SITE NAME: COCKABUTTA CREEK 25 (ULAN ID# 1575)

Site Name: Site Type: Date Recorded:		utta Creek 25 elter with Artefacts 14	Recorder: MGA Grid Reference: Topographic Map:	Peter Kuskie 752140:6433655 Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Scarp Steep >50		Vegetation: Ground Disturbance:	Forest/bush/regrowth Low
Rock Outcrop Materia Outcrop Type: Outcrop Form: Aspect: Erosion: Surface Condition: Soil: Disturbance to Deposi Causes of Disturbance	t:	Sandstone Rock shelter Scarp South Cavernous Exfoliating, accreti Sand Moderate - high Animal burrows	ons	
Possible Extent of Potential Archaeological Deposit: Possible Depth of Potential Archaeological Deposit: # of Artefacts: Archaeological Visibility: Shelter Floor Area: Habitable Shelter Area (roof 1+ metres above floor):			2 x 2 and 2 x 1 metre >0.5 metres 1 20 % 2.4 x 1.2 and 2.4 x 2 2 x 2 and 2 x 1 metre	metres

Lithic Items (recorded during present survey):

Artefact #	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	white	quartz	core fragment	26x18x10			1 metre in front of dripline

- **D** Recorded during survey for Ulan West Modification;
- Dimensions 1.2 metres deep and 2.4 metres wide and 1.2 metres high in alcove at front, 2 x 2.4 metres in inner cavern with 1.3 metre high roof;
- Disturbance from wombat burrow at front and other animal impacts in cavern;
- □ Small pads 2 x 2 metres in cavern and 2 x 1 metres in front alcove;
- □ Low research potential.



Site Location: Cockabutta Creek 25 (100 metre MGA grid; one metre contours).



Site Name:	Cockabutta Creek 26	Recorder:	Peter Kuskie
Site Type:	Isolated Find	MGA Grid Reference:	752520:6433473
Date Recorded:	26/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Simple Slope Moderate >50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	1	1	1	10	10	0.1	1	10.000	possible

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	752520	6433473	white	quartz	flake - distal	12x10x2			

- □ Located during survey for Ulan West Modification;
- □ Long way from water;
- □ Low potential for deposit of value;
- □ Sandy soil;
- □ Minor quartz around;
- □ Ironbark, gums in forest but heavily logged in past, abundant fallen timber.

Site Location: Cockabutta Creek 26 (100 metre MGA grid; one metre contours).





Site Name:	Cockabutta Creek 27	Recorder:	Peter Kuskie
Site Type:	Artefact Scatter	MGA Grid Reference:	752374:6433436
Date Recorded:	27/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Simple Slope Gentle >50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low

Visib Extent Surfac Exposu Length	of Extent of e Surface es: Exposures:	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varie	varies	1	1	1	10	10	0.1	2	20.000	possible

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	752374	6433436	white	quartz	core	25x21x12			4 scars, 2 platforms
2	752374	6433436	white	quartz	flake - longitudinal	30x22x12			

- □ Located during survey for Ulan West Modification;
- □ 20 metres northwest of shelters;
- □ Geebung, ironbark forest heavily logged in past;
- □ Quartz pebbles around.

Site Location: Cockabutta Creek 27 (100 metre MGA grid; one metre contours).





Site Name:	Cockabutta Creek 28	Recorder:	Peter Kuskie
Site Type:	Rock shelter with Artefacts	MGA Grid Reference:	752377:6433418
Date Recorded:	27/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Scarp Steep >50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low
Rock Outcrop Materia Outcrop Type: Outcrop Form: Aspect: Erosion: Surface Condition: Soil: Disturbance to Depose Causes of Disturbance	Rock shelter Scarp North Cavernous Exfoliating, expose Sand it: Low	rd/weathered	
Possible Depth of Pot	ential Archaeological Deposit:	>0.4 metres	
# of Artefacts:	ential Archaeological Deposit:	1	
Archaeological Visibi	lity:	50 %	
Shelter Floor Area:	a (roof 1+ metres above floor):	12 x 1.5 metres	

Lithic Items (recorded during present survey):

Artefact #	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	white	quartz	backed artefact butt	14x8x3			at dripline of rockshelter

- □ Previously recorded by Haglund (1999) as part of adjacent ID# 284;
- □ Re-recorded during survey for Ulan West Modification as separate shelter;
- □ Located in massive pagoda;
- Dimensions 1.5 metres deep and 7 metres wide and 1.6 metres deep and 4.8 metres wide;
- □ 3.5 metres high at dripline;
- □ Friable sandstone and conglomeritic sandstone, iron and goethite staining, erodes easily, soft art unlikely to survive;
- □ Wasps in portion of ceiling;
- □ Sloping back wall;
- □ Deep deposit likely;
- □ Minor erosion from east side probable in very wet periods;
- □ High potential for deposit of research value.

