

APPENDIX 1.

RELEVANT PREVIOUSLY RECORDED ABORIGINAL SITE RECORDS¹

¹ Includes sites inside and within approximately 50 metres of the portion of the Ulan West proposed modification investigation area outside of the existing approved UCCO Project Area and/or archaeological survey coverage area and/or proposed subsidence impact zone at the time of the UCCO Project Part 3A approval. Where detailed re-recording of sites has occurred during the present investigation refer to Appendix 3. All other sites recorded during the UCCO Project (Kuskie 2009) and previously recorded within the Ulan West modification investigation area inside of the existing approved UCCO Project Area are fully described in Kuskie (2009). Additional site descriptions here courtesy Haglund (1999).

OEH AHIMS #	Ulan ID #	Site Name	GDA Easting	GDA Northing	Recorder	Site Type	Comments
36-3-1506	161	Cockabutta Creek 19	752302	6433660	Haglund 1999	Rockshelter with Art and Artefacts	Grid reference updated November 2007. Site 100-150m from where previously listed. In proposed modification area, inside approved UCCO Project Area but outside approved subsidence impact area, not surveyed, needs inclusion here and detailed recording
36-3-1507	162	Cockabutta Creek 20	752307	6433639	Haglund 1999	Rockshelter with Artefacts	Grid reference updated November 2007. Site 150-200m from where previously listed. In proposed modification area, inside approved UCCO Project Area but outside approved subsidence impact area, not surveyed, needs inclusion here and detailed recording
36-3-1563	284	Cockabutta Creek 21	752423	6433404	Haglund 1999	Rockshelter with Artefacts	In proposed modification area, outside approved UCCO Project Area, not surveyed, needs inclusion here and detailed recording
pending	1491	BB233	753461	6432858	South East Archaeology 2011	Isolated Find	Located during survey/ salvage of Grass Tree Lane, May 2011. In proposed modification area, inside approved UCCO Project Area and surface impact area, has been recorded and salvaged by SEA, needs inclusion here but does not need more detailed recording
pending	1492	BB234	753511	6432737	South East Archaeology 2011	Artefact Scatter	Located during survey/ salvage of Grass Tree Lane, May 2011. In proposed modification area, inside approved UCCO Project Area and surface impact area, has been recorded and salvaged by SEA, needs inclusion here but does not need more detailed recording
36-3-2652	1570	Ulan Drosd Track 1	752276	6433209	Kuskie 2013	Artefact Scatter	In proposed modification area, outside approved UCCO Project Area, has been recorded by SEA, needs inclusion here but does not need more detailed recording
36-3-2651	1571	Ulan Drosd Track 2	752124	6433202	Kuskie 2013	Artefact Scatter	In proposed modification area, outside approved UCCO Project Area, has been recorded by SEA, needs inclusion here but does not need more detailed recording
36-3-2650	1572	Ulan Drosd Track 3	752099	6433179	Kuskie 2013	Artefact Scatter	In proposed modification area, outside approved UCCO Project Area, has been recorded by SEA, needs inclusion here but does not need more detailed recording

Notes:

OEH Data valid on 21/5/2014.

AGD to GDA conversion where applicable, +105m eastings, +190m northings.

Ulan ID# 161 (OEH #36-3-1506; Cockabutta Creek 19)

*Laila Haglund: Preliminary survey for EIS, Ulan Coal Mines Second Longwall Project.
March 1, 1999*

NPWS Site No.

Type: Rock shelter w. arch. deposit and art

Recorded by: John Edgar

Date: 22.11.1995

Site Name: Cockabutta Creek 19

Illustration: Pl.46

Identifier: CC19

Field recording code: Boulders 2

Map: Narragamba 8833-4-S

Scale: 1:25,000

Grid Reference: 752010E 6433460N

Distance from creek: c. 3km to Cockabutta Creek, many ephemeral streams nearby, appear likely to retain subsurface water and soaks.

Landform: Small scarp at base of ridge spur.

Aspect: 155°

Description of site: Rock shelter at base of low scarp just above valley floor and short, gentle slope. The shelter is c. 15m wide by 6m deep, by 4m high. Two 'panels' of art were noted, but Mr. D. Maynard, the Aboriginal representative, did not wish the art to be photographed, as he tentatively identified the shelter as a women's site. An impressionistic sketch was prepared.

Panel 1: Red hand stencil (right hand?)

Red hand stencil (handedness not discernible)

Indeterminate red markings.

Panel 2: 1 red 'emu foot'

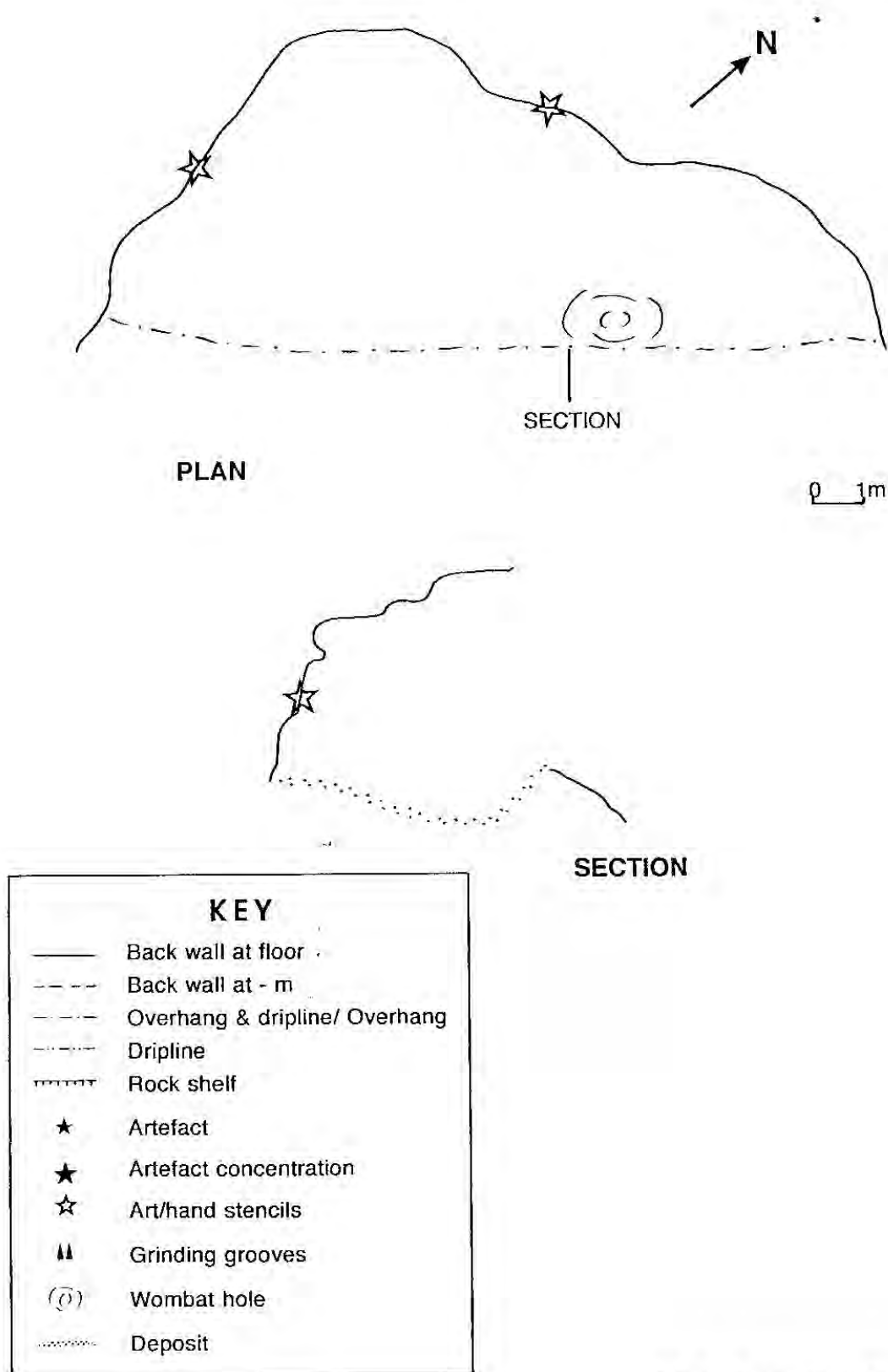
Indeterminate red markings.

Archaeological deposit: Sandy deposit, c. 20 - 30cm deep, covers 100% of floor area. Noted 4 quartz flaked pieces, 20 - 30mm long, on the surface.

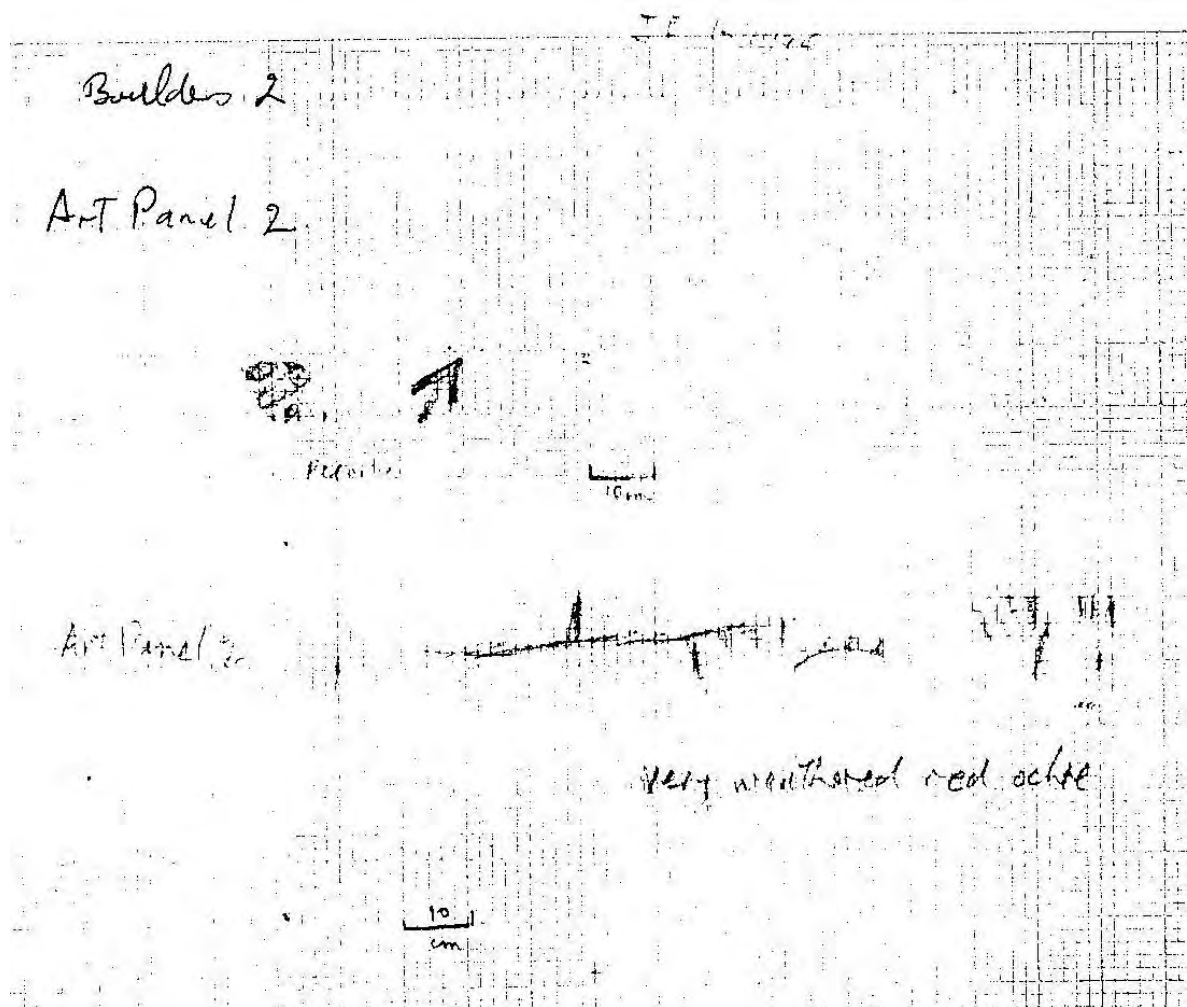


Pl.46 CC19: Shelter at base of scarp. Note the level, dark grey, sandy floor. The shelter has some art; the tape measure is located below panel 1 (hand stencils and various markings). Facing NE.

(R12N:1)



CC19- Plan and profile



Ulan ID# 162 (OEH #36-3-1507; Cockabutta Creek 20)

*Laila Haglund: Preliminary survey for EIS, Ulan Coal Mines Second Longwall Project.
March 1, 1999*

NPWS Site No.

Recorded by: John Edgar

Site Name: Cockabutta Creek 20

Identifier: CC20

Map: Narragamba 8833-4-S

Grid Reference: 752030E 6433450N

Type: Rock shelter w. deposit & artefacts

Date: 22.11.1995

Illustration: Pl.47

Field recording code: Boulders 3

Scale: 1:25,000

Distance from creek: c. 3km to Cockabutta Creek, many ephemeral streams nearby, appear likely to retain subsurface water and soaks.

Landform: Small scarp in sandstone ridge spur.

Aspect: 175°

Description of site: The rock shelter is about 18m long by 4m deep by 3.5m high. The walls are rich in conglomerate and therefore rough. No art was noted though there are occasional red patches. Aboriginal representatives think they may be remains of art.

