Drosera glanduligera			✓
26/8/99 MALLEES				26/8 Goodenia beard				Drosera rotundifolia			✓
Centrolepis drummondiana								Hyalospermum demissum			✓
" " cephaliformis cephalof				GRASSES				Quinchia urvillei			✓
" Actinobole uliginosum				Avena fatua			✓	Podolepis canescens			✓
" Chthacephale pseudovax				Avena canyula			✓	Erodium cymosum	usp		✓
SHRUBS				Pantoclisia arvensis			✓	Hyalospermum demissum			✓
Alloea comp			✓	Elcharta loricifolia			✓	Drosera bulbosa			✓
Dodo visci			✓	Bromus rubens			✓	SEDGES			
Grevillea ferris								Lepidosperma pubisga			✓
Alloea huegelii (seedling)			✓	Rhodanthe laevis				Schoenus neri			✓
(21.5 m tall)											
Xanthorrhoea nanus				HERBS				Herbs:			
Calytrix (? pl. - bud) depressa			✓	Podotrocha gnaphaloides			✓	Drosera			
Aracis lasiocalyx ADT				Watsonia bartramii				Eurychorda rac. rac.			
HERBS (cont.)				Hylachia elata			✓	? Hyalospermum (comp) glutinosum (young)			
Petrophragma retutina			✓	Polypodium sp. pituita conferta			✓	Anagallis arvensis			✓
Cheilanthes australis			✓	Podotrocha lanensis			✓	Podotrocha angust.			✓
Hydrocotyle medic.				Gonolobus panic nodulosus			✓	? Lobelia (sp. milk y?)			
Comesperma integrum			✓	Chorizanthe lanthanoides			✓	Leonardra ethusa			✓
Senecio glossanthus			✓	Trachypogon cynosbati			✓	Dianella revoluta			✓
Wahlenbergia peissii				Paranatalia latifolia			✓	X Onoclea vaginata			✓
				Rutidosis melaleuca				Archibutea caland.			
				Blennospora drummondii				Orthocentrus asperum			
				San Hydrocotyle pilifera	usp			(Shaking, rizer)			✓
				San white leaf hookii				Hibiscus			
								Arthropod. capill.			✓

26/8/99 Thysanotus mangles ✓

✓ 26/8/99 Climbing Drosera macrantha v
ssp macrantha

BUSHLAND PLANT SURVEY RECORDING SHEET 1 - use pencil only

BUSHLAND AREA WONGAN HILLS SITE NUMBER WH 23

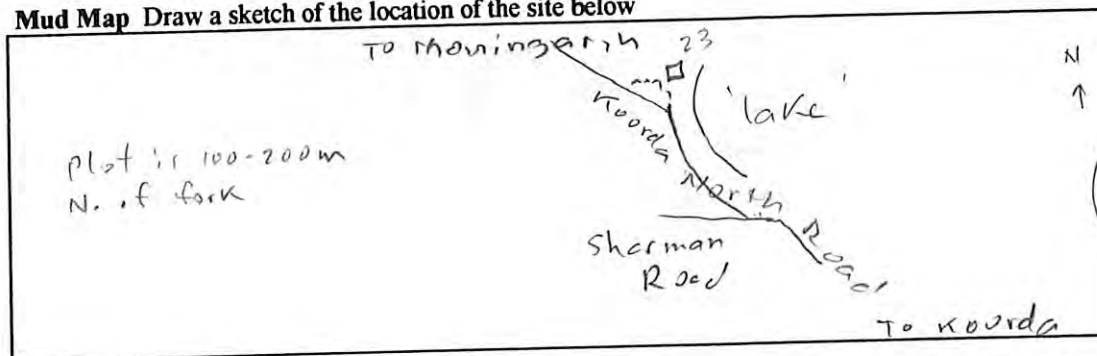
DATE TRIP 23 Sept '98 RECORDERS NG, ASW

DATE TRIP 26/8/1999 RECORDERS NG/GK/AW

DATE TRIP _____ RECORDERS _____

1. LOCATION of the QUADRAT

Mud Map Draw a sketch of the location of the site below



Road Location N. of Koorda Road at old & new road fork; 1.3 km NW of Sherman Rd intersection. Park 0.2 km. N. of intersection of old dirt and new, bitumen Koorda Nth Road.

Geographic Location Latitude 30°43'43.7" S Longitude 117°20'07" E Altitude 14.20
GPS TR. En. XL Accuracy 2.9
Map Sheet 2336 (Koorda 1:100,000)

Photograph Name NG Gibson Number NG 17

Topographic Position (Circle the correct response)
Upland ☐ Lower slope ☒
Upper slope ☐ Valley ☒
Midslope ☐ Washline ☐

2. SITE DATA Circle the correct response

Slope ☒ flat ☐ gentle ☐ steep Aspect N NE E SE S SW W NW

Surface Soil clay Depth to Rock solid (clay?) 10 cm Colour red-brown (dry)

Exposed Rock type becoming harder with depth % surface cover size range

Litter 20-30 % surface cover mainly branches Depth (cm) <5-75

Bare Ground ~30 % surface cover including lichen-covered

Adapted from 'Bushland Plant Survey' written by B. Keighery (1994) and published by Wildflower Society of WA (Inc). PO Box 64 Nedlands WA 6008

#18
Mallee
(E. ? kond.
or yilg-)

Koorda
North rd

30°43'26.2"
117°20'42.6"

AMG
532027
6600931

BUSHLAND PLANT SURVEY RECORDING SHEET 2 (Mulr)- use pencil only

3. VEGETATION STRUCTURE AND COVER

For each layer record - appropriate life form, cover class (see below) and dominant species in each layer.