Site Plan: Cockabutta Creek 28







Photograph: Cockabutta Creek 28



Site Name: Site Type: Date Recorded:	e: Rock shelter with PAD		Recorder: MGA Grid Reference: Topographic Map:	Peter Kuskie 752380:6433400 Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Scarp Steep >50		Vegetation: Ground Disturbance:	Forest/bush/regrowth Low
Rock Outcrop Materia		Sandstone		
Outcrop Type: Outcrop Form:		Rock shelter Scarp		
Aspect:		West		
Erosion:		Exfoliation, caverno	DUS	
Surface Condition:		Exfoliating, exposed		
Soil:		Rocky, sand, gravel		
Disturbance to Deposit		Moderate		
Causes of Disturbance		Erosion, animal bur	rows	
Possible Extent of Pote Possible Depth of Pote		v	3 x 2 metres >0.1 metres	
# of Artefacts:			Nil	

Nil
10 %
5.4 x 2 metres
5.4 x 2 metres

- **D** Recorded during survey for Ulan West Modification;
- □ Located in large pagodas;
- □ Dimensions 2 metres deep and 2.7 metres wide and 2 metres deep and 2.7 metres wide (adjoining);
- □ Southern chamber 2.8 metres high at dripline, northern chamber 1.5 metres high at dripline;
- □ Small shelter, small pad;
- □ Crumbly sandstone;
- □ Eroded;
- □ Low research potential.

Site Plan: Cockabutta Creek 29



Site Location: Cockabutta Creek 29 (100 metre MGA grid; one metre contours).





Site Name:	Cockabutta Creek 30	Recorder:	Peter Kuskie
Site Type:	Artefact Scatter	MGA Grid Reference:	752098:6433480
Date Recorded:	28/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Simple Slope Gentle <50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	75	5	375	5	5	19	4	0.210	probable

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	752030	6433463	white	quartz	lithic fragment	29x17x8			
2	752030	6433463	white	quartz	core fragment	25x14x12			
3	752038	6433463	white	quartz	flake - longitudinal	20x14x6			
4	752098	6433480	white	quartz	flake - distal	20x12x4			

- □ Located during survey for Ulan West Modification;
- □ Extension of adjacent site in drainage;
- □ Ironbark forest;
- □ Quartz pebbles around.

Site Location: Cockabutta Creek 30 (100 metre MGA grid; one metre contours).



Photograph: Cockabutta Creek 30 (at artefact #4)



Site Name:	Cockabutta Creek 31	Recorder:	Peter Kuskie
Site Type:	Artefact Scatter	MGA Grid Reference:	752052:6433501
Date Recorded:	28/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Drainage depression Gentle <50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low

Visible Extent of Surface Exposure Length (n	Surface Exposures:	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	35	20	700	10	10	70	19	0.271	probable

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	752052	6433501	white	quartz	geometric microlith	18x11x4			not in situ; on sand mound created by loggers
2	752061	6433503	white	quartz	core fragment	17x15x10			
3	752061	6433502	white	quartz	flake	50x35x10			
4	752054	6433497	white	quartz	flake	30x24x10			
5	752049	6433496	white	quartz	lithic fragment	24x8x8			
6	752053	6433495	white	quartz	flake	22x17x9			
7	752053	6433495	white	quartz	core	22x17x8			2+ scars, 2 platforms
8	752053	6433494	white/ orange	quartz	flake	38x19x15	20	peb	
9	752053	6433494	white	quartz	flake	11x9x3			
10	752053	6433494	white	quartz	core	36x24x14			4+ scars, 2 platforms
11	752056	6433496	white	quartz	flake - medial	13x9x4			
12	752055	6433495	white	quartz	lithic fragment	20x17x6			
13	752055	6433486	white	quartz	flake - longitudinal	24x9x8			
14	752054	6433487	translucent	crystal quartz	flake	20x15x4			
15	752054	6433488	cream	tuff	flake	30x13x9	5	terr	
16	752039	6433489	white	quartz	flake	23x14x4			
17	752039	6433489	white	quartz	flake	23x12x4			
18	752040	6433485	translucent	crystal quartz	flake	20x14x6			
19	752040	6433485	white	quartz	core	37x30x20			5+ scars, 3+ platforms