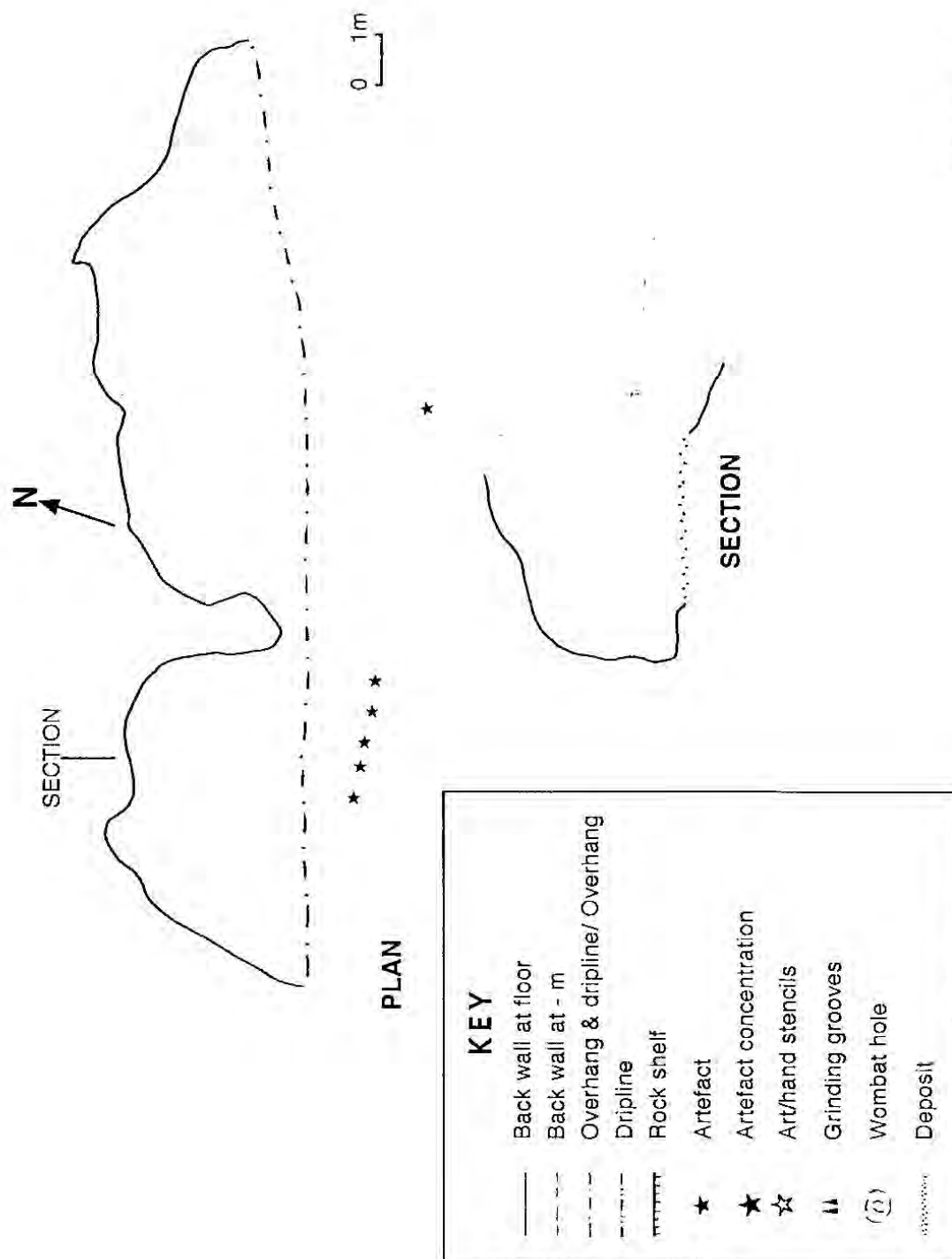
Archaeological deposit: Grey sandy deposit, 15 - 30cm deep, covers c. 80% of the floor area. Noted:

- 6 quartz flaked pieces, 20 - 30mm long,
- 1 chert core fragment, 30mm long (on surface inside shelter)
- 1 basalt ground edge axe outside shelter (photographed).



Pl.47 CC20: Shelter at base of 'Boulder' formation; floor deposit of grey sand. A few artefacts exposed near dripline and on talus slope, the latter including a rough edge-ground axe. Facing N.

(R12N:8)



CC20 - Plan and profile

Ulan ID# 284 (OEH #36-3-1563; Cockabutta Creek 21)

*Laila Haglund: Preliminary survey for EIS, Ulan Coal Mines Second Longwall Project.
March 1, 1999*

NPWS Site No.

Recorded by: John Edgar

Site Name: Cockabutta Creek 21

Identifier: CC21

Map: Narragamba 8833-4-S

Grid Reference: 752310E 6433220N

Type: Rock shelter w. deposit & artefacts

Date: 22.11.1995

Illustration: PI.49

Field recording code: Boulders 1

Scale: 1:25,000

Distance from creek: C.3km to Cockabutta Creek, but numerous ephemeral streams nearby, appear likely to retain subsurface water and soaks.

Landform: Free-standing vertical, boulder-like sandstone formation, one of a series of five.

Aspect: 280°

Description of site: Cavernously weathering overhang, c.19m long by <4.5m deep and < 3m high. This looks and feels like a "special place" and the walls would have been suitable for art in the past. However, no art was noted and the walls are actively eroding.

Archaeological deposit: A sandy, 10-15cm deep deposit covers c.2/3 of the floor area. There is a large amount of roof fall in the centre front (see plan) which indicate that the shelter would have had a much larger habitable area in the past.

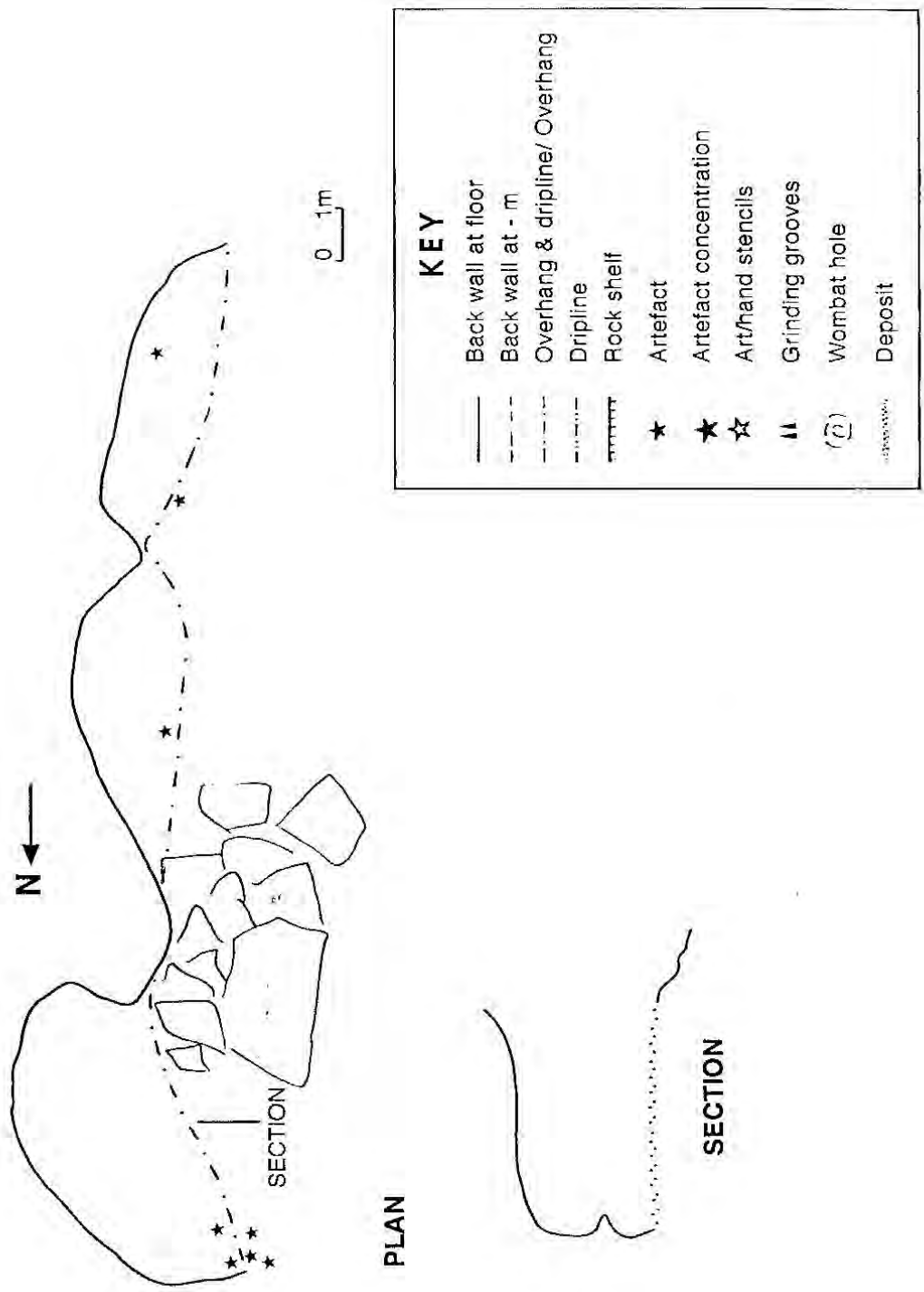
Noted:

6 quartz flaked pieces 20 - 30mm long, 1 grey fine-grained siliceous flaked piece, c. 15 mm long, 1 banded chert (dark brown) flake, 20 - 30mm long & 1 basalt flaked piece, c. 60 by 50 by 20mm, may have polish on one area.



PI.49 CC21: Shallow shelter = a series of 'small chambers' in free-standing sandstone 'Boulder'. Would have been deeper prior to partial roof fall. A few artefacts seen along the dripline. Facing E.

(R12M:35)



CC21 - Plan and profile

Ulan ID# 1491 (OEH #pending; BB233)

SITE NAME: ULAN ID# 1491

Site Name:	<i>BB233</i>	Recorder:	<i>Katarina Boljkovac</i>
Site Type:	<i>Isolated Find</i>	MGA Grid Reference:	<i>753461:6432858</i>
Date Recorded:	<i>19/5/2011</i>	Topographic Map:	<i>Narragamba 8833-4S</i>
Landform Element:	<i>Simple Slope</i>	Vegetation:	<i>Cleared</i>
Slope:	<i>Gentle</i>	Ground Disturbance:	<i>High</i>
Distance to Water:	<i>>50</i>		

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
50+	3	1	1	1	90	60	0.6	1	1.667	unlikely

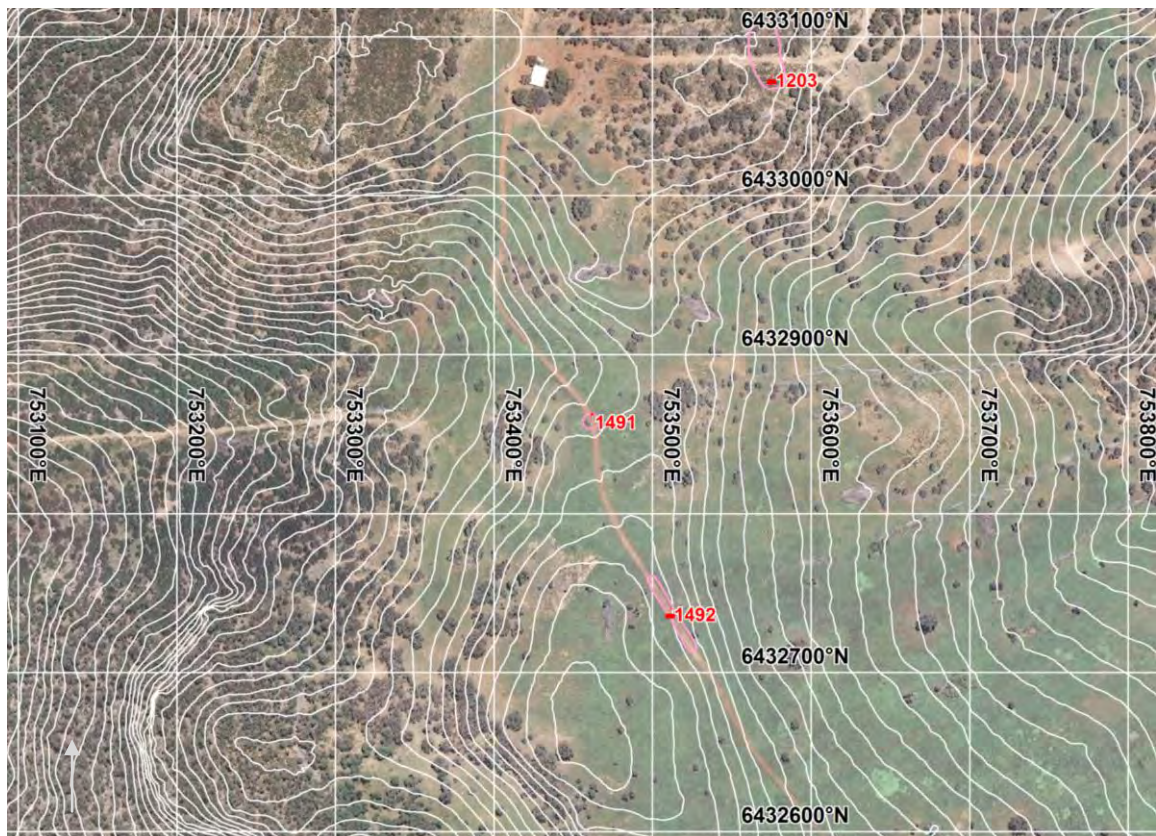
Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	753461	6432858	white	quartz	flake	20x13x3			

Additional Comments:

- ☐ Located along Grass Tree Lane during survey under Part 3A approved Heritage Management Plan of previously unsurveyed roads;
- ☐ Subject to surface collection under Part 3A Approval on 19 May 2011.

Site Location: Ulan ID# 1491 (100 metre MGA grid; one metre contours).