Cover Class 2-10% 10-30% 30-70% over 70%

TREES						MALEES	
	over 15m	5-15m	under 5m	over 8m	under 8m		
LIFE FORM		(to 4m) (see mallee) 	 			30m	10m
COVER CLASS (%)	—	See Mallee	—	—	2-10		
DOMINANT SPECIES		F. ...			Euc. ... / yilgarn.		
SHRUBS						SHRUBS	
	over 2m	(>) 2m - 1.5m (-2)	1.5 - 1m	1 - 0.5m	under 0.5m		
LIFE FORM	 	~20% 				2m	1m
COVER CLASS (%)	—	10-30	—	?	?		
DOMINANT SPECIES		Acacia ... ? Templetonia sulcata		Rhagodia			
GRASSES		HERBS		SEDGES		over 0.5m	
						under 0.5m	
LIFE FORM	 	 		 		 	
COVER CLASS (%)	?	?					
DOMINANT SPECIES	Mixed	Mixed					

4. VEGETATION CONDITION

(2-3)

(of 6)

Comments

Overscorey and middle storey has dead branches and, nearby, dead plants - probably salt affected but with lichen crust and few weeds

BUSHLAND PLANT SURVEY RECORDING SHEET 3 - use pencil only

5. SPECIES PRESCENCE

Label each plant with plants number, site code, date and plant's name or working name if required