- □ Located during survey for Ulan West Modification;
- □ Sandy soil;
- □ Ironbark;
- □ Low disturbance from vegetation removal and erosion;
- □ Quartz available.

Site Location: Cockabutta Creek 31 (100 metre MGA grid; one metre contours).





Site Name:	Cockabutta Creek 32	Recorder:
Site Type:	Artefact Scatter	MGA Grid Reference:
Date Recorded:	28/5/2014	Topographic Map:
Landform Element: Slope: Distance to Water:	Simple slope Gentle >50	Vegetation: Ground Disturbance:

Peter Kuskie 751981:6433553 Narragamba 8833-4S

Forest/bush/regrowth

Low

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	35	15	525	50	50	262	6	0.023	probable

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	751981	6433553	white	quartz	core	25x20x16			5+ scars, 3 platforms
2	751981	6433553	white	quartz	lithic fragment	27x18x10			adjacent to #1
3	752000	6433553	white	quartz	core	45x28x22	20	terr	5 scars, 4 platforms
4	752004	6433550	white	quartz	flake	10x7x2			
5	752005	6433539	white	quartz	flake - longitudinal	26x20x9			
6	752009	6433543	white	quartz	core	34x30x16			10 scars, 2 platforms; bifacial

- □ Located during survey for Ulan West Modification;
- □ Just east of small outcrop of boulders;
- □ Sandy soil;
- □ Ironbarks;
- **D** Low disturbance from vegetation removal and erosion.

Site Location: Cockabutta Creek 32 (100 metre MGA grid; one metre contours).





Site Name:	Cockabutta Creek 33	Recorder:	Birgitta Stephenson
Site Type:	Isolated Find	MGA Grid Reference:	751844:6433587
Date Recorded:	27/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Drainage depression Gentle <50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
5	1	1	1	1	10	10	0.1	1	10.000	unlikely

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	751844	6433587	grey	tuff	lithic fragment	30x24x2			

- □ Located during survey for Ulan West Modification;
- □ Eroded edge of drainage;
- □ Leaf litter, eucalypts, sifton bush;
- □ Minor pebbles available.

Site Location: Cockabutta Creek 33 (100 metre MGA grid; one metre contours).





Site Name:	Cockabutta Creek 34	Recorder:	Birgitta Stephenson
Site Type:	Artefact Scatter	MGA Grid Reference:	751786:6433503
Date Recorded:	30/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Drainage depression Gentle <50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	4	2	8	40	40	3	2	0.625	possible

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	751786	6433503	white	quartz	core fragment	16x12x4			2 scars
2	751785	6433503	white	quartz	lithic fragment	22x8x6			

- □ Located during survey for Ulan West Modification;
- □ Edge of drainage;
- □ Impacts from erosion.

Site Location: Cockabutta Creek 34 (100 metre MGA grid; one metre contours).





Site Name:	Cockabutta Creek 35	Recorder:	Peter Kuskie
Site Type:	Artefact Scatter	MGA Grid Reference:	751584:6433539
Date Recorded:	28/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Hill crest Level - very gentle >50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	40	2	80	20	20	16	2	0.125	possible

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	751584	6433539	brown	sandstone	ground pounder	76x68x68			originally used as pounder; extensive pitting and impact points on one rounded convex end; ground on four faces around end; originally hammer dressed (topstone); probably used as muller; cortex all removed
2	751562	6433568	white	quartz	flake - distal	16x10x4			

- □ Located during survey for Ulan West Modification;
- □ Almost saddle on crest;
- □ Cleared grass, acacia, ironbark;
- □ Vehicle track and ants nest adjacent.

Site Location: Cockabutta Creek 35 (100 metre MGA grid; one metre contours).