Photograph: Ulan ID# 1491



SITE NAME: ULAN ID# 1492

Site Name: *BB234* Recorder: *Katarina Boljkovac*
Site Type: *Artefact Scatter* MGA Grid Reference: *753511:6432737*
Date Recorded: *19/5/2011* Topographic Map: *Narragamba 8833-4S*

Landform Element: *Simple Slope* Vegetation: *Cleared*
Slope: *Gentle* Ground Disturbance: *High*
Distance to Water: *>50*

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
50+	3	50	3	150	90	60	90	3	0.033	unlikely

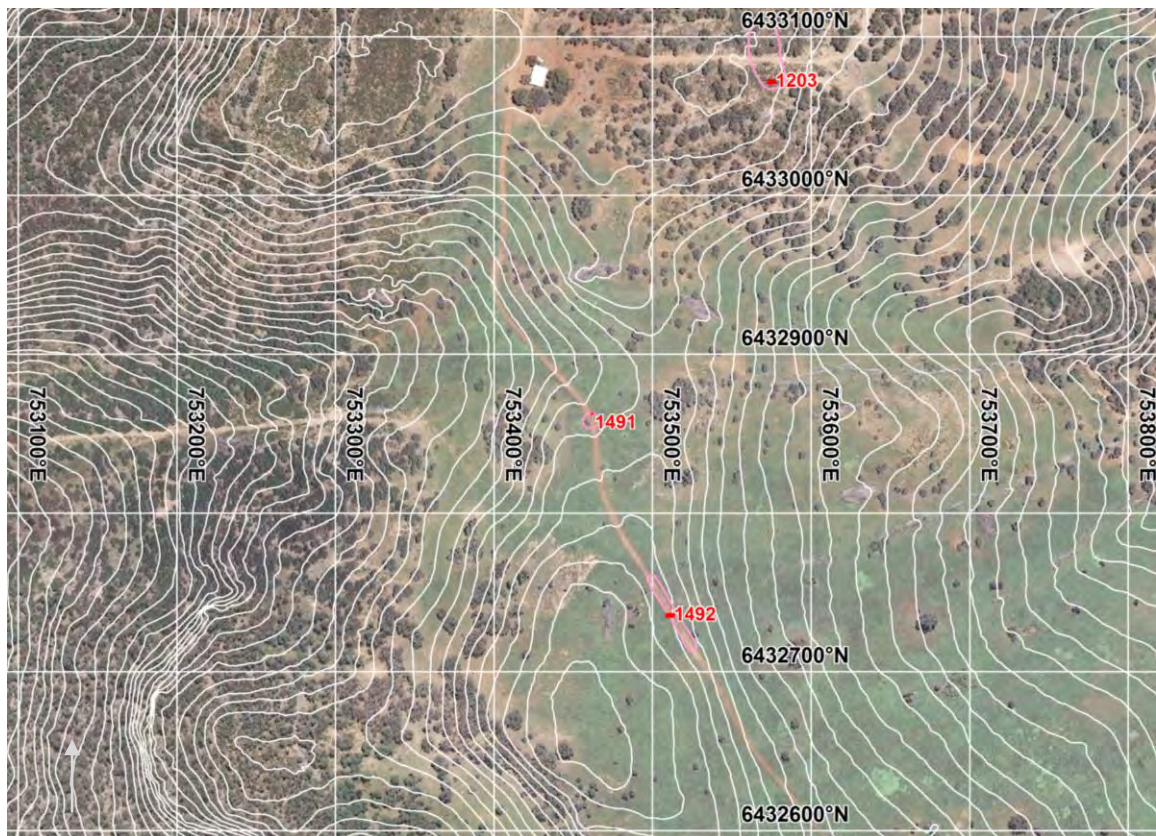
Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	753500	6432756	brown	tuff	flake - utilised	18x9x6			use wear for 14mm; blade-like
2	753501	6432754	brown	tuff	flake	25x13x4			
3	753522	6432718	white	quartz	flake	31x24x5			

Additional Comments:

- ☐ Located along Grass Tree Lane during survey under Part 3A approved Heritage Management Plan of previously unsurveyed roads;
- ☐ 100 metres west of junction with Valley Way;
- ☐ Subject to surface collection under Part 3A Approval on 19 May 2011.

Site Location: Ulan ID# 1492 (100 metre MGA grid; one metre contours).



Photograph: Ulan ID# 1492



SITE NAME: ULAN DROSD TRACK 1

Site Name:	Ulan Drosd Track 1	Recorder:	Birgitta Stephenson
Site Type:	Artefact Scatter	MGA Grid Reference:	752276:6433209
Date Recorded:	21/5/13	Topographic Map:	Narragamba 8833-4-S
Landform Element:	Simple slope	Vegetation:	Forest/cleared
Slope:	Very gentle	Ground Disturbance:	Moderate
Distance to Water:	<50		

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	2	30	2	60	90%	90%	54	3	0.056	possible

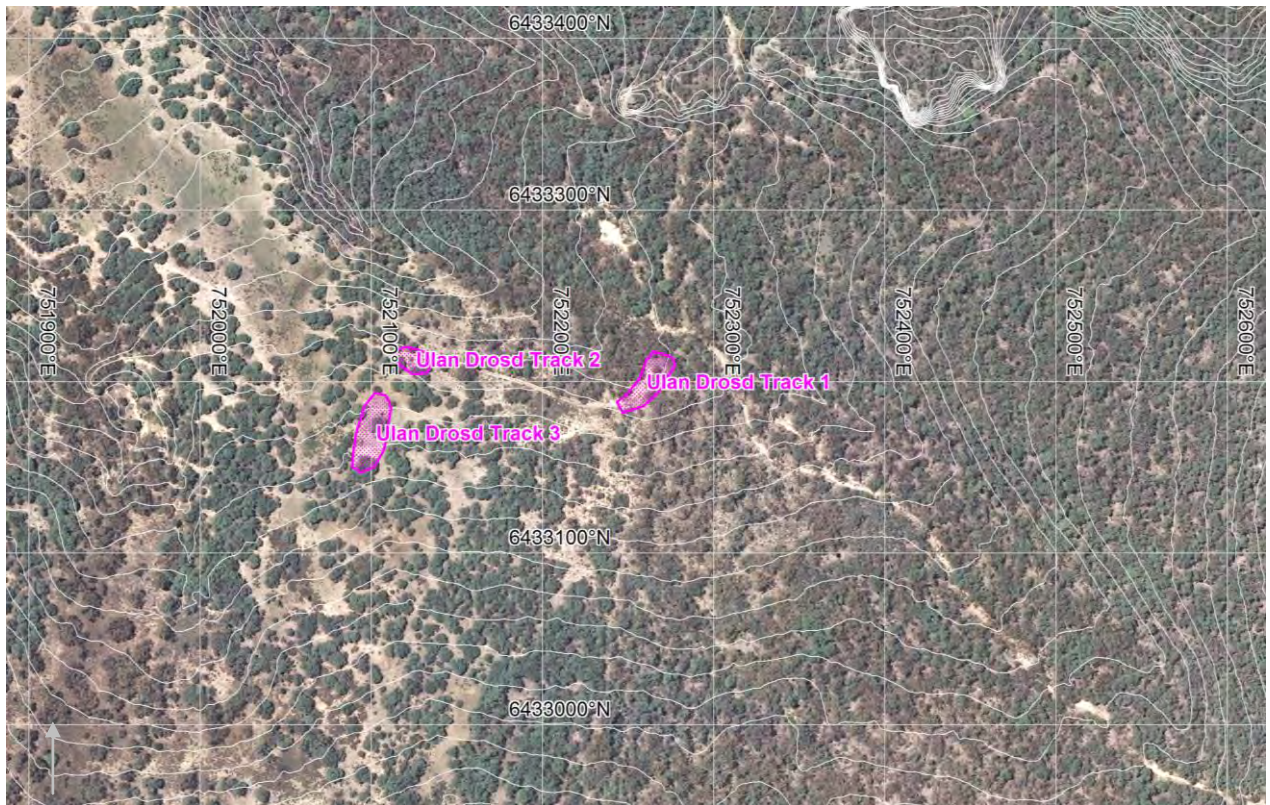
Lithic Items:

Artefact #	Colour	Stone Material	Lithic Item Type	Size (mm)	Cortex (%)	Cortex Type	Comments
1	white	quartz	flake - distal	10x7x1			c752276:6433209
2	white/orange	quartz	lithic fragment	20x10x2	50%	peb	c20 metres south of #1; c752257:6433187
3	white	quartz	flake - medial	10x5x1			c752257:6433187

Additional Comments:

- ☐ On existing vehicle access track;
- ☐ Sandy soil;
- ☐ Low potential for sub-surface deposit of high research value but probably more artefacts.

Site Location: Ulan Drozd Track 1 (100 metre MGA grid; site shape - pink shading).



Photograph: Ulan Drozd Track 1 (inset - artefacts #2 and 3)



SITE NAME: ULAN DROSD TRACK 2

Site Name:	Ulan Drosd Track 2	Recorder:	Birgitta Stephenson
Site Type:	Artefact Scatter	MGA Grid Reference:	752124:6433202
Date Recorded:	21/5/13	Topographic Map:	Narragamba 8833-4-S
Landform Element:	Simple slope	Vegetation:	Forest/cleared
Slope:	Very gentle	Ground Disturbance:	Moderate
Distance to Water:	<50		

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	3	12	3	36	90%	90%	32	2	0.062	possible

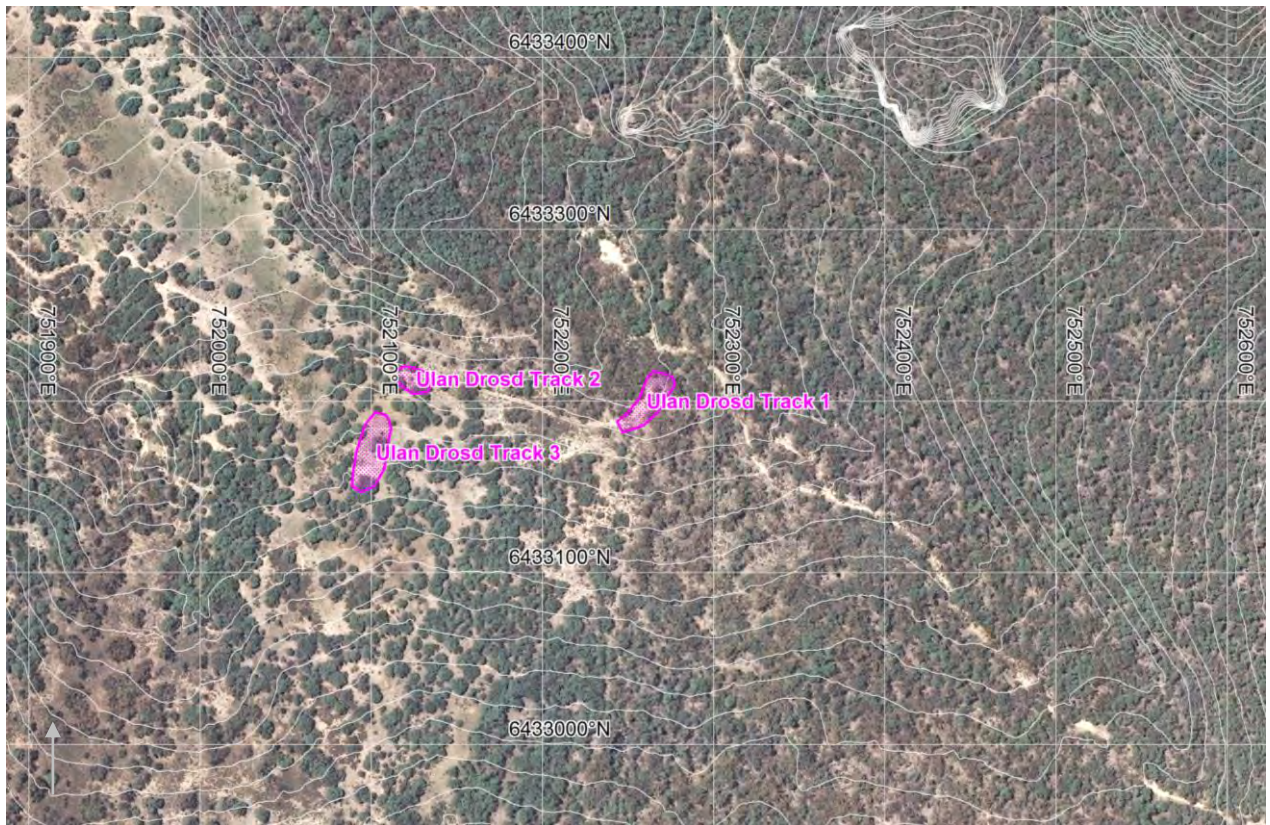
Lithic Items:

Artefact #	Colour	Stone Material	Lithic Item Type	Size (mm)	Cortex (%)	Cortex Type	Comments
1	white	quartz	flake - proximal	11x10x2			c752124:6433202
2	grey	chert	flake - proximal	40x20x5			c752121:6433211

Additional Comments:

- ☐ On existing vehicle access track beside large ants nest;
- ☐ Sandy soil;
- ☐ Low potential for sub-surface deposit of high research value but probably more artefacts.

Site Location: Ulan Drozd Track 2 (100 metre MGA grid; site shape - pink shading).