SITE No WH 73

Record on Sheet

Date 23 Sept '98

• Column 1 plant name

• Column 2 plant number

• Column 3 flowering time- TICK if species flowering

• Column 4 identification check

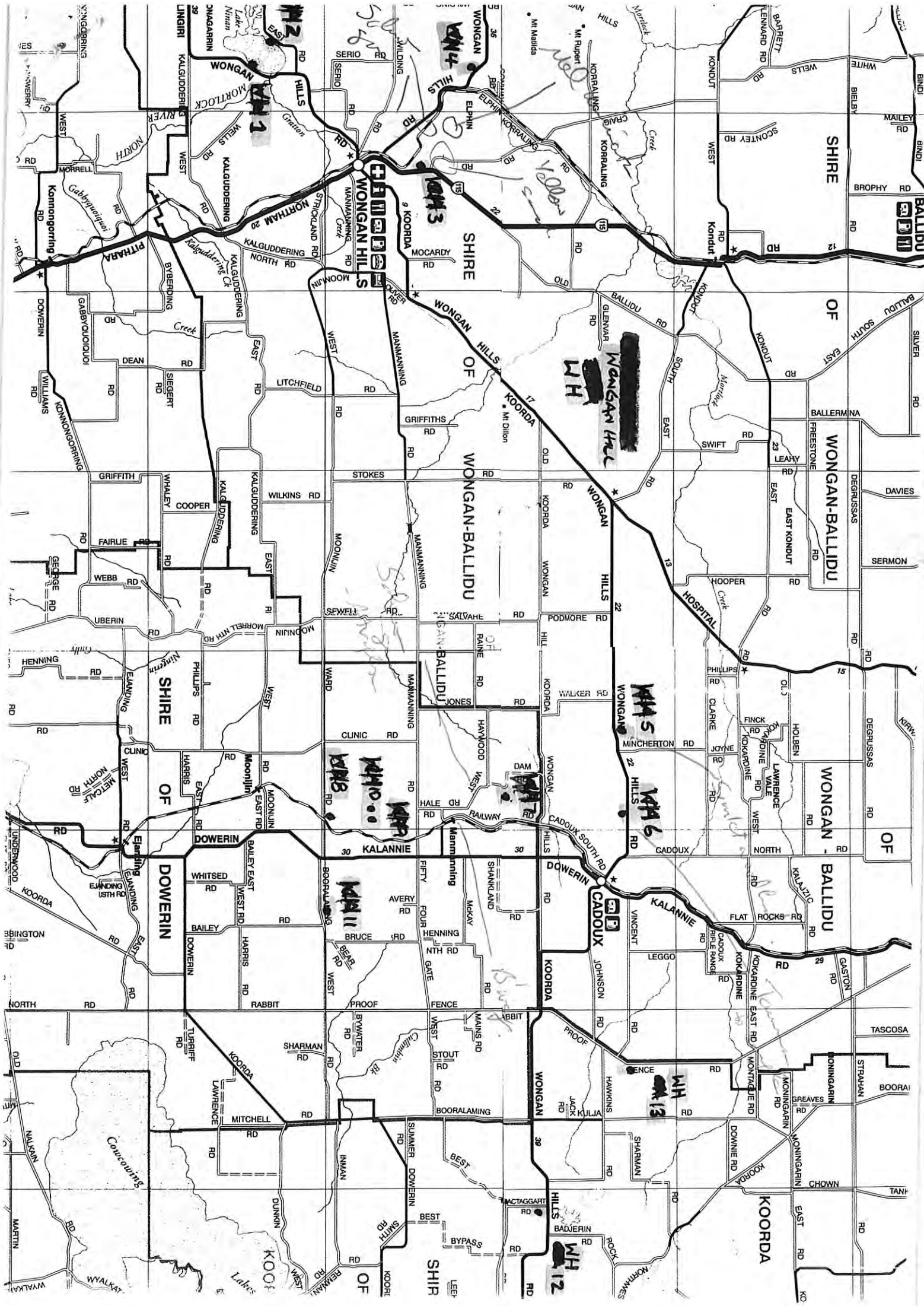
NG, APL 26/8/1999

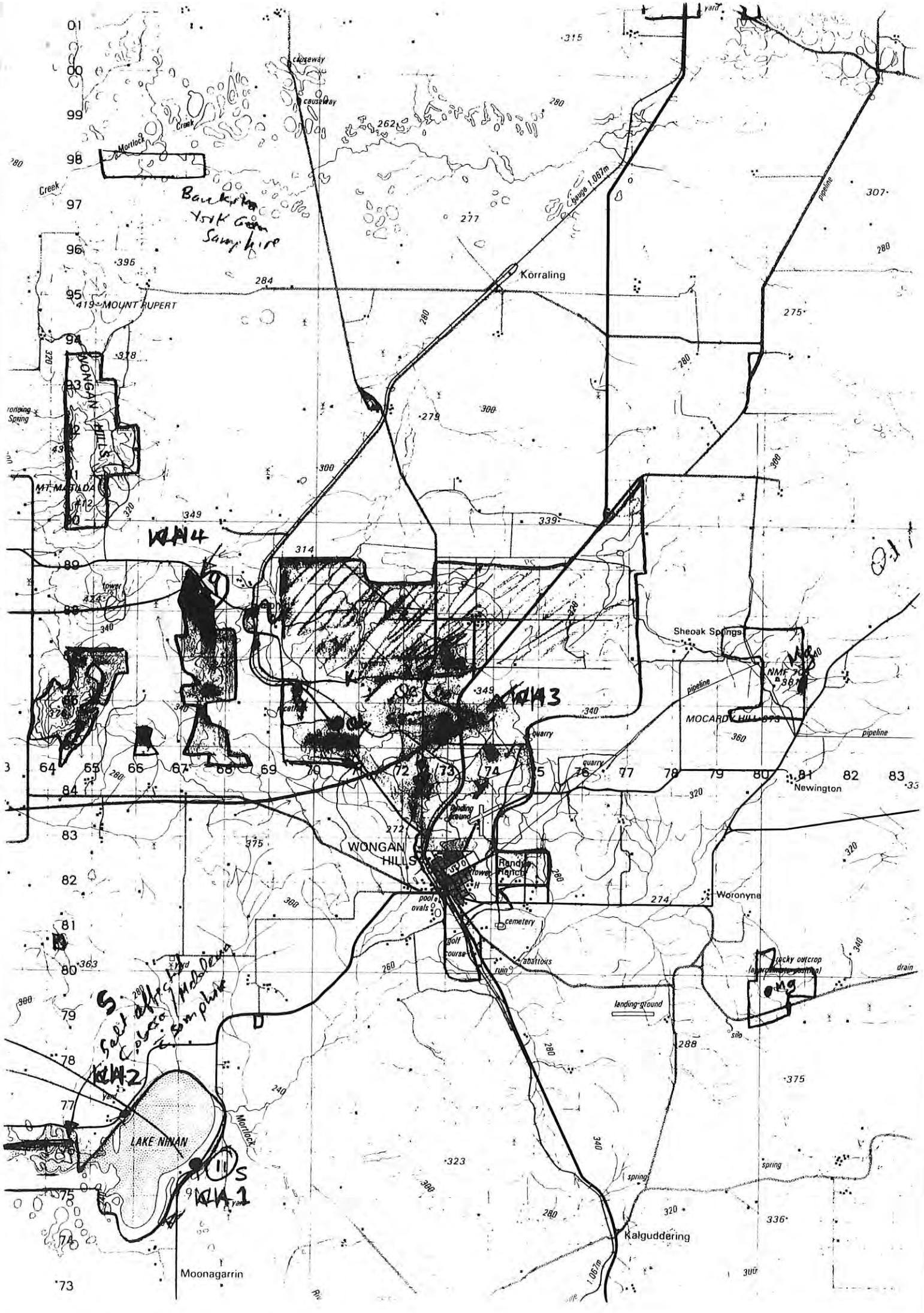
= Calo aph multiflora
Tri... Skirrophora (comp.)

