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7.3.3 Cultural Lithic Assemblage

As indicated in **Section 7.3.2**, a total of 482 cultural lithic items were identified during the current survey, 475 or 98.9% of which are located within the Project area. A typological breakdown of the combined cultural lithic assemblage recorded during survey (**Table 19**) shows that the majority (69.9%, n = 337) of identified artefacts consisted of flake debitage items (i.e., complete/proximal flakes and flake shatter pieces), with non-flake debitage items (i.e., flaked pieces, 7.5%, n = 36), heat shatters¹⁷ (14.3%, n = 69) and formed objects (*sensu* Moore, 2000) (1.7%, n = 8) comparatively poorly represented. A single broken sandstone grindstone, previously recorded by AMBS (2009a) as site KK15 (37-6-1963) and located outside of the current Project area, was also identified during survey. Complete flakes were the most common flake debitage item identified during survey (n = 208, 43.2%), followed by flake shatter fragments (n = 61, 14.3%), proximal (broken) flakes (n = 49, 10.2%) and split flakes (n = 19, 3.9%). Of the 69 heat shatters identified during survey, 37.7% (n = 26) retained remnant flaked surfaces indicative of post-discard burning. Two were potlids.

Excluding the grindstone, recorded artefacts were, on average, reasonably large, exhibiting an average Maximum Linear Dimension (MLD) of 31±13.9 mm (range: 2.9-117 mm). The largest artefact recorded during survey - an atypically large complete silicified tuff flake - measures 111.6 (L) x 117 (W) x 30.4 (T) mm (**Plate 11**).

As shown in **Table 20**, silcrete was the dominant raw material overall, accounting for 56.8% (n = 274) of the total recorded assemblage. However, silicified tuff was also well represented (35.1%, n = 169). Other, less common raw materials included unidentified Fine Grained Siliceous (FGS) (n = 17, 3.5%), quartz (n = 12, 2.5%), quartzite (n = 5, 1%), volcanic (n = 3, 0.6%), chalcedony (n = 1, 0.2%) and sandstone (n = 1, 0.2%). Notably, cortical artefacts were poorly represented, with only 74 or 15.4% of artefacts exhibiting some cortex. Remnant cortical surfaces, where present, were consistent with the exploitation of water-rolled pebbles and cobbles sourced from one or more alluvial and/or colluvial gravel deposits.

Descriptive statistics for the size and shape of all complete flakes (n = 208) identified during survey indicate a population of relatively large, squat flakes (**Table 20**). Few (n = 29, 13.9%) complete flakes were less than 20 mm in MLD. Elongate flakes (i.e., those exhibiting an elongation ratio ≥2) were likewise relatively rare, with only 13 examples recorded during survey. Striking platforms on complete and proximal flakes were mostly plain (i.e., single scar) (n = 202, 78.6%), with multiple scar (non-faceted) (n = 24, %), crushed/collapsed (n = 14, 5.4%), cortical (n = 14, 5.4%) and punctiform (n = 3, 1.2%) forms also represented. No faceted platforms were observed. In keeping with the paucity of cortex in the assemblage as a whole, the majority (n = 182, 87.5%) of complete flakes in the combined surface assemblage exhibited no dorsal cortex. All but one cortex-bearing flake was recorded as retaining between 1 and 50% dorsal cortex.

Summary data on the 29 cores identified during survey are provided in **Table 22**. As indicated, multidirectional (n = 10, 34.5%) and unidirectional (n = 9, 31%) cores were represented more-or-less equally, with bifacial (n = 7, 24.1) cores also well represented (**Plate 12** and **Plate 13**). Comparatively rare types included two bipolar cores and one bidirectional core. In keeping with the assemblage overall, silcrete cores were most common (n = 14, 48.3%) followed closely by silicified tuff (n = 12, 41.4%) examples. Two quartz cores and one FGS core were also identified. Primary blanks were predominantly of indeterminate form due to extent of reduction. However, both pebble/cobble (n = 9) and flake (n = 6) blanks were also noted. No tranchet flake cores (*sensu* Hiscock, 1993) were recorded. Most cores (n = 16, 55.2%) exhibited no cortex. Where present, cortex was most commonly recorded as 1-50% (n = 11), with only two examples exhibiting more than 50% cortex.