Photograph: Ulan Drozd Track 2



SITE NAME: ULAN DROSD TRACK 3

Site Name:	Ulan Drosd Track 3	Recorder:	Birgitta Stephenson
Site Type:	Artefact Scatter	MGA Grid Reference:	752099:6433179
Date Recorded:	21/5/13	Topographic Map:	Narragamba 8833-4-S
Landform Element:	Simple slope	Vegetation:	Forest
Slope:	Gentle	Ground Disturbance:	Low
Distance to Water:	>50		

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	3	120	30%	30%	36	3	0.083	possible

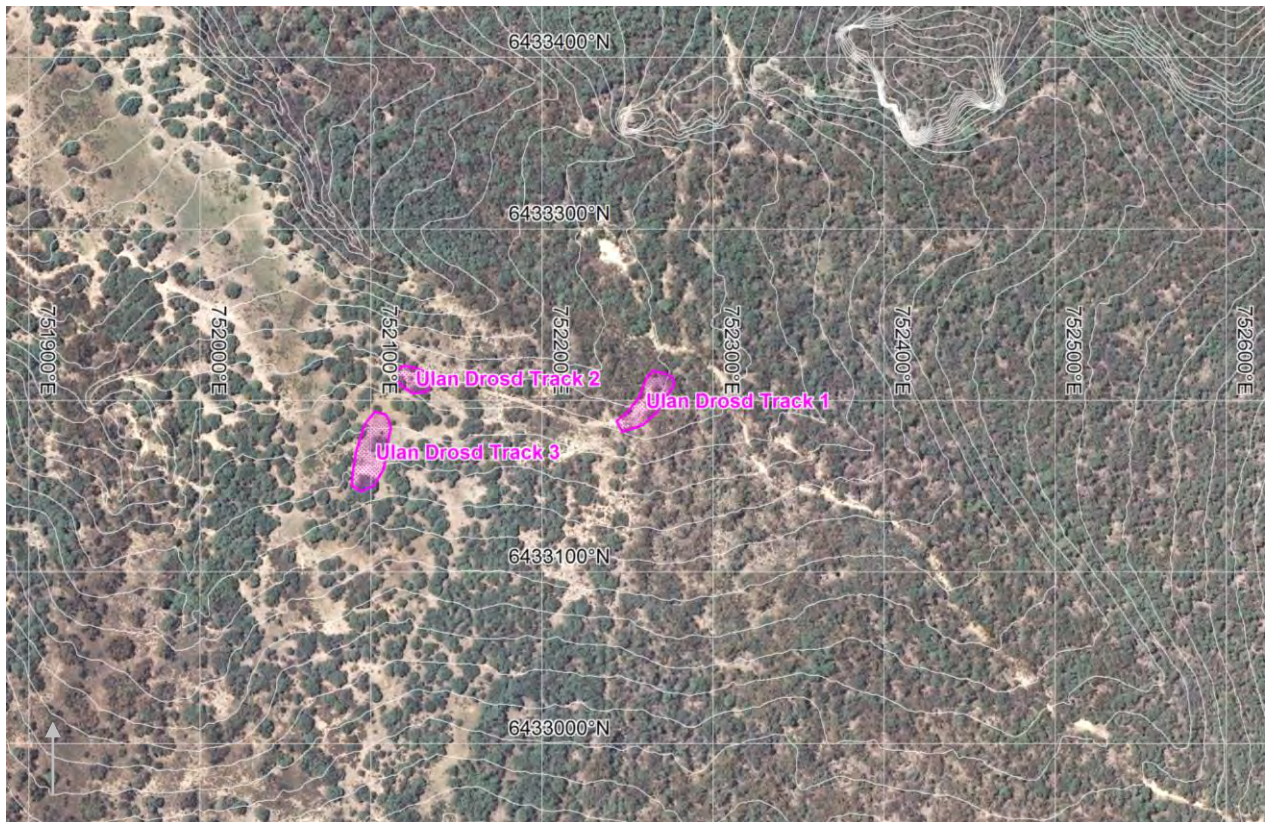
Lithic Items:

Artefact #	Colour	Stone Material	Lithic Item Type	Size (mm)	Cortex (%)	Cortex Type	Comments
1	white/orange	chert	flake - proximal	18x10x2			c752099:6433179
2	black/cream/orange	chert	core	40x20x5			3 metres west of artefact #1; 2 platforms, 5 scars; banded material; c752098:6433181
3	white/pink	quartz	lithic fragment	10x5x2			c752092:6433153; south of #2

Additional Comments:

- ☐ On proposed vehicle access track for drilling;
- ☐ Sandy soil;
- ☐ Low potential for sub-surface deposit of high research value but probably more artefacts.

Site Location: Ulan Drozd Track 3 (100 metre MGA grid; site shape - pink shading).



Photograph: Ulan Drozd Track 3



APPENDIX 2.

ARCHAEOLOGICAL SURVEY COVERAGE DATABASE²

Key:

Vegetation: 1 = cleared/grass/crop; 2 = forest/bush/regrowth;

Land Surface: 1 = sheet erosion; 2 = gully erosion; 3 = stream bank erosion; 4 = vegetated; 5 = modified;

Detection Limiting Factors: 1 = vegetation; 2 = leaf litter/gravel; 3 = sediment deposition; 4 = other.

of artefacts: Only relates to open artefact sites as recorded during the current survey.

² Relates to survey coverage obtained during the modification survey in June 2014, including some coverage marginally outside of the final subsidence impact area (investigation area) boundary.

ULAN MODIFICATION 2014 - ARCHAEOLOGICAL SURVEY COVERAGE DATABASE

Survey Area	Landform Element	Slope	Distance to Water (metres)	Vegetation	Land Surface	Exposure Type (Horizon)	Total Sample Area (m ²)	Surface Visibility (%)	Detection Limiting Factors	Archaeological Visibility %	Ground Disturbance	Effective Survey Coverage (m ²)	# of Artefacts (open sites)	Rock Outcrop Material	Rock Outcrop Form	Extent of Rock Outcrop (%)	Artefact Density/m ² of Effective Survey Coverage	Comments	Survey Unit Area (m ²)
Mod1	ridge crest	gentle	>50	2	4	A	600	10	1, 2	10%	low	60	0	-	-	-	-	series of large boulder/pagoda outcrops; ferruginous sandstone; red, yellow minerals, friable; one near overhang but eroded, no deposit	12340
Mod2	hillock	gentle	>50	2	4	A	500	10	1, 2	10%	low	50	0	sandstone	boulder, outcrop	>50	-	series of large boulder/pagoda outcrops; ferruginous sandstone; red, yellow minerals, friable; one near overhang but eroded, no deposit	540
Mod3	simple slope	moderate	>50	2	4	A	15,600	2	1, 2	2%	low	312	1	sandstone	open surface, boulder, outcrop	>50	0.003	rock wall 2-4 metres high but no shelters; minor bedrock	73020
Mod4	spur crest	gentle	>50	2	4	A	600	1	1, 2	1%	low	6	0	sandstone	boulder, outcrop	10-50	-	dense vegetation; low potential	6914
Mod5	simple slope	gentle	>50	2	4	A	6,000	0.5	1	0.5%	low	30	0	-	-	-	-	grass, ironbark, acacia; low visibility; sandy soil; abundant fallen timber; generally low potential	27360
Mod6	drainage depression	gentle	<50	2	1, 4	A	15,600	5	1	5%	low	780	0	-	-	-	-	dense vegetation; sandy soil; abundant fallen timber; broad drainage; almost simple slope	43260
Mod7	ridge crest	level-very gentle	>50	2	4	A	900	5	1, 2	5%	low	45	0	-	-	-	-	saddle	3553
Mod8	scarp	steep	>50	2	1, 4	A	4,800	5	1	5%	low	240	0	sandstone	scarp	>50	-	large series of pagodas, remnant sandstone eroded from low ridge in valley; mostly straight walled, with few shelters; friable sandstone/conglomerate, art very unlikely to preserve for long; shelter on north side of pagoda at 752325/6433363 but all rocky floor, no pad; several other rock shelters	11530
Mod9	simple slope	gentle	>50	2	4	A	18,000	1	1, 2	1%	low	180	12	sandstone	boulder, outcrop	<10	0.067	dense leaf litter, fallen timber; ironbark, pines, geebung; boulders at 751970/6433570; 2x1m alignment of stone at 751837/6433623 but probably related to non-indigenous	132500
Mod10	drainage depression	gentle	<50	2	1, 4	A	2,800	5	1, 3	5%	low	140	19	-	-	-	0.136	leaf litter, sandy; broad swale	18420

ULAN MODIFICATION 2014 - ARCHAEOLOGICAL SURVEY COVERAGE DATABASE

Survey Area	Landform Element	Slope	Distance to Water (metres)	Vegetation	Land Surface	Exposure Type (Horizon)	Total Sample Area (m ²)	Surface Visibility (%)	Detection Limiting Factors	Archaeological Visibility %	Ground Disturbance	Effective Survey Coverage (m ²)	# of Artefacts (open sites)	Rock Outcrop Material	Rock Outcrop Form	Extent of Rock Outcrop (%)	Artefact Density/m ² of Effective Survey Coverage	Comments	Survey Unit Area (m ²)
Mod11	simple slope	gentle	<50	2	4	A	24,000	0.5	1, 2	0.5%	low	120	14	sandstone	outcrop	<10	0.117	grass, ironbark, acacia; low visibility; sandy soil, deep sand; wombat holes; abundant fallen timber; generally low potential apart from near watercourse	148200
Mod12	simple slope	moderate	>50	2	4	A	16,800	2	1, 2	2%	low	336	0	sandstone	boulder, outcrop	>50	-	rock wall 5 metres high but no shelters; mostly broad slope with outcrops but no shelters on major rock; low potential	76670
Mod13	drainage depression	gentle	<50	2	2, 4	A/B	16,800	1-10	1	1-10	low	240	10	sandstone	open surface, boulder, outcrop	<10	0.042	numerous wombat burrows; exposed areas and gully erosion; vehicle track; conglomeritic sandstone pebbles; eucalypts, geebung, sifton bush; abundant fallen timber	77480
Mod14	drainage depression	gentle	<50	2	4	A	1,600	1	1, 2	1%	low	16	0	sandstone	outcrop	<10	-	thick scrub, fallen timber, ironbark, geebung	14150
Mod15	spur crest	gentle	>50	2	4	A	2,000	5	1, 2	5%	low	100	0	sandstone	open surface, boulder, outcrop	>50	-	large remnant sandstone rock feature, eroded away around margins	4405
Mod16	simple slope	gentle	<50	2	4	A	800	1	1, 2	1%	low	8	0	-	-	-	-	dense vegetation	19210
Mod17	simple slope	moderate	>50	2	4	A	10,400	5	1, 2	5%	low	520	1	sandstone	scarp, open surface, boulder, outcrop	<10	0.002	more open vegetation at top of slope; dense shrub lower down slope; large boulders, rock walls in places	90190
Mod18	scarp	steep	>50	2	4	A	640	5	1, 2	5%	low	32	0	sandstone	scarp, open surface, boulder, outcrop	>50	-	extensive views to north; massive boulders, scarp; 'passageway'/chasm through large boulder detached from scarp; Great Divide	1008
Mod19	spur crest	gentle	>50	2	4	A	900	2	1, 2	2%	low	18	0	sandstone	outcrop	<10	-	abundant conglomerite derived pebbles and fallen timber	16750
Mod20	ridge crest	level-very gentle	>50	2	4	A	4,000	5	1, 2	5%	low	200	1	sandstone	open surface, boulder, outcrop	10-50	0.005	abundant fallen timber, thick young ironbark; excellent views to north; Great Divide; large boulders and several small shelters with pads south of study area	22630

ULAN MODIFICATION 2014 - ARCHAEOLOGICAL SURVEY COVERAGE DATABASE

Survey Area	Landform Element	Slope	Distance to Water (metres)	Vegetation	Land Surface	Exposure Type (Horizon)	Total Sample Area (m ²)	Surface Visibility (%)	Detection Limiting Factors	Archaeological Visibility %	Ground Disturbance	Effective Survey Coverage (m ²)	# of Artefacts (open sites)	Rock Outcrop Material	Rock Outcrop Form	Extent of Rock Outcrop (%)	Artefact Density/m ² of Effective Survey Coverage	Comments	Survey Unit Area (m ²)
Mod21	hillock	gentle	>50	2	4	A	540	1	1, 2	1%	low	5	0	sandstone	outcrop	<10	-	leaf litter, fallen timber	5364
Mod22	drainage depression	moderate	<50	2	4	A	2,400	2	1, 2	2%	low	48	0	sandstone	open surface, boulder, outcrop	>50	-	leaf litter; no suitable exposed bedrock for grooves	12170
Mod23	simple slope	moderate	>50	2	4	A	6,000	2	1, 2	2%	low	120	0	sandstone	boulder, outcrop	<10	-	rock wall south of 752050;6432640	57450
Mod24	ridge crest	level-very gentle	>50	2	4	A	300	1	1, 2	1%	low	3	0	sandstone	outcrop	<10	-	dense leaf litter	4338
Mod25	spur crest	gentle	>50	2	4	A	640	2	1, 2	2%	low	13	0	sandstone	outcrop	<10	-	abundant fallen timber and regrowth juvenile ironbark	12260
Mod26	simple slope	gentle	>50	1, 2	1, 4	A	20,800	5	1, 2	5%	low	1040	2	-	-	-	0.002	sandy; ironbark, scribbly gum, geebung, acacia; leaf litter, fallen vegetation; some cleared areas; very few mature trees apart from one stand of gums; relatively open forest good visibility to sides 50-100 metres from survey transects, no rock evident	350200
Mod27	drainage depression	gentle	<50	1, 2	2, 4	A	8,400	1-50	1, 2	1-50	low - mod	138	7	-	-	-	0.051	sandy areas; large areas of fallen timber, dense sifton, eucalypts; cleared areas lower down; conglomeritic pebbles	64790
Mod28	drainage depression	moderate	<50	2	2, 4	A/B	1,600	2	1, 2	2%	low	32	2	sandstone	open surface, boulder, outcrop	<10	0.062	sandy areas; banks exposed; gully erosion	6496
Mod29	simple slope	level-very gentle	<50	1	4	A	16,000	5	1	5%	low	800	362	-	-	-	0.452	sandy; adjacent to creek; moderate to high potential	33210
Mod30	drainage depression	gentle	<50	2	2, 4	A/B	16,000	2	1, 2	2%	low	320	1	sandstone	outcrop	<10	0.003	sifton bush, eucalypts, wattie; broad drainage swale; farm dam	35720
Mod31	simple slope	moderate	<50	2	4	A	2,000	2	1, 2	2%	low	40	0	sandstone	boulder, outcrop	<10	-	conglomerate derived pebbles; rock wall, boulders	16950
Mod32	simple slope	gentle	>50	2	4	A	2,000	1	1, 2	1%	low	20	0	-	-	-	-	dense vegetation; conglomeritic pebbles	12530