TREES	No	FI	ID	SHRUBS (cont.)	No	FI	ID	HERBS (cont.)	No	FI	ID
26/8 Caladenia hirta rosea				Herbs:				Senecio glossanthus			
26/8 " - longicauda				26/8 Eucalyptus canosa				Brachycome ibicifolia			
26/8 Velleia cynopos				26/8 Clematis delicatula				(? Angianthus hairy; y. fls.)			
26/8 Hyalospermum leucomissum				26/8 " Sparculla acutensis pentandra				Crassula colorata var acuta			
26/8 Rhodanthe chlorocephala				26/8 Selitolaena diacantha				Calandrinia eremaea			
26/8 Pod. Heteropodum curvipes				26/8 Phyllanthum paradox				both Bulbine semiberberis			
MALLEES				26/8 Thysanot mangals				Arctotheca calendula			
calad. jules ssp. viridis (usp)				26/8 Templetonia sulcata				Urospermum (= Osteospermum)			
Euc. 7 Kordin. (? ylgar n.)				GRASSES				Therabryanthemum nodifl.			
dark grey, rough stem, to 3m; smooth				26/8 Poriraria debilis				Trachymene ornata			
1st grey above; lvs. dark green, glossy				Vulpia myuros				Hypochaeris glabra			
SHRUBS				Brachycome rubra				Calotis hispidula			
				Pentstemon serotinus				Sonchus oler.			
				Austrostipa elegant				SEDGES (no sedges)			
26/8 Hec. preissii				Austrodanthonia				Mitrasacine			
Aceae tetragynophylla				Lolium rigidum				Plantago aff. hispidula			
Templetonia ? sulcata				Rhodanthe floribunda				Erodium (no fls.) - cyperum			
Emmophila decipiens				HERBS				Lepidium rotundum			
Rhagodia drummondii				Ptilotus ? exaltatus				Hydrocotyle sp. (dimorph.)			
Stearia sp.				Hyalospermum (glutin. inb. form)				Poa (Hyalospermum)			
Atriplex vesicaria				Pogonopis stricta				Dianella revoluta			
Enchyliacae toman.				Emmophila ?				Daucus glochid.			
26/8 Eucalyptus trichoptera				Goodenia occidentalis				Wahlenbergia major			
26/8 Ptilotus obovatus				Trachymene cyanop.				Podolepis gardenii tepperi			
26/8 Ptilotus divaricatus				Podolepis lesson.				? Caranb. (= WH 13) (? Sparg.)			
Exocarpus ophyllus				Hyalospermum glutinosum				Triglochin ? calcitr.			
				Podolepis canescens				Crassula pedicillosa			
Rhodanthe chlorocephala ssp. rosea				Blennospora drummondii phlegmifer				Rhodanthe pygmaea			
				Podolepis capillaris (yellow)				No Sedges			
				Isoetes graminifolia				26/8 Podolepis canescens			
								26/8 Cntholnorph. pseudov.			

" Stellaria filifolia
Podolepis tepperi

both Osteospermum / Urospermum





9

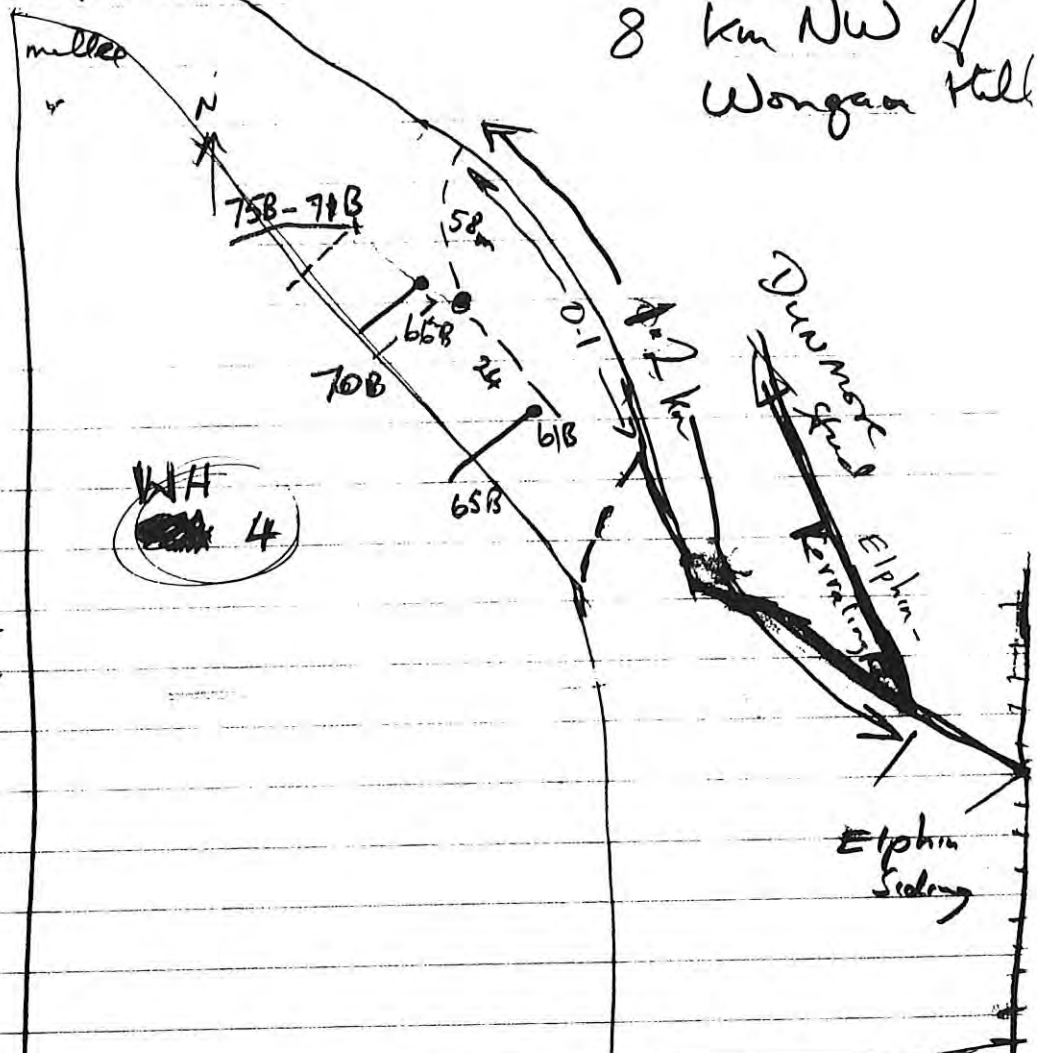
Cadoux Survey Area

Rogers Nature Reserve No. 1
(West of Eastern Block)