Retouched and edge-ground implements identified during survey consisted of two Bondi points (**Plate 14** and **Plate 15**), one edge-ground hatchet head (**Plate 16**), one thumbnail scraper (**Plate 17**), four miscellaneous retouched flakes and one grindstone (**Plate 18** and **Plate 19**). The two Bondi points were manufactured on silcrete and silicified tuff flakes respectively. Both identified examples are broken. The thumbnail scraper identified in artefact scatter Hydro-AS12-14 appears to have been manufactured on a thermally-altered silcrete flake and exhibits continuous abrupt unifacial (ventral to dorsal) retouch. No macroscopic edge-wear was noted. The edge-ground hatchet head identified in artefact scatter Hydro-AS02-14 was manufactured on a water-rolled cobble assessed in the field as being of volcanic origin. The hatchet has been bifacially flaked, is complete and in good condition. The cutting edge of the implement is located at what, superficially, appears to be the 'butt' end of the implement. The grindstone identified by AMBS (2009a) is broken and measures 205 (L) x 185 (W) x 70 (T) mm. The implement has been split in half and exhibits prominent scratch marks and areas of pitting across the main

¹⁷ All heat shatters identified during the current survey comprised thermally-fractured pieces of stones used locally for stone artefact manufacture. A proportion also exhibited remnant flaked surfaces indicative of post-flaking burning.

grinding surface. These appear to have resulted from the implement being used to stabilise an adjacent fencepost.

Table 19 Typological breakdown of combined cultural lithic assemblage identified during the current survey

Type	Number	%
Complete flake	208	43.2
Heat shatter	69	14.3
Flake shatter	61	12.7
Proximal flake	49	10.2
Flaked piece	38	7.9
Core	29	6
Split flake	19	3.9
Misc. retouched flake	4	0.8
Bondi point	2	0.4
Edge-ground hatchet head	1	0.2
Grindstone	1	0.2
Thumbnail scraper	1	0.2
Total	482	100

Table 20 Lithic raw materials

Raw material	Number	%
Silcrete	274	56.8
Silicified tuff	169	35.1
FGS	17	3.5
Quartz	12	2.5
Volcanic	3	0.6
Quartzite	5	1.0
Chalcedony	1	0.2
Sandstone	1	0.2
Total	482	100

Table 21 Descriptive statistics for size and shape of complete flakes identified during survey

Attribute	Complete flakes
Length (mm)	29.3±13 mm (range: 7.1-111.6 mm)
Width (mm)	26.6±11.9 mm (range: 6.1-117 mm)
Thickness (mm)	8.5±4.2 mm (range: 1-30.4 mm)
Elongation ratio	1.2±0.5 (range: 0.2-2.9)
Area (mm ²)	879.3±1023.6 (range: 49.4-13057.2 mm)