ULAN MODIFICATION 2014 - ARCHAEOLOGICAL SURVEY COVERAGE DATABASE

Survey Area	Landform Element	Slope	Distance to Water (metres)	Vegetation	Land Surface	Exposure Type (Horizon)	Total Sample Area (m ²)	Surface Visibility (%)	Detection Limiting Factors	Archaeological Visibility %	Ground Disturbance	Effective Survey Coverage (m ²)	# of Artefacts (open sites)	Rock Outcrop Material	Rock Outcrop Form	Extent of Rock Outcrop (%)	Artefact Density/m ² of Effective Survey Coverage	Comments	Survey Unit Area (m ²)
Mod33	hill crest	level-very gentle	>50	2	4	A	2,100	5	1, 2	5%	low	105	2	sandstone	outcrop	>50	0.019	sandstone cobbles, some in pushed up piles of rock; rusted old farm machinery	7910
Mod34	simple slope	gentle	>50	1, 2	1, 4	A	30,000	5	1, 2	5%	low	1500	45	sandstone	outcrop	<10	0.030	partially cleared, mostly regrowth ironbark	113600
Mod35	simple slope	moderate	<50	2	4	A	13,800	1	1, 2	1%	low	138	1	sandstone	open surface, outcrop	10-50	0.007	mostly dense vegetation; abundant fallen timber and leaf litter; conglomeritic pebbles	125600
Mod36	spur crest	gentle	>50	2	4	A	720	1	1, 2	1%	low	7	0	-	-	-	-	conglomerate derived pebbles; minor sandy exposures	10550
Mod37	simple slope	gentle	<50	2	4	A	2,100	1	1, 2	1%	low	21	0	sandstone	open surface, outcrop	10-50	-	mostly dense vegetation	35780
Mod38	spur crest	gentle	>50	2	4	A	2,100	1	1, 2	1%	low	21	0	sandstone	open surface, outcrop	10-50	-	mostly dense vegetation; abundant fallen timber and leaf litter; conglomeritic pebbles	20590
Mod39	simple slope	moderate	>50	2	4	A	720	1	1, 2	1%	low	7	0	sandstone	open surface, outcrop	10-50	-	mostly dense vegetation; abundant fallen timber and leaf litter; conglomeritic pebbles	7658
Mod40	hillock	gentle	>50	2	4	A	300	1	1, 2	1%	low	3	0	sandstone	open surface, outcrop	10-50	-	low rock walls, sandstone outcrops	3923

APPENDIX 3.

ABORIGINAL HERITAGE SITE DATA³

³ For new sites identified and recording during the present survey and re-recordings of several previously reported sites (Haglund 1999). Refer to Appendix 1 for additional information on previously recorded sites (not included within Kuskie 2009) and Kuskie (2009) for descriptions of sites recorded during the UCCO Project within the approved UCCO Project Area.

Newly recorded and re-recorded sites:

Ulan ID#¹	Site Name²	Site Type	MGA Grid Reference Eastings	MGA Grid Reference Northings	Landform	Comments
160	CC18	Rockshelter with Artefacts	751619	6433924	simple slope	In approved UCCO Project Area and previously surveyed area but outside of approved subsidence impact area. First recorded by Haglund, re-recorded during modification survey in May 2014, although now outside of final modification area.
161	CC19	Rockshelter with Art and Artefacts	752292	6433639	scarp	In approved UCCO Project Area and previously surveyed area but outside of approved subsidence impact area. First recorded by Haglund, re-recorded during modification survey in May 2014.
162	CC20	Rockshelter with Art and Artefacts	752313	6433639	scarp	In approved UCCO Project Area and previously surveyed area but outside of approved subsidence impact area. First recorded by Haglund, re-recorded during modification survey in May 2014.
284	CC21	Rockshelter with Artefacts	752385	6433419	scarp	In modification area but outside approved UCCO Project Area and not previously surveyed. First recorded by Haglund, re-recorded during modification survey in May 2014.
1573	CC23	Isolated Find	751617	6433910	simple slope	In approved UCCO Project Area, but outside of previously surveyed area and outside of final modification area. Recorded during modification survey in May 2014.
1574	CC24	Rockshelter with PAD	752280	6433638	scarp	In approved UCCO Project Area, modification area and previously surveyed area. Recorded during modification survey in May 2014.
1575	CC25	Rockshelter with Artefacts	752140	6433655	scarp	In approved UCCO Project Area, modification area and previously surveyed area. Recorded during modification survey in May 2014.
	CC26	Isolated Find	752520	6433473	simple slope	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC27	Artefact Scatter	752374	6433436	simple slope	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC28	Rockshelter with Artefacts	752377	6433418	scarp	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC29	Rockshelter with PAD	752380	6433400	scarp	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC30	Artefact Scatter	752098	6433480	simple slope	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC31	Artefact Scatter	752052	6433501	drainage depression	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC32	Artefact Scatter	751981	6433553	simple slope	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC33	Isolated Find	751844	6433587	drainage depression	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC34	Artefact Scatter	751786	6433503	drainage depression	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.

Ulan ID# ¹	Site Name ²	Site Type	MGA Grid Reference Eastings	MGA Grid Reference Northings	Landform	Comments
	CC35	Artefact Scatter	751584	6433539	hill crest	Outside approved UCCO Project Area, previously surveyed area and final modification area. Recorded during modification survey in May 2014.
	CC36	Artefact Scatter	751854	6433364	drainage depression	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
1576	CC37	Artefact Scatter	751788	6433299	simple slope	In modification area but mostly outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC38	Isolated Find	751812	6433247	simple slope	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC39	Artefact Scatter	752049	6433344	drainage depression	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC40	Artefact Scatter	752113	6433336	simple slope	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC41	Artefact Scatter	752058	6433273	simple slope	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC42	Artefact Scatter	752360	6433142	drainage depression	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC43	Artefact Scatter	752511	6433020	drainage depression	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC44	Isolated Find	752605	6432954	drainage depression	In modification area but outside approved UCCO Project Area and not previously surveyed. Recorded during modification survey in May 2014.
	CC45	Rockshelter with PAD	752782	6432453	spur crest	Outside approved UCCO Project Area, previously surveyed area and final modification area. Recorded during modification survey in May 2014.
	CC46	Rockshelter with PAD	752804	6432382	spur crest	Outside approved UCCO Project Area, previously surveyed area and final modification area. Recorded during modification survey in May 2014.
	CC47	Rockshelter with PAD	752883	6432326	simple slope	Outside approved UCCO Project Area, previously surveyed area and final modification area. Recorded during modification survey in May 2014.
	CC48	Isolated Find	752669	6432370	simple slope	Outside approved UCCO Project Area, previously surveyed area and final modification area. Recorded during modification survey in May 2014.
	CC49	Isolated Find	752282	6432506	ridge crest	Outside approved UCCO Project Area, previously surveyed area and final modification area. Recorded during modification survey in May 2014.
	Ulan Drosd Track 3	Artefact Scatter	752099	6433179	simple slope	In modification area and previously surveyed for drill track due diligence, but outside approved UCCO Project Area. Re-recorded during modification survey in May 2014.

1: Only applicable for sites within the approved UCCO Project Area.

2: CC = 'Cockabutta Creek'.

SITE NAME: COCKABUTTA CREEK 18 (ULAN ID# 160)

Site Name:	<i>Ulan ID# 160 (CC18)</i>	Recorder:	<i>Birgitta Stephenson</i>
Site Type:	<i>Rock shelter with Artefacts</i>	MGA Grid Reference:	<i>751619:6433924</i>
Date Recorded:	<i>27/5/2014</i>	Topographic Map:	<i>Narragamba 8833-4S</i>

Landform Element:	<i>Simple slope</i>	Vegetation:	<i>Forest/bush/regrowth</i>
Slope:	<i>Moderate</i>	Ground Disturbance:	<i>Low</i>
Distance to Water:	<i>>50</i>		

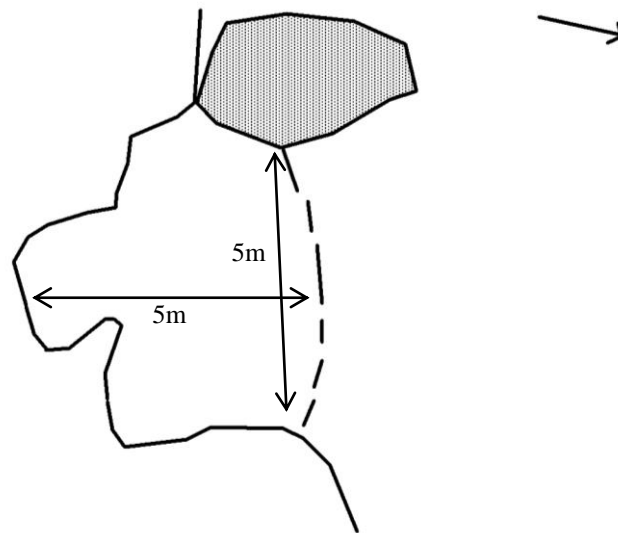
Rock Outcrop Material:	<i>Conglomerate</i>
Outcrop Type:	<i>Rock shelter</i>
Outcrop Form:	<i>Scarp</i>
Aspect:	<i>West</i>
Erosion:	<i>Exfoliation, cavernous</i>
Surface Condition:	<i>Exfoliating; exposed, weathered</i>
Soil:	<i>Sand, gravel</i>
Disturbance to Deposit:	<i>Low</i>
Causes of Disturbance:	<i>Erosion</i>

Possible Extent of Potential Archaeological Deposit:	<i>2 x 2 metres</i>
Possible Depth of Potential Archaeological Deposit:	<i>>0.1 metres</i>
# of Artefacts:	<i>Nil recorded during present survey (3 previously - Haglund 1999)</i>
Archaeological Visibility:	<i>50 %</i>
Shelter Floor Area:	<i>c.5 x 4 metres</i>
Habitable Shelter Area (roof 1+ metres above floor):	<i>c.5 x 3 metres</i>

Additional Comments:

- ☐ Originally recorded by Haglund (1999) in 1995;
- ☐ Re-recorded during survey for Ulan West Modification;
- ☐ Once substantially larger - major roof fall at front of shelter;
- ☐ Artefacts recorded by Haglund (1999) but not relocated here;
- ☐ Up to 5 metres deep (although rear portion very low) and 5 metres wide, and 1.75 metres high at dripline;
- ☐ Small pad, mostly rocky floor;
- ☐ Low potential for deposits of research value.

Site Plan: Cockabutta Creek 18 (ID# 160)



KEY:

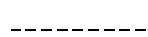
Back wall at floor



Back wall at x metres



Dripline



Overhang & dripline/overhang



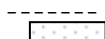
Artefact

x

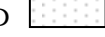
Artefact concentration

X

Rock Shelf



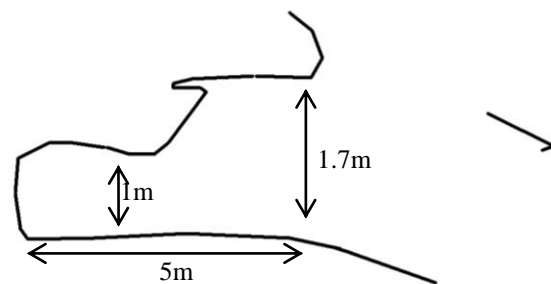
Deposit/PAD



Animal burrow



Cross-section:



Site Location: Cockabutta Creek 18 (ID# 160) (100 metre MGA grid; one metre contours).