Qe Quating Elluvial
Latent gravel $\approx$ Pavement

8 km NW of
Wongah Hill

Euc *drummondii*
Euc *gittinzi*
Casuarina campervii
Dryandra commosa



30° 50' 11.1" S
116° 39' 40.4" E
Pdrop = 1.8

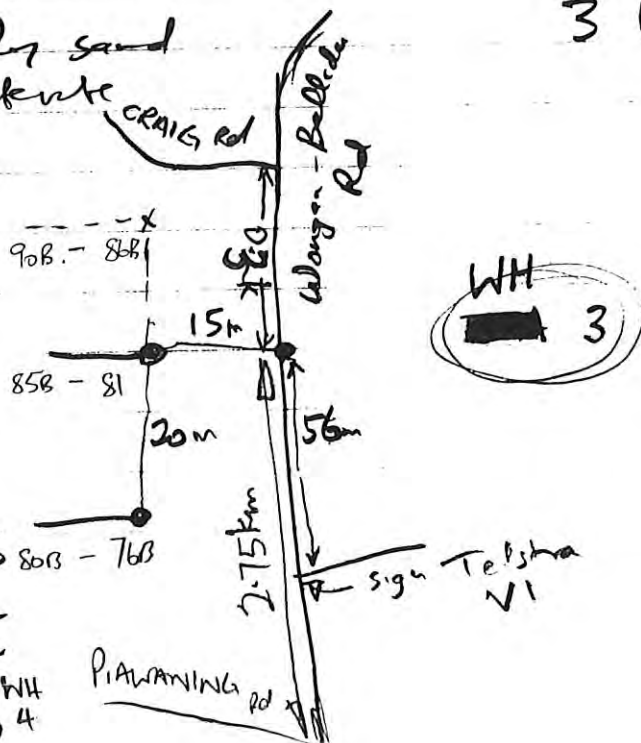
10

Qe-K Gray gravelly sand
over latent

16418 Townsite Reserve for Wongah Hill

3 km N of Wongah Hill

Shrubland of
Euc. pyriformes
Dryandra circoides
Actinostachya
Casuarina campervii
Hakea trifurcata



30° 51' 48.7" S
116° 43' 10.2" E
Pdrop = 2.3
WH 4
PRAWANING RD
sign Telstra
VI

(11)

Lake Ninnan & Cadoux Survey Area
↑ 27025 Eastern Side

Mo (lower) - fringing lake
ALTY BUT NOT SALTED

(good condition) but weedy

Casuarina obesa

Eric loxophloea

Rhagodia

Santalum

Samphires

WIA 2

468-608

Form Rd

12

30m

468-508

508-558

558-608

608-658

658-708

708-758

758-808

808-858

858-908

908-958

958-1008

1008-1058

1058-1108

1108-1158

1158-1208

1208-1258

1258-1308

1308-1358

1358-1408

1408-1458

1458-1508

1508-1558

1558-1608

1608-1658

1658-1708

1708-1758

1758-1808

1808-1858

1858-1908

1908-1958

1958-2008

2008-2058

2058-2108

2108-2158

2158-2208

2208-2258

2258-2308

2308-2358

2358-2408

2408-2458

2458-2508

2508-2558

2558-2608

2608-2658

2658-2708

2708-2758

2758-2808

2808-2858

2858-2908

2908-2958

2958-3008

3008-3058

3058-3108

3108-3158

3158-3208

3208-3258

3258-3308

3308-3358

3358-3408

3408-3458

3458-3508

3508-3558

3558-3608

3608-3658

3658-3708

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3958-4008

4008-4058

4058-4108

4108-4158

4158-4208

4208-4258

4258-4308

4308-4358

4358-4408

4408-4458

4458-4508

4508-4558

4558-4608

4608-4658

4658-4708

4708-4758

4758-4808

4808-4858

4858-4908

4908-4958

4958-5008

5008-5058

5058-5108

5108-5158

5158-5208

5208-5258

5258-5308

5308-5358

5358-5408

5408-5458

5458-5508

5508-5558

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5608-5658

5658-5708

5708-5758

5758-5808

5808-5858

5858-5908

5908-5958

5958-6008

6008-6058

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6758-6808

6808-6858

6858-6908

6908-6958

6958-7008

7008-7058

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11108-11158

11158-11208

11208-11258

11258-11308

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11358-11408

11408-11458

11458-11508

11508-11558

11558-11608

11608-11658

11658-11708

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13158-13208

13208-13258

13258-13308

13308-13358

13358-13408

13408-13458

13458-13508

13508-13558

13558-13608

13608-13658

13658-13708

13708-13758

13758-13808

13808-13858

②

Cadoux Survey Area

23665

Nature Reserve

8 km W of
Cadoux
Siding

B

Beltkuling.)

Euc. erthonema

E. aff. redunca

over
Melaleuca
undulata

+ 3 other *Melaleuca*



sandy loam / mottled clay

$30^{\circ} 45' 48.9'' S$

$117^{\circ} 02' 55.4'' E$

Pdop = 2.6

WH
£5

③

Mannering Dam N.R.