Table 22 Summary attribute data for cores identified during survey

No.	Raw material	Length (mm)	Width (mm)	Thick-ness (mm)	Type	Original blank	Cortex	Number of complete/partial scars	Length of longest scar (mm)
1	Silicified tuff	48.5	19.4	12.7	Bifacial	Cobble	1-50%	6	16.6
2	Silcrete	81.5	80.2	62.9	Multidirectional	Cobble	1-50%	8	61.9
3	Silicified tuff	48.7	40.4	39.1	Bifacial	Flake	None	4	26.3
4	Silcrete	45.5	34.2	21.2	Unidirectional	Flake	None	5	16.5
5	Silicified tuff	70	35.4	23.9	Unidirectional	Flake	None	2	22.2
6	Silcrete	65	37	35.1	Multidirectional	Indeterminate	None	6	36.8
7	Silcrete	66.9	59.3	39.9	Bifacial	Indeterminate	1-50%	7	31.7
8	Silicified tuff	90	46.8	31.9	Unidirectional	Cobble	51-99%	8	29.4
9	Silcrete	52.3	50.4	31.6	Multidirectional	Indeterminate	1-50%	3	30.6
10	Silcrete	26.4	21.4	19.5	Unidirectional	Indeterminate	None	8	20.9
11	Silicified tuff	71.1	47.5	35	Multidirectional	Cobble	1-50%	5	29.2
12	Silcrete	56.6	36.2	18.8	Bifacial	Indeterminate	None	2	17.8
13	Silcrete	48.7	35.5	25.7	Bifacial	Flake	None	6	25
14	Silcrete	72.2	53.4	31.7	Unidirectional	Flake	1-50%	4	32.4
15	Silcrete	55.4	34.3	23	Unidirectional	Flake	1-50%	1	15.5
16	Silcrete	48.3	33.7	16.4	Unidirectional	Indeterminate	None	2	31.9
17	Silicified tuff	34.8	23.7	21.4	Multidirectional	Indeterminate	None	3	16.5
18	Quartz	29.2	23.4	19.8	Unidirectional	Cobble	1-50%	2	22.1
19	Silicified tuff	34.4	23	11.2	Bifacial	Indeterminate	None	4	25.8
20	Quartz	20.8	15.5	14.9	Bipolar	Indeterminate	None	2	27.7
21	Silicified tuff	31.3	24.7	19	Bipolar	Cobble	51-99%	3	15.8
22	Silcrete	41.2	35.1	26.8	Multidirectional	Indeterminate	None	4	26.28
23	Silcrete	87	60.7	46.2	Unidirectional	Cobble	1-50%	1	75.2
24	FGS - Other	31	26.3	18.1	Multidirectional	Indeterminate	None	10	18.8
25	Silicified tuff	36.9	28.3	20.7	Multidirectional	Cobble	1-50%	13	23
26	Silicified tuff	36.9	23.2	17.4	Bidirectional	Indeterminate	None	4	20.8
27	Silicified tuff	50.7	35	16.2	Bifacial	Cobble	1-50%	4	16.4
28	Silicified tuff	33.4	34.3	17.8	Multidirectional	Indeterminate	None	5	26.9
29	Silcrete	26.2	25.5	14.9	Multidirectional	Indeterminate	None	4	20.4

Table 23 Summary attribute data for retouched/edge-ground implements identified during survey

Type	Raw material	Length (mm)	Width (mm)	Thickness (mm)	Blank	Cortex	Condition	Thermally altered?
Misc. retouched flake	Silcrete	54.8	50.6	19.1	Flake	1-50%	Complete	No
Misc. retouched flake	Silicified tuff	32.6	17.4	8.7	Flake	None	Complete	No
Misc. retouched flake	Silicified tuff	43	36.3	9.5	Flake	None	Complete	No
Misc. retouched flake	Quartzite	74.4	42.3	20.3	Flake	51-99%	Complete	No
Bondi point	Silcrete	26.7	10.4	5.2	Flake	None	Broken	Yes
Bondi point	Silicified tuff	21.6	10.4	5.5	Flake	None	Broken	No
Edge-ground hatchet head	Volcanic	103.4	56.8	24	Cobble	51-99%	Complete	No
Thumbnail scraper	Silcrete	18.5	16.5	5.4	Flake		Complete	Yes
Grindstone	Sandstone	205	185	70	Slab	-	Broken	No

**Plate 11** Hydro-AS07-14: atypically large silicified tuff flake



Plate 12 Hydro-AS03-14: multidirectional silicified tuff core



Plate 13 Hydro-AS-12-14: bifacial silcrete core (left) and unidirectional silicified tuff core (right)



Plate 14 Hydro-IA15-14: broken silcrete Bondi point



Plate 15 Hydro-AS23-14: broken silicified tuff Bondi point



Plate 16 Hydro-AS02-14: complete edge-ground hatchet head



Plate 17 Hydro-AS12-14: silcrete thumbnail scraper



Plate 18 AMBS (2009) site KK15 (37-6-1963): broken sandstone grindstone. Note damage to grinding surface.



Plate 19 AMBS (2009) site KK15 (37-6-1963): Profile view of broken sandstone grindstone

7.3.4 Spatial Analysis

The distribution of Aboriginal archaeological materials within any given landscape can be assessed from two analytical positions. The first, known as a *site-based approach*, utilises the 'site' as the basic unit of analysis while the second, referred to as a *non-site approach*, utilises the individual artefact as the unit of analysis. In this section, the latter approach is employed to investigate the relationship between recorded stone artefact locations (n = 475) and the key environmental variables of distance to water, stream order, landform and slope.