Photograph: Cockabutta Creek 18 (Ulan ID# 160)



Photograph: Cockabutta Creek 18 (Ulan ID# 160)



SITE NAME: COCKABUTTA CREEK 19 (ULAN ID# 161)

Site Name:	<i>Ulan ID# 161 (CC19)</i>	Recorder:	<i>Peter Kuskie</i>
Site Type:	<i>Rock shelter with Art and Artefacts</i>	MGA Grid Reference:	<i>752292:6433639</i>
Date Recorded:	<i>27/5/2014</i>	Topographic Map:	<i>Narragamba 8833-4S</i>
Landform Element:	<i>Scarp</i>	Vegetation:	<i>Forest/bush/regrowth</i>
Slope:	<i>Steep</i>	Ground Disturbance:	<i>Low to moderate</i>
Distance to Water:	<i>>50</i>		

Rock Outcrop Material:	<i>Sandstone</i>
Outcrop Type:	<i>Rock shelter</i>
Outcrop Form:	<i>Scarp</i>
Aspect:	<i>South</i>
Erosion:	<i>Cavernous</i>
Surface Condition:	<i>Accretions</i>
Soil:	<i>Sand</i>
Disturbance to Deposit:	<i>Low - moderate</i>
Causes of Disturbance:	<i>Animal burrows</i>

Possible Extent of Potential Archaeological Deposit:	<i>17 x 4 metres</i>
Possible Depth of Potential Archaeological Deposit:	<i>>1 metre</i>
# of Artefacts:	<i>4 recorded during present survey (4 previously - Haglund 1999)</i>
Archaeological Visibility:	<i>90 %</i>
Shelter Floor Area:	<i>c.17 x 7.5 metres</i>
Habitable Shelter Area (roof 1+ metres above floor):	<i>c.17 x 4 metres</i>

Rock Art:

Art Surface:	<i>Vertical</i>
# of Motifs:	<i>6</i>
Motif Types:	<i>1 cross, 1 hand, 1 emu foot, 3 uncertain</i>
Motif Techniques:	<i>Painted (cross, emu foot, uncertain), stencilled (hand, 2 uncertain)</i>
Motif Colour:	<i>Red</i>
Disturbance:	<i>Low</i>
Comments:	<i>Motifs 1-4 (painted red cross, red hand stencil, several uncertain stencils - possibly hands) in 2 x 0.4 metre section of rear wall in mid of shelter, 1.4 metres above floor. Motifs 5-6 (painted red emu foot and uncertain painted motif) in 0.4 x 0.1 metre section of rear wall on left side of shelter above low alcove and 1.1 metres above floor.</i>

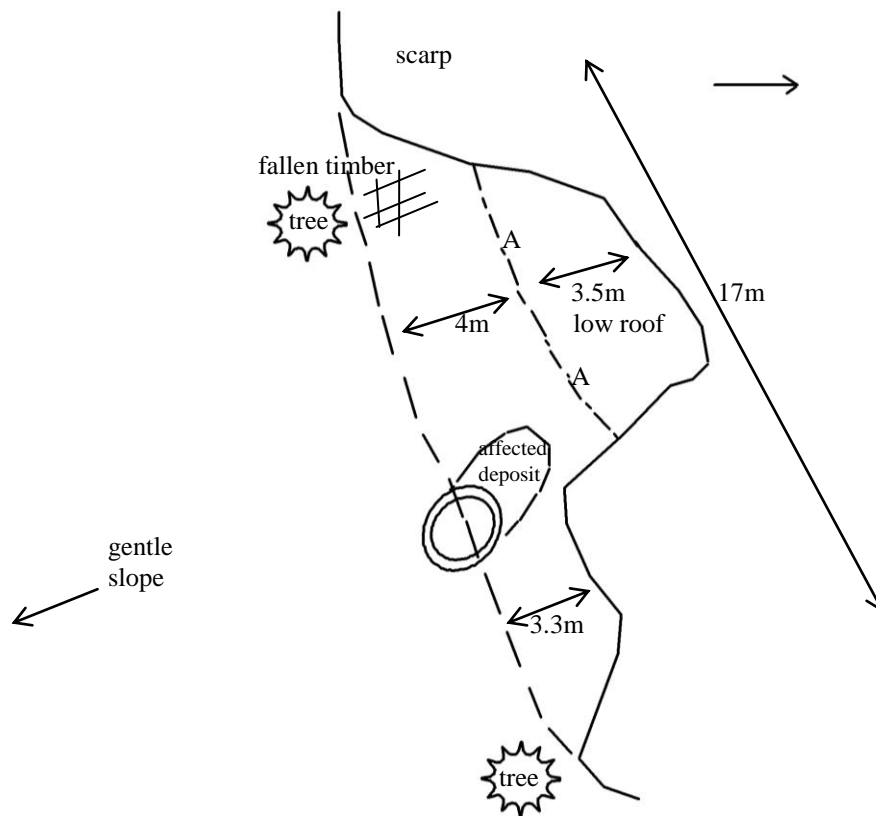
Lithic Items (recorded during present survey):

Artefact #	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	translucent	crystal quartz	flake	31x20x6			around wombat hole
2	white	quartz	flake	14x12x2			around wombat hole
3	brown	chert	core fragment	23x16x8			around wombat hole
4	white	quartz	flake	20x13x4			2 metres in front of dripline



Additional Comments:

- ❑ Originally recorded by Haglund (1999) in 1995;
- ❑ Re-recorded during survey for Ulan West Modification;
- ❑ Dimensions up to 7.5 metres deep (but back 3.5 metres under low 1 metre roof) and 17 metres wide, 2.9 metres high at dripline;
- ❑ Large shelter, high potential for deposits of research value, but part of deposit highly disturbed by wombat burrow at dripline;
- ❑ 20 metres west of ID# 162;
- ❑ Pad extends in front of dripline;
- ❑ Animal bones present;
- ❑ A previous informant (David Maynard) had tentatively identified the shelter as a 'women's shelter' (Haglund 1999);
- ❑ Completely coincidentally and unbeknownst to the two Aboriginal representatives involved in the present survey, both, at the same moment, distinctly heard a woman's voice, when with the archaeologist approximately 120 metres east of this rock shelter (at MGA reference 752408:6433637). Neither representative had been in the area before or had any prior knowledge of the rock shelters or previous recording, and no other feasible sources of a female voice were possible in that location at that time.

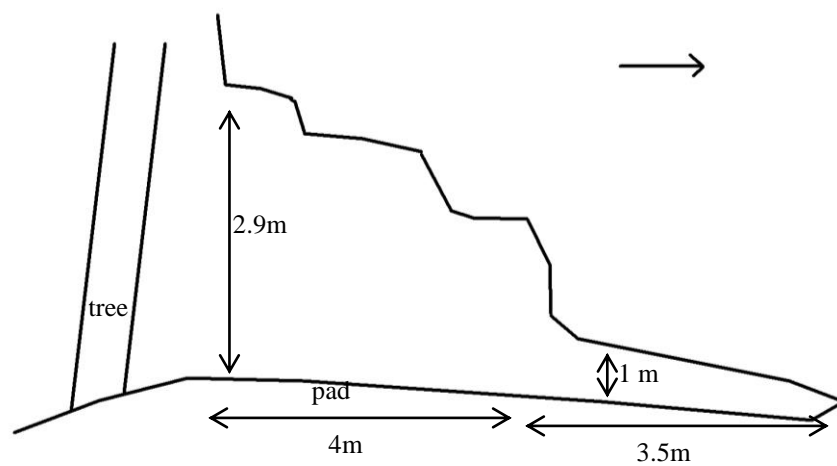
Site Plan: Cockabutta Creek 19 (ID# 161)



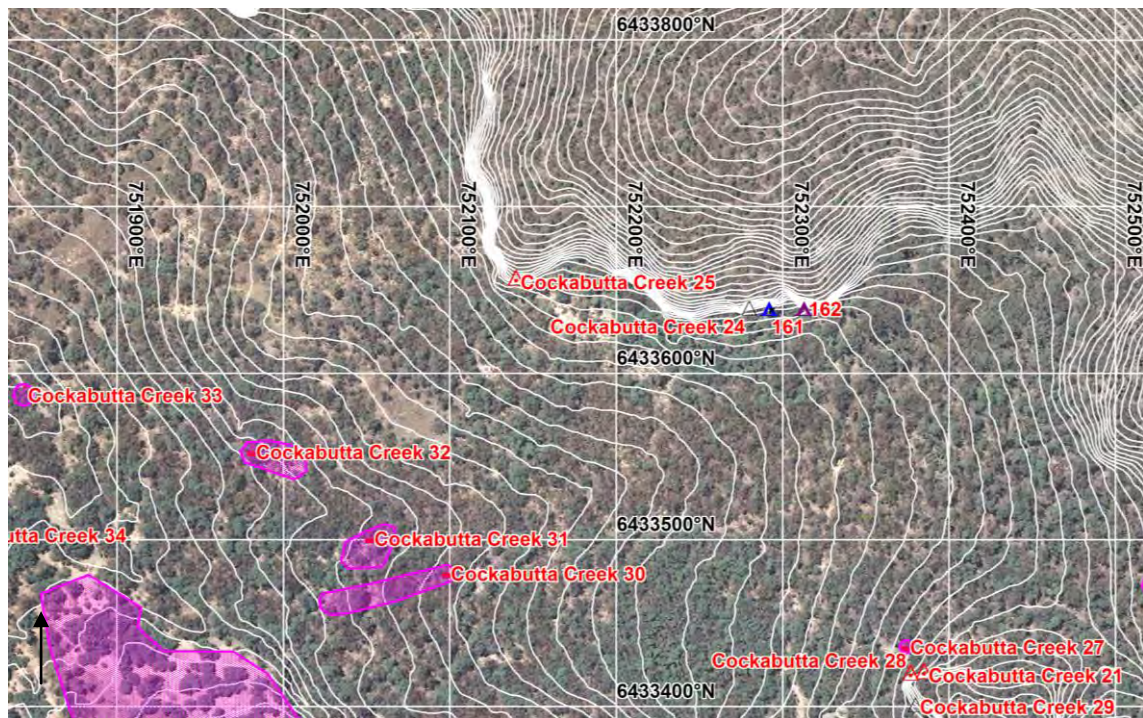
KEY:

Back wall at floor	—————	Back wall at x metres	-----	Rock Shelf	-----
Dripline	x-----	Overhang & dripline/overhang	-----	Deposit/PAD	
Artefact	x	Artefact concentration	X	Animal burrow	

Cross-section:



Site Location: Cockabutta Creek 19 (ID# 161) (100 metre MGA grid; one metre contours).



Photograph: Cockabutta Creek 19 (Ulan ID# 161)



Photograph: Cockabutta Creek 19 (Ulan ID# 161)



Photograph: Cockabutta Creek 19 (Ulan ID# 161) (rock art motifs 1-4)



Photograph: Cockabutta Creek 19 (Ulan ID# 161) (rock art motifs 5-6)



SITE NAME: COCKABUTTA CREEK 20 (ULAN ID# 162)

Site Name:	<i>Ulan ID# 162 (CC20)</i>	Recorder:	<i>Peter Kuskie</i>
Site Type:	<i>Rock shelter with Art and Artefacts</i>	MGA Grid Reference:	<i>752313:6433639</i>
Date Recorded:	<i>27/5/2014</i>	Topographic Map:	<i>Narragamba 8833-4S</i>
Landform Element:	<i>Scarp</i>	Vegetation:	<i>Forest/bush/regrowth</i>
Slope:	<i>Steep</i>	Ground Disturbance:	<i>Low</i>
Distance to Water:	<i>>50</i>		

Rock Outcrop Material:	<i>Sandstone</i>
Outcrop Type:	<i>Rock shelter</i>
Outcrop Form:	<i>Scarp</i>
Aspect:	<i>South</i>
Erosion:	<i>Cavernous</i>
Surface Condition:	<i>Exposed/weathered</i>
Soil:	<i>Sand</i>
Disturbance to Deposit:	<i>Low</i>
Causes of Disturbance:	<i>Animal burrows</i>

Possible Extent of Potential Archaeological Deposit:	<i>17 x 3 metres</i>
Possible Depth of Potential Archaeological Deposit:	<i>2 metres</i>
# of Artefacts:	<i>12 recorded during present survey (8 previously - Haglund 1999)</i>
Archaeological Visibility:	<i>90 %</i>
Shelter Floor Area:	<i>c.17 x 3 metres</i>
Habitable Shelter Area (roof 1+ metres above floor):	<i>c.17 x 3 metres</i>

Rock Art:

Art Surface:	<i>Vertical</i>
# of Motifs:	<i>2</i>
Motif Types:	<i>1 goanna, 1 uncertain</i>
Motif Techniques:	<i>Painted</i>
Motif Colour:	<i>Red</i>
Disturbance:	<i>Low (erosion)</i>
Comments:	<i>Motif 1 is a red painted goanna 300 mm in length on the left side of shelter, 1.6 metres above the rock ledge at the rear wall. Motif 2 is a possible painted hand on the rear wall in the mid portion of the shelter, 1.9 metres above the floor.</i>

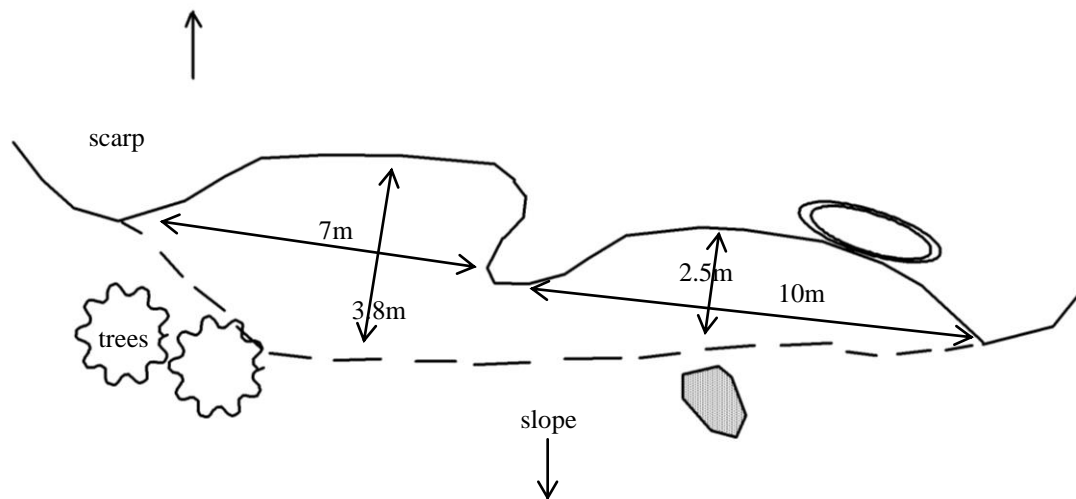
Lithic Items (recorded during present survey):

Artefact #	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	translucent	crystal quartz	core fragment	23x12x10			
2	grey	acidic volcanic	retouched piece	30x25x9			outside dripline by 2 metres; extensive retouch
3	brown	petrified wood	core	50x38x20	50	terr	1 scar, 1 platform
4	white	quartz	flake	18x13x4			
5	white	quartz	core	35x28x15			1+ scars, 1 platform, 1 metre in front of dripline
6	grey	chert	lithic fragment	20x16x12			1 metre in front of dripline
7	white	quartz	flake - longitudinal	16x11x3			at dripline
8	white	quartz	flake - distal	35x21x7			at dripline
9	white	quartz	flake	23x19x9			at dripline
10	white	quartz	core	30x26x12			4+ scars, 2 platforms
11	white	quartz	core fragment	26x22x12			3 metres in front of dripline
12	white	quartz	core	25x16x10			2 scars, 1 platform; 1m from dripline

Additional Comments:

- ☐ Originally recorded by Haglund (1999) in 1995;
- ☐ Re-recorded during survey for Ulan West Modification;
- ☐ 20 metres east of ID# 161;
- ☐ Dimensions up to 3.8 metres deep (but mostly 2.5-3 metres deep) and 17 metres wide;
- ☐ 2 metres high at dripline on east side and 3.3 metres high on west side;
- ☐ Large wombat hole in rear on east side but not impacting on deposit;
- ☐ Pad 17 x 3 metres and possibly up to 2 metres deep;
- ☐ Large shelter, high potential for deposits of research value;
- ☐ At base of scarp;
- ☐ Dark sandy soil;
- ☐ Many more artefacts than sample recorded.