7 km SSW
of Cadoux

Mo (Mortlock - duplex) - mid-level N
in landscape

E. salubus

E. salmonophora

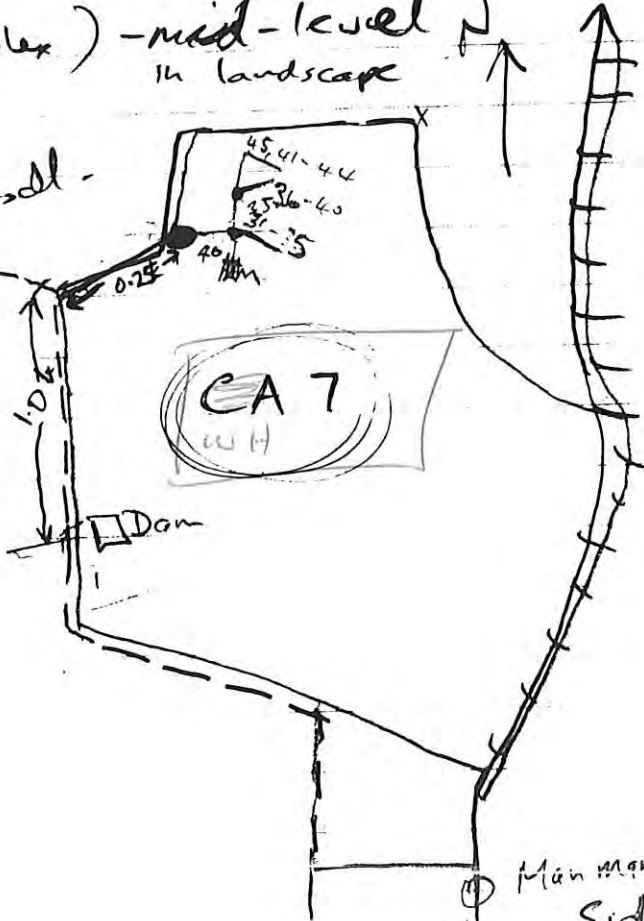
E. gracilis

over *Melaleuca* shrubs
+ *Oliveria* + litter

$30^{\circ} 49' 13.0'' S$

$117^{\circ} 04' 57.7'' E$

Pdop = 2.6



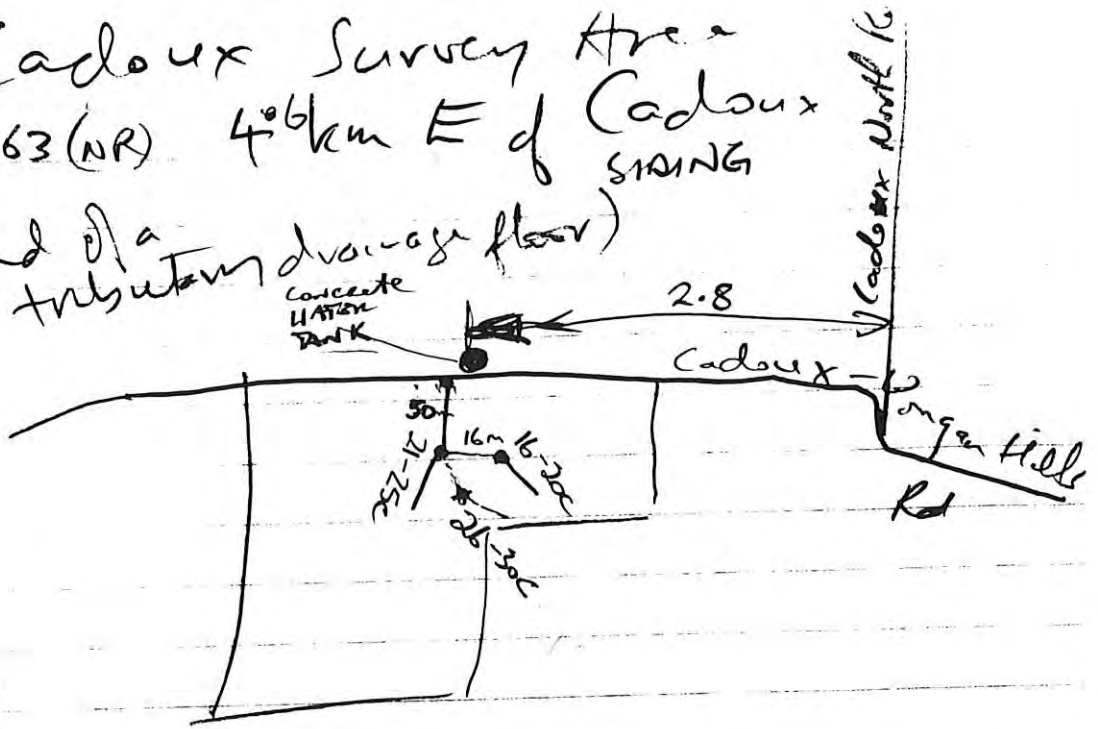
Cadoux Survey Area

C↑22363(NR) 4.6 km E of Cadoux
SING

(1)

Mo (upper end of a tributary drainage floor)
Mortlock

Mallee
Broombush
Allocasuarina



30° 45' 24.6" S
117° 05' 25.7" E

P_{drop} = 2.7

WH
6

Cadoux Survey Area

(13)

Maumanning NR A-23156
(SE corner)