7.3.4.1 Distance To and Type of Watercourse

The proximity and permanency of potable water sources are routinely cited as key determinants of Aboriginal settlement patterns. Accordingly, **Table 24** tabulates the relationship of these variables to recorded artefact locations within the Project area¹⁸. Regarding distance to water, as indicated, the majority (84.8%, n = 403) of artefacts are located within 100 m of a water source, being either a mapped stream or Wentworth Swamp. A trend for higher counts within 50 m of water, which may, it should be noted, relate simply to increased fluvial erosion activity along watercourses and around Wentworth Swamp, is also apparent. Differences in the relative frequency of artefacts between distances classes greater than 100 m from water, meanwhile, are negligible. Distances from water in areas over 251 m range from 252 m to 464 m, with a mean distance of 357 m (Std dev = 72.1).

Most artefacts (59.2%, n = 281) are associated with higher order (i.e., $\geq 3^{\text{rd}}$ order) streams, with 1st order associations accounting for less than 20% of the total. For 1st and 2nd order streams, examination of the relationship between stream order and distance to water indicates a trend for higher artefact counts between 51 and 100 m of streams of this order. A similar trend is apparent for 3rd order streams. For 4th and >4th order 'streams', namely Swamp Creek, Black Waterholes Creek (part) and Wentworth Swamp, a strong trend for higher counts within 50 m of streams of this order is apparent though consideration of the distribution of ground surface exposures around Wentworth Swamp and along Black Waterholes Creek suggests that this patterning may, in fact, be more apparent than real.

Although complicated by environmental biases, when viewed in conjunction with the results of local test and salvage excavations, the data presented in **Table 24** provide support for the suggestion that the availability of potable water exerted a strong influence on the way in which Aboriginal people utilised the Project area in the past. As demonstrated in other contexts (e.g., Kuskie and Kamminga 2000; Umwelt, in prep), the permanency of freshwater sources appears to have been particularly important, with reliable water sources the focus of repeated activity through time. Historical changes in flows rate and drainage patterns notwithstanding, within the Project area, these sources likely comprised Black Waterholes Creek, Swamp Creek and Wentworth Swamp.

Table 24 Artefact distribution in relation to distance to water and stream order

Distance to water (m)	Stream Order					Total	%
	1 st	2 nd	3 rd	4 th	>4 th ¹		
0-50	22	27	19	43	157	268	56.4
51-100	41	57	28	8	1	135	28.4
101-150	4	11	2	-	2	19	4
151-200	10	9	-	-	1	20	4.2
201-250	2	3	-	-	6	11	2.3
251+	6	2	1	-	13	22	4.6
Total	85	109	50	51	180	475	100

¹ Category includes Wentworth Swamp

7.3.4.2 Landform

As indicated in **Section 7.3.1**, landform-based artefact counts for the current survey are consistent with landform-specific levels of effective coverage in so far as the simple slope unit containing the largest number of surface artefacts (**Table 25**). Nonetheless, calculation of mean artefact densities per m² of effective coverage, a calculation that takes inter-landform differences in exposure into account, reveals a minor but significant

¹⁸ Note that Wentworth Swamp is treated here as a >4th order stream.

difference between the co-dominant¹⁹ simple slope and spur crest landform units, with the former exhibiting a higher mean density. Mean densities for the drainage depression, elevated flat and flood-prone flat landform units are identical are comparable to that of the simple slope land forms but significantly lower than that of the spur crest unit. No cultural lithics were identified within the creek terrace, crest, disturbed, residual rise and swamp landform units. However, given inter-landform differences in exposure and GSV, the absence of artefacts from some of these units (e.g. creek terrace, residual rise and swamp) is unsurprising.

Table 25 Artefact distribution in relation to landform

Landform unit	Effective coverage (ha)	% of total effective coverage	Number of surface artefacts	% of total artefacts	Mean density per m ² of effective coverage
Creek terrace	0.1	0.4	0	-	-
Crest	0.6	2.9	0	-	-
Drainage depression	1.3	6.5	18	3.8	0.001
Disturbed	0.3	1.5	0	-	-
Elevated flat	2	9.5	19	4	0.001
Flood-prone flat	1	4.9	11	2.3	0.001
Residual rise	0.1	0.4	0	-	-
Simple slope	13.3	64.2	326	68.6	0.002
Spur crest	1.6	7.6	101	21.3	0.006
Swamp	0.4	2.1	0	-	-
Total	20.7	100	475	100	-

7.3.5 Slope

Comparison of artefact counts between slope classes (**Table 26**) reveals a strong trend for higher counts on low to very low gradient land surfaces, with most (n = 384, 80.8%) of artefacts located on level to gently inclined land surfaces. Artefacts are comparatively poorly represented on moderate slopes (n = 91, 19.2%) and absent from steep and very steep slopes.