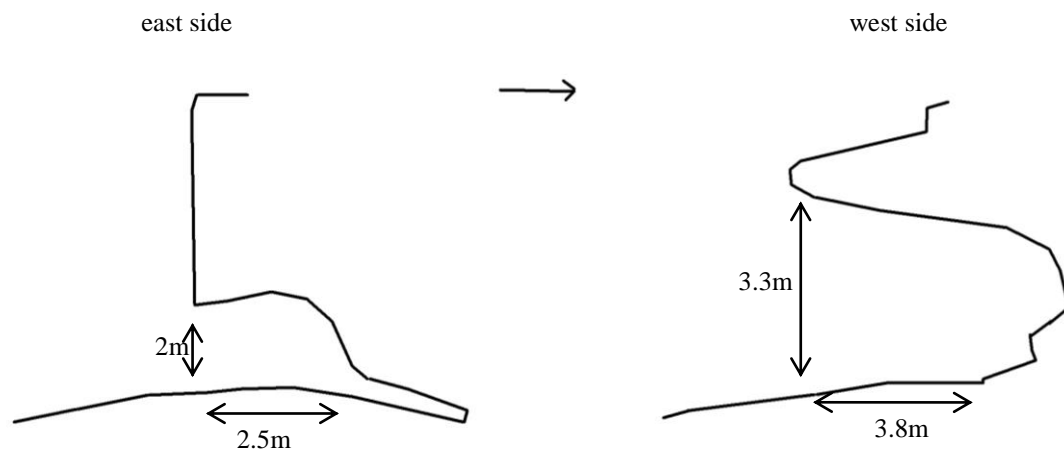
Site Plan: Cockabutta Creek 20 (ID# 162)



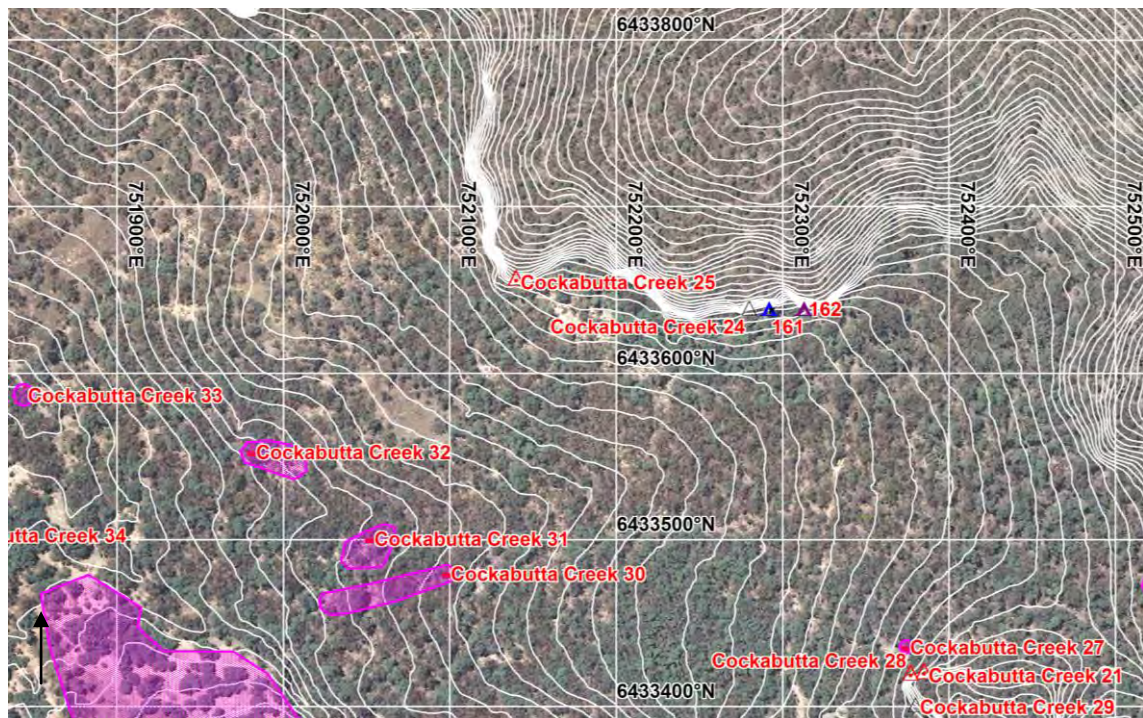
KEY:

Back wall at floor	-----	Back wall at x metres	-----	Rock Shelf	-----
Dripline	-----	Overhang & dripline/overhang	-----	Deposit/PAD	-----
Artefact	x	Artefact concentration	X	Animal burrow	-----

Cross-section:



Site Location: Cockabutta Creek 20 (ID# 162) (100 metre MGA grid; one metre contours).



Photograph: Cockabutta Creek 20 (Ulan ID# 162)



Photograph: Cockabutta Creek 20 (Ulan ID# 162)



Photograph: Cockabutta Creek 20 (Ulan ID# 162) (motif #1 - above, #2 - below)



SITE NAME: COCKABUTTA CREEK 21 (ULAN ID# 284)

Site Name: *Ulan ID# 284 (CC21)* Recorder: *Peter Kuskie*
 Site Type: *Rock shelter with Artefacts* MGA Grid Reference: *752385:6433419*
 Date Recorded: *28/5/2014* Topographic Map: *Narragamba 8833-4S*

Landform Element: *Scarp* Vegetation: *Forest/bush/regrowth*
 Slope: *Steep* Ground Disturbance: *Low*
 Distance to Water: *>50*

Rock Outcrop Material: *Sandstone*
 Outcrop Type: *Rock shelter*
 Outcrop Form: *Scarp*
 Aspect: *North*
 Erosion: *Cavernous*
 Surface Condition: *Exposed/weathered*
 Soil: *Sand*
 Disturbance to Deposit: *Low*
 Causes of Disturbance: *Animal burrows*

Possible Extent of Potential Archaeological Deposit: *5 x 3 metres*
 Possible Depth of Potential Archaeological Deposit: *>0.4 metres*
 # of Artefacts: *13 recorded during present survey*
(9 previously - Haglund 1999)
 Archaeological Visibility: *80 %*
 Shelter Floor Area: *c.5 x 3 metres*
 Habitable Shelter Area (roof 1+ metres above floor): *c.5 x 3 metres*

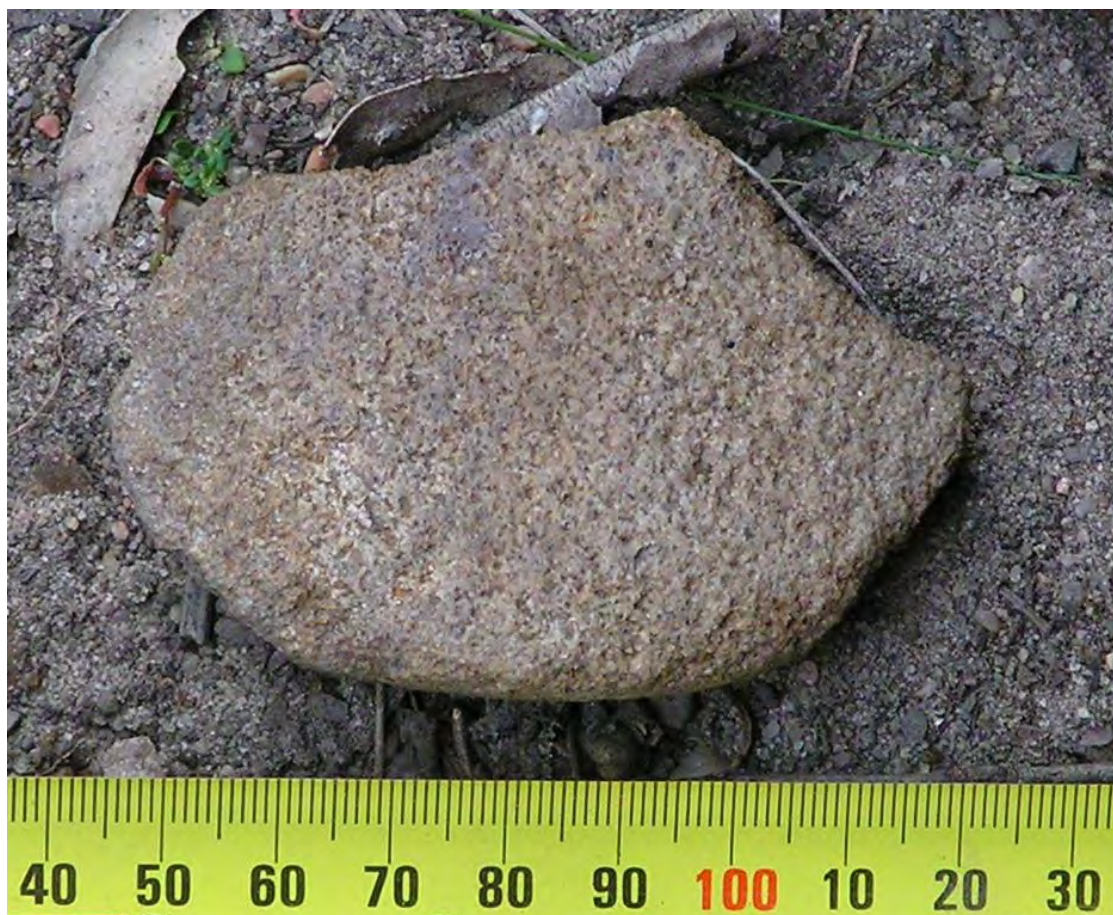
Lithic Items (recorded during present survey):

Artefact #	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	white	quartz	flake	17x15x3			
2	white	quartz	lithic fragment	25x17x10			
3	white	quartz	flake	30x25x5			
4	white	quartz	core fragment	22x13x10			
5	cream	petrified wood	flake - proximal	50x25x10			
6	brown	sandstone	topstone fragment	76x55x20			lenticular; top surface polished/smooth
7	white	quartz	lithic fragment	10x6x2			
8	white/orange	quartz	flake	32x24x7	80	peb	
9	translucent	crystal quartz	core	23x18x16			7+ scars, 3 platforms
10	white	quartz	flake - distal	14x10x3			
11	white	quartz	core	40x30x25			5 scars, 4 platforms
12	white	quartz	flake	13x8x2			
13	black	chert	flake	26x14x5			

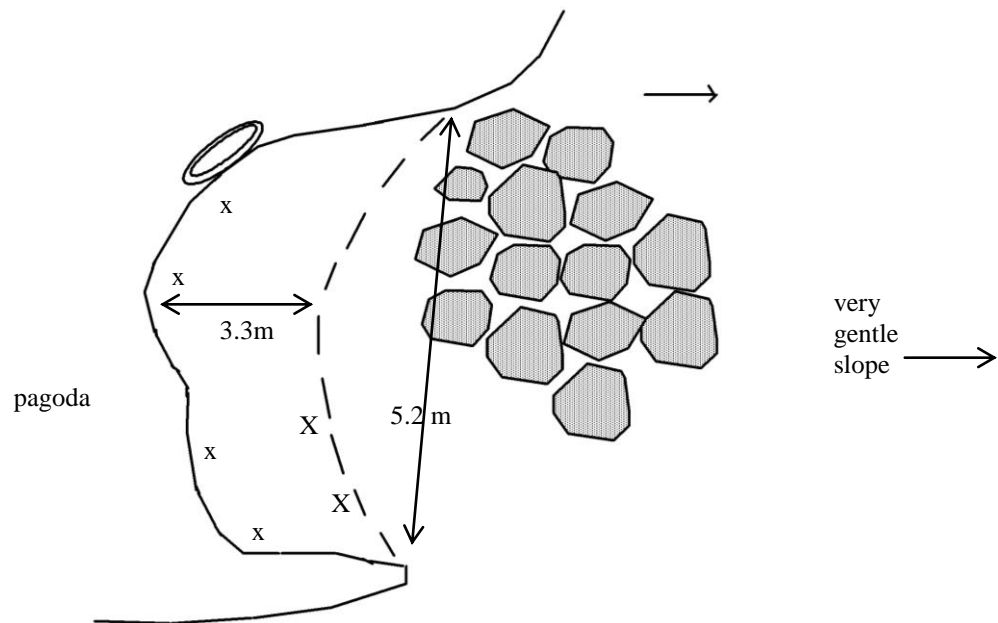
Additional Comments:

- ❑ Originally recorded by Haglund (1999) in 1995;
- ❑ Re-recorded during survey for Ulan West Modification;
- ❑ Adjacent shelter recorded separately;
- ❑ Dimensions 3.3 metres deep and 5.2 metres wide;
- ❑ 2.7 metres high at dripline and 2.2 metres high internally;
- ❑ Low rocks near entrance;
- ❑ Wombat hole in rear but minimal impact;
- ❑ Friable sandstone, minor pink and orange staining;
- ❑ Possibly art in past but would quickly erode;
- ❑ High potential for deposit of research value;
- ❑ Deep deposit likely and possibly old, no obvious erosion sources;
- ❑ Located in massive pagoda;
- ❑ Rock fall at front of dripline from earlier collapse, forward of pad.