Photograph: Cockabutta Creek 35 (artefact #1 - sandstone ground pounder)

Site Name:	Cockabutta Creek 36	Recorder:	Birgitta Stephenson
Site Type:	Artefact Scatter	MGA Grid Reference:	751854:6433364
Date Recorded:	30/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Drainage depression Gentle <50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low - moderate

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	20	4	80	30	30	24	5	0.208	possible

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	751854	6433364	translucent	crystal quartz	flake	22x20x2			
2	751854	6433364	translucent	crystal quartz	flake	10x6x2			
3	751852	6433362	translucent	crystal quartz	flake	18x14x2			
4	751852	6433362	translucent	crystal quartz	flake	18x12x2			
5	751846	6433382	translucent	crystal quartz	flake - distal	24x14x2			

- □ Located during survey for Ulan West Modification;
- \Box Edge of drainage;
- □ Old machinery dumped;
- □ Animal bones, broken brown glass present;
- □ Impacts from erosion.

Site Location: Cockabutta Creek 36 (100 metre MGA grid; one metre contours).





SITE NAME: COCKABUTTA CREEK 37 (ULAN ID# 1576)

Site Name: Site Type: Date Recorded:	Cockabutta Creek 37 Artefact Scatter 30/5/2014	Recorder: MGA Grid Reference: Topographic Map:	Peter Kuskie 751788:6433299 Narragamba 8833-4S
Landform Element:	Simple slope	Vegetation:	Forest/bush/regrowth, cleared/grass
Slope: Distance to Water:	Gentle <50	Ground Disturbance:	Low

E	Visible Extent of Surface xposures: ength (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
	varies	varies	450	90	40500	10	10	4050	45	0.011	probable

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	751788	6433299	white	quartz	flake - proximal	12x9x3			
2	751824	6433300	white	quartz	microblade - proximal	14x7x3			
3	751824	6433300	translucent	crystal quartz	lithic fragment	14x11x6			
4	751847	6433282	grey/pink	tuff	flake	40x36x10	10	terr	
5	751844	6433279	white/red	quartz	core fragment	34x18x15			
6	751827	6433267	white	quartz	flake	34x25x11			
7	751827	6433267	white	quartz	lithic fragment	30x18x11			
8	751828	6433275	white	quartz	flake	17x17x6			
9	751842	6433289	white/red	quartz	core fragment	25x20x13	10	terr	
10	751870	6433279	white	quartz	lithic fragment	26x24x12			
11	751899	6433277	white	quartz	flake	30x22x8			on track
12	751889	6433282	white	quartz	lithic fragment	18x10x6			on track
13	751875	6433295	white	quartz	flake	24x20x5			on track
14	751858	6433325	white	quartz	lithic fragment	17x11x8			on track
15	751823	6433375	white	quartz	flake - longitudinal	42x25x11			on track
16	751821	6433378	grey	acidic volcanic	flake	40x25x7	20	terr	on track; white cortex
17	751804	6433392	white	quartz	flake	12x7x3			on track
18	751799	6433394	white	quartz	lithic fragment	13x8x3			on track
19	751786	6433404	white	quartz	flake	10x8x2			on track
20	751829	6433397	white	quartz	flake	40x30x15	30	peb	
21	751829	6433397	white	quartz	core fragment	29x16x16			
22	751829	6433397	white	quartz	flake - distal	15x12x4			
23	751829	6433397	white/pink	quartz	core fragment	25x21x15			
24	751825	6433395	white	quartz	lithic fragment	35x18x11			