17 km S
of Cadoux

$30^{\circ} 54' 53.4''$
 $116^{\circ} 05' 41.3''$

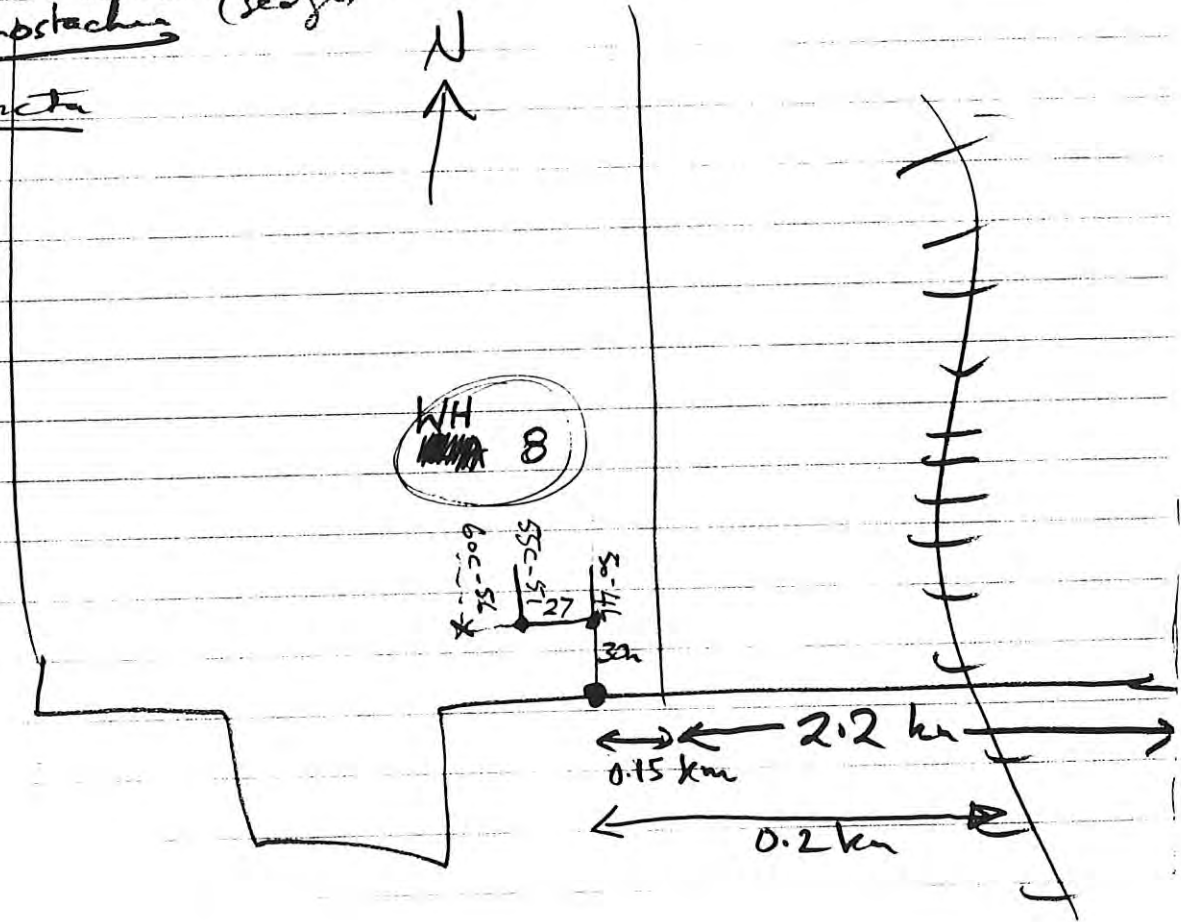
100p. 201

M (Monkopen = gravel sands)
grey sand — a little clayey

Casuarina canadensis shrubland

Ecdicholia monostachya (sedge)

Borya constricta



Cadoux Survey Area

(4)

Manmanning Nature Reserve, 17 km South of Cadoux

Bg Belmoring gravel spur

Belmoring

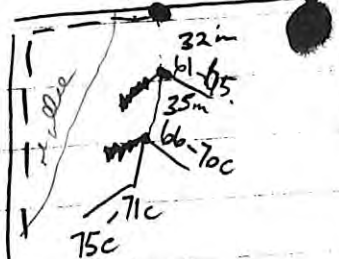
- E. transcurvatus* } Wood
- E. ? calycogone* }
- E. aff. reduncus* } Tall Shrubs
- Metaleuca sp. n.* }
- Alchornea maculata* } Low shrubs
- Eriostemon* }

30° 53' 32.2" S

117° 05' 17.3" E

Pdop = 2.3

(4) ← 0.9 →



WH 10

61c - 75c

WARD Rd

N ↑

(5) Qd (top)

Deep yellowish sand (pink)
Lower laterite band
at depth.

E. berrucapineas v. *metlee*

- Dryandra circioides*
- Pterophila schubertianum*
- Leptospermum* + other shrubs mixed.