Photograph: Cockabutta Creek 21 (artefact #6 - sandstone topstone fragment)



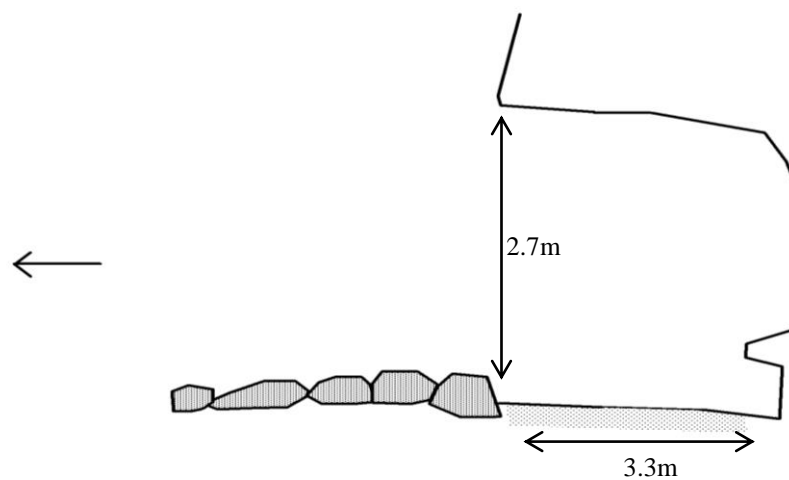
Site Plan: Cockabutta Creek 21 (ID# 284)



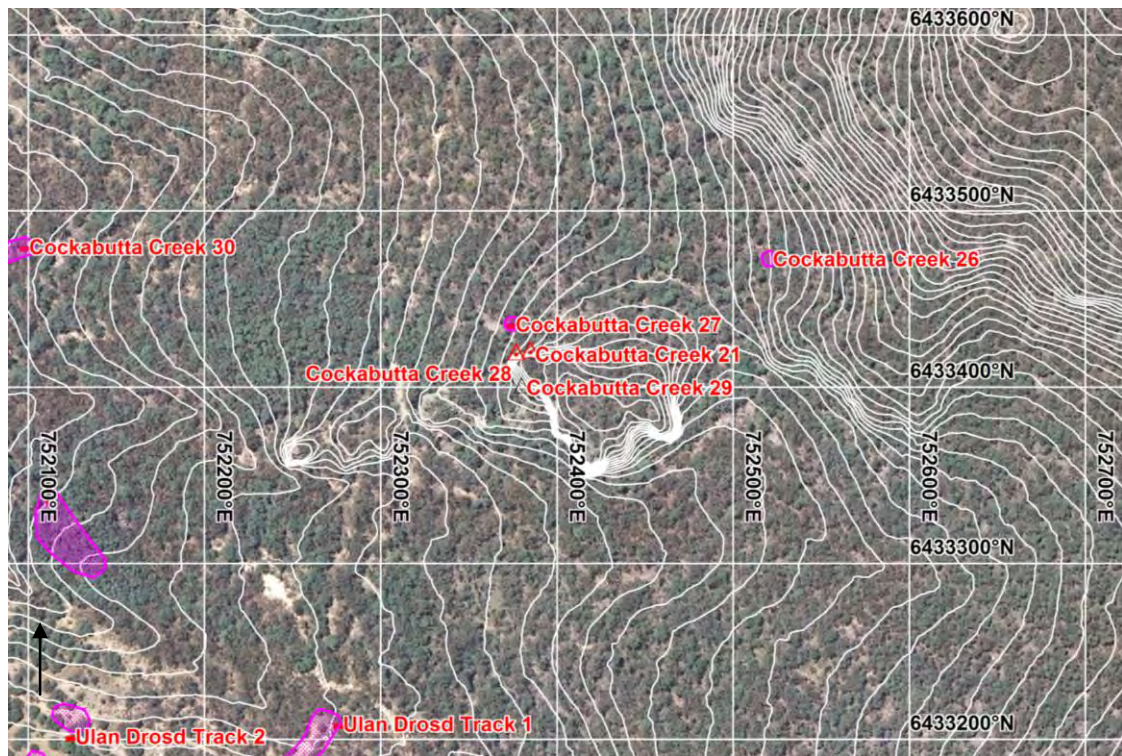
KEY:

Back wall at floor	—————	Back wall at <i>x</i> metres	-----	Rock Shelf	-----
Dripline	-----	Overhang & dripline/overhang	-----	Deposit/PAD	
Artefact	<i>x</i>	Artefact concentration	<i>X</i>	Animal burrow	

Cross-section:



Site Location: Cockabutta Creek 21 (ID# 284) (100 metre MGA grid; one metre contours).



Photograph: Cockabutta Creek 21 (Ulan ID# 284)



SITE NAME: COCKABUTTA CREEK 23 (ULAN ID# 1573)

Site Name: *Cockabutta Creek 23* Recorder: *Birgitta Stephenson*
 Site Type: *Isolated Find* MGA Grid Reference: *751617:6433910*
 Date Recorded: *27/5/2014* Topographic Map: *Narragamba 8833-4S*

 Landform Element: *Simple Slope* Vegetation: *Forest/bush/regrowth*
 Slope: *Moderate* Ground Disturbance: *Low*
 Distance to Water: *<50*

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	unlikely

Lithic Items:

Artefact #	MGA Easting	MGA Northing	Colour	Stone Material	Lithic Item Type	Dimensions (mm)	Cortex Type	Cortex Amount (%)	Comments
1	751617	6433910	white	quartz	hammerstone	36x36x9	90	peb	18 metres from shelter ID# 160; 'chimpler'; small pebble hammerstone used for backing of artefacts; circular shape; extensive bruising and crushing on ends and margins

Additional Comments:

- ☐ Located during survey for Ulan West Modification;
- ☐ 18 metres from rock shelter site ID# 160.

Site Location: Cockabutta Creek 23 (100 metre MGA grid; one metre contours).



Photograph: Cockabutta Creek 23



Photograph: Cockabutta Creek 23 (quartz hammerstone)



SITE NAME: COCKABUTTA CREEK 24 (ULAN ID# 1574)

Site Name:	<i>Cockabutta Creek 24</i>	Recorder:	<i>Peter Kuskie</i>
Site Type:	<i>Rock shelter with PAD</i>	MGA Grid Reference:	<i>752280:6433638</i>
Date Recorded:	<i>28/5/2014</i>	Topographic Map:	<i>Narragamba 8833-4S</i>
Landform Element:	<i>Scarp</i>	Vegetation:	<i>Forest/bush/regrowth</i>
Slope:	<i>Steep</i>	Ground Disturbance:	<i>Low</i>
Distance to Water:	<i>>50</i>		

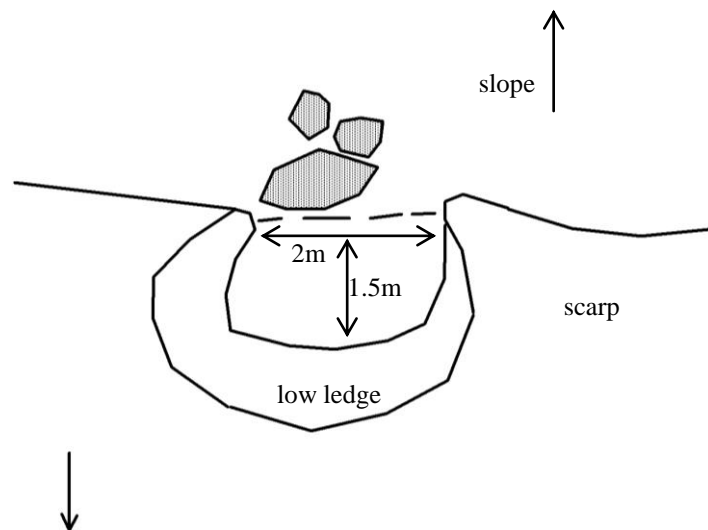
Rock Outcrop Material:	<i>Sandstone</i>
Outcrop Type:	<i>Rock shelter</i>
Outcrop Form:	<i>Scarp</i>
Aspect:	<i>South</i>
Erosion:	<i>Cavernous</i>
Surface Condition:	<i>Accretions</i>
Soil:	<i>Sand</i>
Disturbance to Deposit:	<i>Low</i>
Causes of Disturbance:	<i>Erosion</i>

Possible Extent of Potential Archaeological Deposit:	<i>2 x 1.5 metres</i>
Possible Depth of Potential Archaeological Deposit:	<i>>0.2 metres</i>
# of Artefacts:	<i>Nil</i>
Archaeological Visibility:	<i>10 %</i>
Shelter Floor Area:	<i>2 x 1.5 metres</i>
Habitable Shelter Area (roof 1+ metres above floor):	<i>2 x 1.5 metres</i>

Additional Comments:

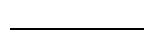
- ☐ Recorded during survey for Ulan West Modification;
- ☐ Dimensions 1.5 metres deep and 2 metres wide;
- ☐ 2 metres high at dripline;
- ☐ Small shelter immediately west of ID# 161 and 162;
- ☐ Small pad, low potential but part of cluster.

Site Plan: Cockabutta Creek 24



KEY:

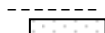
Back wall at floor



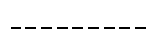
Back wall at x metres



Rock Shelf



Dripline



Overhang & dripline/overhang



Deposit/PAD



Artefact

x

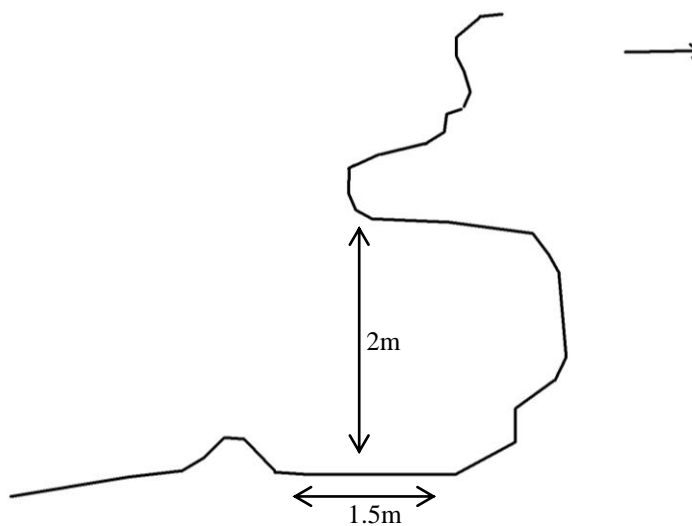
Artefact concentration

X

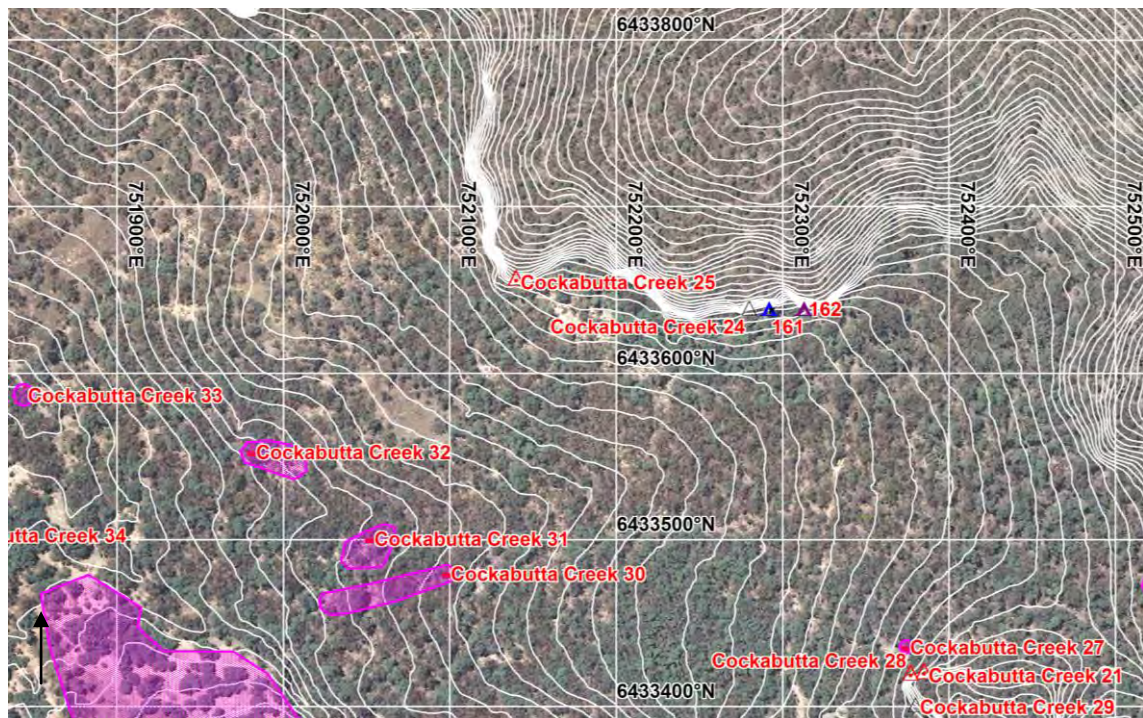
Animal burrow



Cross-section:



Site Location: Cockabutta Creek 24 (100 metre MGA grid; one metre contours).



Photograph: Cockabutta Creek 24