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
25	751762	6433474	grey	acidic volcanic	flake	28x25x10			
26	751764	6433474	white	quartz	flake	15x13x6			
27	751719	6433456	white	quartz	flake	26x23x8			
28	751711	6433473	white	quartz	flake - medial	17x14x6			
29	751697	6433469	white	quartz	core fragment	25x19x12			on track
30	751697	6433469	white	quartz	lithic fragment	25x20x10			on track
31	751679	6433483	white	quartz	flake	17x16x9			on track
32	751664	6433502	white	quartz	core	17x17x15			on track; 3+ scars, 2 platforms
33	751654	6433507	white	quartz	flake	22x16x8			on track
34	751651	6433510	white	quartz	flake	20x18x10			on track
35	751650	6433513	white	quartz	lithic fragment	18x15x11			on track
36	751642	6433520	translucent	crystal quartz	blade - medial	15x10x4			on track
37	751671	6433542	white	quartz	flake - longitudinal	18x10x6			
38	751683	6433514	white	quartz	flake - longitudinal	13x8x3			
39	751721	6433568	white	quartz	lithic fragment	22x15x7			
40	751725	6433584	white	quartz	flake - distal	23x16x5			
41	751693	6433633	white/red	quartz	flake	19x15x4			
42	751686	6433656	white	quartz	core	40x25x20			1+ scars, 1 platform; almost in drainage unit
43	751667	6433697	grey	acidic volcanic	flake	44x25x21			not far from dam
44	751652	6433628	cream	tuff	blade - proximal	22x13x4			high quality tuff
45	751653	6433617	white/pink	quartz	core	78x62x45	50	peb	pebble core; 11+ scars, 2 platforms

- □ Located during survey for Ulan West Modification;
- □ Grass, acacia, ironbark;
- □ Partly cleared;
- □ Sandy soil;
- □ Quartz available;
- □ Moderate potential near creek.

Site Location: Cockabutta Creek 37 (100 metre MGA grid; one metre contours).



Photograph: Cockabutta Creek 37 (artefact #45 - quartz core)



Photograph: Cockabutta Creek 37 (view northeast from artefact #1)



Photograph: Cockabutta Creek 37 (view northwest from artefact #19)



Site Name:	Cockabutta Creek 38	Recorder:	Birgitta Stephenson
Site Type:	Isolated Find	MGA Grid Reference:	751812:6433247
Date Recorded:	29/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Simple slope Moderate >50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	1	1	1	5	5	0.05	1	20.000	unlikely

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	751812	6433247	white	quartz	lithic fragment	32x20x10			

- □ Located during survey for Ulan West Modification;
- □ Less dense vegetation on lower portion of slope;
- □ Sifton, geebung, eucalypts.

Site Location: Cockabutta Creek 38 (100 metre MGA grid; one metre contours).





Site Name:	Cockabutta Creek 39	Recorder:	Birgitta Stephenson
Site Type:	Artefact Scatter	MGA Grid Reference:	752049:6433344
Date Recorded:	27/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Drainage depression Moderate <50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	12	2	24	5	5	1.2	2	1.667	possible

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	752049	6433344	white	quartz	lithic fragment	18x12x2			
2	752064	6433348	white	quartz	lithic fragment	18x10x2			

- □ Located during survey for Ulan West Modification;
- □ Edge of eroded drainage;
- □ Small exposure;
- □ Shrubs, acacia, eucalypts around;
- □ Quartz pebbles available.
Site Location: Cockabutta Creek 39 (100 metre MGA grid; one metre contours).



Photograph: Cockabutta Creek 39



Site Name:	Cockabutta Creek 40	Recon
Site Type:	Artefact Scatter	MGA
Date Recorded:	26/5/2014	Topog
Landform Element: Slope: Distance to Water:	Simple slope Gentle <50	Veget Grour

Recorder: MGA Grid Reference: Topographic Map:

Vegetation: Ground Disturbance: Peter Kuskie 752113:6433336 Narragamba 8833-4S

Forest/bush/regrowth Low

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	50	15	750	10	10	75	14	0.187	probable

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	752113	6433336	white	quartz	flake	20x20x10			
2	752113	6433336	white	quartz	lithic fragment	27x20x11			
3	752113	6433333	white	quartz	flake - distal	10x10x3			
4	752113	6433333	white	quartz	lithic fragment	25x18x8			
5	752112	6433327	white	quartz	lithic fragment	21x16x6			
6	752116	6433321	white	quartz	flake	17x9x6			
7	752118	6433314	dark grey	acidic volcanic	flake	24x24x8			next to wombat burrow
8	752118	6433314	white	quartz	lithic fragment	34x20x13			
9	752118	6433314	white	quartz	lithic fragment	18x12x9			
10	752112	6433316	white	quartz	bondi point	16x8x3			
11	752118	6433314	cream	chert	retouched utilised piece	26x14x6			20mm edge damage; retouch one concave lateral margin and along opposite thick margin
12	752129	6433307	white	quartz	core	50x50x50	50	peb	4 scars, 1 platform
13	752133	6433299	white	quartz	lithic fragment	25x17x6			
14	752129	6433300	white	quartz	flake - longitudinal	20x15x4			

- □ Located during survey for Ulan West Modification;
- □ Adjacent to confluence of minor drainage and main creek;
- \Box Deep sand;
- □ Probably many more artefacts;

- Low visibility off site; Forest, geebungs;
- Wombat burrows;
- Quartz available;
- □ Low to possibly moderate research potential.