30° 53' 32.0" S

117° 05' 46.0" E

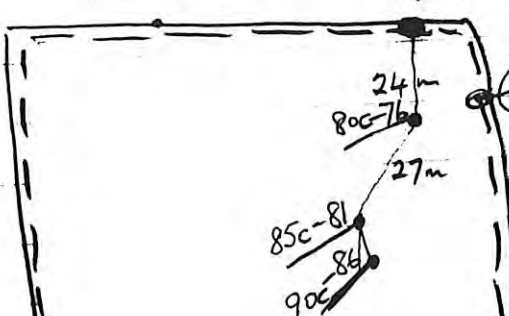
Pdop = 2.6

Manmanning Nature Reserve 17 km South of Cadoux

WKA 9

76c - 90c

0.1



2.6 km

N ↑

WARD Rd

⑥

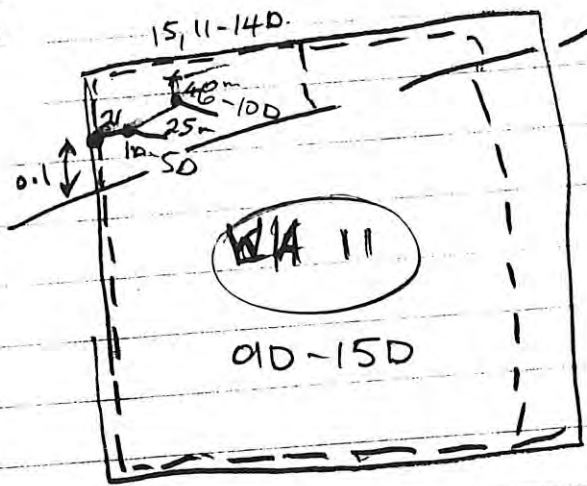
Cadoux Survey Area
Moonijin NR, 16 km S of Cadoux

Y (York)



Brown loam
(granite exposed nearby)

York Gum } Wood
Jam



$30^{\circ} 54' 56.8''$ S

$117^{\circ} 09' 05.3''$ E

H Dop = 2.8

⑦

Cadoux Survey Area

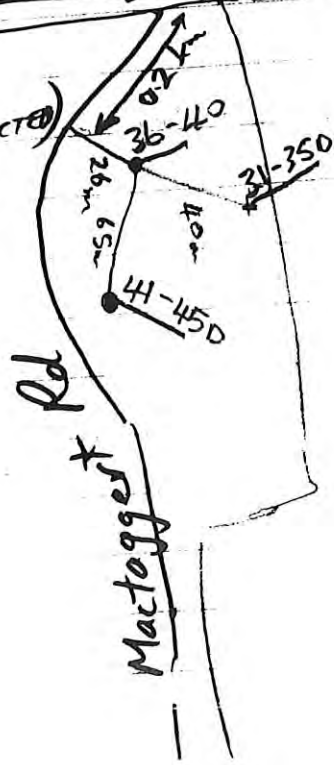
Mo (Mortlock) - (Plover)



Woolkoolba NR
CA 24838

18 km ESE of Cadoux

Savannah
dead Melaleuca (SALT AFFECTED)
+ some shrub incl. Atriplex



$30^{\circ} 48' 08.0''$ S

$117^{\circ} 19' 18.7''$ E

H Dop = 2.5

Cadoux Survey Area 10.0km E of Cadoux

(8) Moovajin Sank Nature Reserve A↑

Mg

Casuarina huegeliana

Acacia lasiocalyx

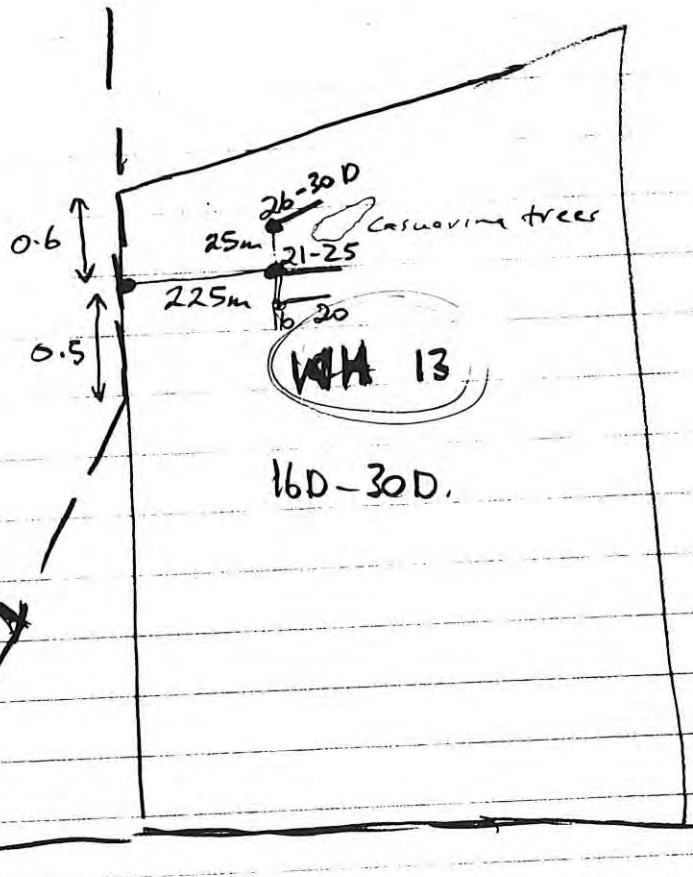
Casuarina acutivalvis

Lepidosperma angustifolium

Albizia spicata clon

Boerhaavia nutans

" *carinata*
etc



peg on road :- $30^{\circ} 45' 15.7'' S$

$117^{\circ} 14' 24.6'' E$

$P_{dop} = 3.0$

traphue peg

$30^{\circ} 45' 17.1'' S$
 $117^{\circ} 14' 30.5'' E$

$P_{dop} = 2.2$