Site Location: Cockabutta Creek 40 (100 metre MGA grid; one metre contours).



Photograph: Cockabutta Creek 40



Site Name:	Cockabutta Creek 41	Recorder:	Peter Kuskie
Site Type:	Artefact Scatter	MGA Grid Reference:	752058:6433273
Date Recorded:	30/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Simple slope Level - very gentle <50	Vegetation: Ground Disturbance:	Cleared/grass Low

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	280	120	33600	5	5	1680	362	0.215	probable

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	752058	6433273	cream	petrified wood	core	58x40x34	20	terr	3 platforms, 14 scars; #1- 15 in 10x10m area between 752058:6433273 and 752047:6433270
2			white	quartz	flake	33x26x10			#1-15 in 10x10m area between 752058:6433273 and 752047:6433270
3			white	quartz	flake	25x24x9			#1-15 in 10x10m area between 752058:6433273 and 752047:6433270
4			white	quartz	flake - longitudinal	20x10x9			#1-15 in 10x10m area between 752058:6433273 and 752047:6433270
5			cream/red	tuff	core	28x22x18	20	terr	4 scars, 1 platform; #1-15 in 10x10m area between 752058:6433273 and 752047:6433270
6			white	quartz	flake - distal	18x15x4			#1-15 in 10x10m area between 752058:6433273 and 752047:6433270
7			white	quartz	core	30x20x15	20	terr	1 scar, 1 platform; #1-15 in 10x10m area between 752058:6433273 and 752047:6433270
8			white	quartz	flake	20x15x5			#1-15 in 10x10m area between 752058:6433273 and 752047:6433270
9			white	quartz	lithic fragment	22x10x5			#1-15 in 10x10m area between 752058:6433273 and 752047:6433270
10			white	quartz	flake	21x11x4			near creek bank; #1-15 in 10x10m area between 752058:6433273 and 752047:6433270

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
11			white	quartz	flake - distal	18x18x5			#1-15 in 10x10m area between 752058:6433273 and 752047:6433270
12			white	quartz	flake	20x15x6			#1-15 in 10x10m area between 752058:6433273 and 752047:6433270
13			translucent	crystal quartz	flake	30x25x9			#1-15 in 10x10m area between 752058:6433273 and 752047:6433270
14			grey/red	chert	flake	22x14x5	20	peb	#1-15 in 10x10m area between 752058:6433273 and 752047:6433270
15	752047	6433270	grey/red/ yellow	sandstone	muller/pounder /anvil	70x50x36	80	peb	ground worked both faces but not edges; anvil pitting in centre of face; #1-15 in 10x10m area between 752058:6433273 and 752047:6433270
16	752037	6433285	white	quartz	core	20x20x20			1 platform, 1 scar; #16-36 between 752037:6433285 and creek
17			grey	tuff	core	30x26x12			6 platforms, 2 scars; #16- 36 between 752037:6433285 and creek
18			grey	chert	flake	28x21x6			#16-36 between 752037:6433285 and creek
19			red/grey	quartzite	core	54x46x32	90	peb	split pebble, 1 flake, 1 platform; distal end some bruising possibly from use as hammerstone; #16-36 between 752037:6433285 and creek
20			white	quartz	lithic fragment	20x15x7			#16-36 between 752037:6433285 and creek
21			translucent	crystal quartz	flake	10x8x3			#16-36 between 752037:6433285 and creek
22			white	quartz	backed artefact - medial	14x13x5			#16-36 between 752037:6433285 and creek
23			white	quartz	lithic fragment	52x36x22	10	terr	#16-36 between 752037:6433285 and creek
24			cream/black	chert	core	60x55x25	50	terr	2 scars, 1 platform; rough cortex, possibly petrified wood; #16-36 between 752037:6433285 and creek
25			white	quartz	lithic fragment	13x9x4			#16-36 between 752037:6433285 and creek
26			white	quartz	lithic fragment	24x20x10			#16-36 between 752037:6433285 and creek
27			white	quartz	flake - medial	15x11x3			#16-36 between 752037:6433285 and creek
28			white	quartz	core	44x35x16	5	terr	2+ scars, 2 platforms; #16- 36 between 752037:6433285 and creek
29			white	quartz	lithic fragment	19x12x7			#16-36 between 752037:6433285 and creek

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
30			white	quartz	knife	62x32x10			utilised backed flake; very high quality quartz; fine backing retouch for 40 and 25mm on thick margin; bulb, platform; usewear c.60mm fine damage along chord; highly unusual item; possibly men's initiation knife; #16-36 between 752037:6433285 and creek
31			white	quartz	flake	24x13x6			#16-36 between 752037:6433285 and creek
32			yellow	tuff	flake	64x28x22			coarse; near creek bank; #16-36 between 752037:6433285 and creek
33			grey	chert	core	61x45x20			5 scars, 2 platforms; #16- 36 between 752037:6433285 and creek
34			white	quartz	flake - proximal	19x17x6			#16-36 between 752037:6433285 and creek
35			white	quartz	lithic fragment	18x14x6			#16-36 between 752037:6433285 and creek
36	752034	6433317	white	quartz	flake - proximal	15x9x4			#16-36 between 752037:6433285 and creek
37	752018	6433321	white	quartz	flake - longitudinal	14x9x4			
38			grey	acidic volcanic	lithic fragment	20x16x4			
39			white	quartz	flake	30x27x20	10	peb	chunky
40			translucent	crystal quartz	core	30x25x9	10	peb	1+ scars, 1 platform
41	751937	6433297	white	quartz	lithic fragment	9x5x4			on track, south-west end of site
42	751946	6433309	white	quartz	lithic fragment	11x10x3			on track
43	751949	6433313	white	quartz	flake	11x10x5			
44	751885	6433384	white	quartz	flake	16x12x6			
45	751871	6433428	translucent	crystal quartz	lithic fragment	12x10x3			
46	751871	6433428	white	quartz	flake	8x8x2			
47	751875	6433435	white	quartz	core fragment	25x18x14	40	peb	
48	751880	6433431	white	quartz	lithic fragment	40x20x15			
49	751887	6433423	dark grey	petrified wood	flake - longitudinal	72x43x20	90	terr	rough cortex
50	751896	6433415	cream	tuff	flake	25x10x4			
51	751896	6433415	cream/red	tuff	core	41x36x12			3 scars, 1 platform
52	751895	6433411	translucent	crystal quartz	flake	20x19x6			
53	751895	6433411	white	quartz	lithic fragment	24x20x7			
54	751895	6433411	white	quartz	flake	20x17x6			
55	751907	6433388	white	quartz	flake	13x10x3			
56	751907	6433388	white	quartz	flake - longitudinal	20x15x6			
57	751907	6433388	brown	acidic volcanic	flake - proximal	14x13x4			

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
58	751978	6433340	translucent	crystal quartz	flake - distal	14x10x4			
59	751978	6433340	translucent	crystal quartz	flake	13x6x2			
60	751978	6433340	white	quartz	lithic fragment	12x12x3			
61	751914	6433396	white/pink	quartz	core	45x40x20	30	terr	1 scar, 1 platform
62	751914	6433396	cream	petrified wood	core	60x35x15			3 scars, 1 platform
63	751887	6433473	white	quartz	lithic fragment	16x12x2			
64	751913	6433459	white	quartz	flake	14x10x2			at wombat hole
65	751870	6433451	white	quartz	lithic fragment	12x10x4			
66			grey	acidic volcanic	ground-edge axe	52x30x20	40	terr	pitting on ground surface, flake scars
67	751902	6433431	grey/green	acidic volcanic	ground-edge axe	90x60x30	70	terr	2 flake scars
68	751935	6433408	cream	sandstone	lithic fragment	66x66x20	100	terr	possibly part of anvil but rough, non-ground
69	751936	6433418	white/grey	sandstone	grindstone fragment	80x38x20	75	terr	top face ground; #69 and 70 associated
70	751917	6433415	white/grey	sandstone	grindstone fragment	130x50x30	75	terr	#69 and 70 associated; ground, hammer dressed surface
71	751945	6433422	mustard	sandstone	muller	78x60x50			ground, three margins, worked edges

- □ Located during survey for Ulan West Modification;
- □ Broad sandy 'flat' come very gentle simple slope adjacent to creek;
- □ Grassy;
- □ Low disturbance;
- □ Quartz available;
- □ Extensive site, numerous more artefacts and sub-surface deposits of research value probably present;
- □ 71 artefacts recorded in detail, another 291 counted but not recorded due to time constraints and subsidence only area including:
 - 25 in cluster between 752009:6433327 and 751994:6433348 and creek;
 - 99 in cluster between 751990:6433360 and creek and 752011:6433380 and 751993:6433411 and 751971:6433399 and 751974:6433385;
 - 40 in cluster between 751956:6433422 and 751934:6433425 and 751930:6433415 and 751967:6433415;
 - 20 in cluster between 751955:6433379 and creek and 751965:6433429;
 - 47 in cluster between 751912:6433412 and 751924:6433438 and 751903:6433435 and 751900:6433414; and
 - 51 others.

Site Location: Cockabutta Creek 41 (100 metre MGA grid; one metre contours).



Photograph: Cockabutta Creek 41 (northwest from southeastern end of site)



Photograph: Cockabutta Creek 41 (lithic recording in northern portion of site)



Photograph: Cockabutta Creek 41 (artefact #30 - quartz knife)



Photograph: Cockabutta Creek 41 (artefact #15 - sandstone muller/pounder/anvil)



Photograph: Cockabutta Creek 41 (artefact #66 - volcanic ground-edge axe)



Photograph: Cockabutta Creek 41 (artefact #67 - volcanic ground-edge axe)



Photograph: Cockabutta Creek 41 (artefacts #69 and 70 - sandstone grindstone fragments)



Photograph: Cockabutta Creek 41 (artefact #71 - sandstone muller)



Site Name:	Cockabutta Creek 42	Recorder:	Peter Kuskie
Site Type:	Artefact Scatter	MGA Grid Reference:	752360:6433142
Date Recorded:	30/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Drainage depression Gentle <50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	15	5	75	80	80	60	3	0.050	probable

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	752360	6433142	translucent	crystal quartz	core fragment	24x18x10			creek bank
2	752373	6433137	white	quartz	flake	26x20x15			on south side of vehicle track; chunky
3	752373	6433140	white	quartz	flake	18x15x5			on track

- □ Located during survey for Ulan West Modification;
- □ Along and adjacent to vehicle track next to drainage;
- □ Sandy;
- □ Grass, forest;
- □ Low disturbance unformed track, erosion.

Site Location: Cockabutta Creek 42 (100 metre MGA grid; one metre contours).



Photograph: Cockabutta Creek 42 (northwest from southeastern end of site)



Site Name:	Cockabutta Creek 43	Recorder:	Birgitta Stephenson
Site Type:	Artefact Scatter	MGA Grid Reference:	752511:6433020
Date Recorded:	27/5/2014	Topographic Map:	Narragamba 8833-4S
Landform Element: Slope: Distance to Water:	Drainage depression Gentle <50	Vegetation: Ground Disturbance:	Forest/bush/regrowth Low

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m ²)	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m ²)	# of Artefacts	# of Artefacts per m ² of Effective Locus Area	Sub- Surface Deposit
varies	varies	40	10	400	10	10	40	6	0.150	possible

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	752511	6433020	white	quartz	flake - proximal	25x25x2			
2	752510	6433020	white	quartz	flake	14x10x2			1m west of #1
3	752510	6433020	white	quartz	lithic fragment	18x12x2			1m west of #1
4	752508	6433022	white	quartz	lithic fragment	10x8x2			1m west of #2 and 3
5	752484	6433045	red/yellow	tuff	lithic fragment	46x46x6	10	tab	possibly core fragment
6	752486	6433043	white	quartz	lithic fragment	14x8x2			

- □ Located during survey for Ulan West Modification;
- □ Edge of small eroded drainage channel;
- Grass, small acacia and eucalypt regrowth;
- □ Minor pebbles of quartz available.





Photograph: Cockabutta Creek 43