Table 26 Artefact distribution in relation to slope

Slope class	Number of surface artefacts	% of total artefacts
Level	52	10.9
Very gentle (1-3%)	94	19.8
Gentle (3-10%)	238	50.1
Moderate (10-32%)	91	19.2
Steep (32-56%)	-	0
Very steep (56-100%)	-	0
Total	475	100

¹⁹ In terms of artefact numbers

7.3.6 Synthesis and Discussion

The archaeological survey undertaken for this assessment has resulted in a significant increase in the known Aboriginal archaeological resource of the Project area. Although limited to the identification of surface evidence, when combined with the results of previous subsurface investigations survey within and adjacent to the Project area, the current investigation has enhanced our understanding of Aboriginal site patterning and occupation on a local scale and has provided an important dataset for guiding the management of the Project area's known and potential Aboriginal archaeological resource into the future.

Aboriginal archaeological sites are widely distributed across the Project area, attesting to an extensive Aboriginal presence in the past. However, in keeping with broader local and regional patterning, the results of the current survey are suggestive of an occupational emphasis on elevated low gradient land surfaces adjacent to Wentworth Swamp and higher order watercourses such as Black Waterholes Creek. The former, in particular, will have been a focal resource area for Aboriginal peoples occupying the greater Kurri Kurri/Maitland area, facilitating sustained or intensive occupation over thousands of years. Collectively, the character of the stone artefact assemblages associated with the newly identified artefact scatter sites surrounding this regionally significant wetland are suggestive of what Shiner (2008), following Schlanger (1992), has described as a 'persistent place' (i.e., a place in the landscape that was the focus of repeated activity through time).

Identified open artefact sites ($n = 85$) within the Project area vary significantly in size and complexity. Most ($n = 70$, 82.4%) contain less than 10 artefacts. However, three sites are known to contain more than 50 artefacts. Open artefact sites within the Project area occur exclusively in contexts consistent with their exposure from subsurface contexts and, as such, are best conceived of as opportunistic surface manifestations of former subsurface deposits. In common with other parts of the Hunter Valley, a more-or-less continuous subsurface distribution of artefacts across the non-swampy and non-grossly disturbed parts of the Project area is inferred from the results of the current survey and previous archaeological investigations on a local and regional scale, albeit one with highly variable densities linked to key environmental factors such as landform, distance to water, water permanency and slope. Recorded artefacts, importantly, likely represent only a fraction of the total stone artefact resource present within the Project area, with most artefacts occurring in subsurface contexts.

In common with other local stone artefact assemblages, both surface recorded and excavated, the combined cultural lithic assemblage identified during the current survey attests to an emphasis on the procurement and reduction of locally available lithic raw materials, principally silcrete and silicified tuff but also other materials such as quartz, quartzite and chalcedony. Remnant cortical surfaces indicate the exploitation of water-rolled pebbles and cobbles and it seems likely that most, if not all, of the lithic raw materials used for flaked stone artefact manufacture in the Project area were sourced from locally-occurring alluvial and/or colluvial gravel deposits. At the same time, the rarity of cortex in the assemblage suggests that these materials were typically imported in a largely decorticated state, having been substantially flaked or prepared elsewhere, presumably at or near exploited stone sources. The presence of thermally altered artefacts and heat shatters within the assemblage, meanwhile, is suggestive of two processes: unintentional post-discard burning and deliberate heat treatment to improve flaking quality. Both phenomena are well represented in the archaeological record the Hunter Valley.

Relatively rare on a local and sub-regional scale, the identification of a complete edge-ground hatchet head within the Project area is of particular note. As discussed in **Section 6.5**, available historical records for the lower Hunter Valley indicate that these implements, known as *mogo*, were an important component of men's 'gear' and were used for variety of tasks including bark and wood removal, animal butchery, cutting toeholds in trees and extracting game and honey from logs and trees (Anon, 1877a; Dawson, 1830: 202; Scott, 1929: 41; Threlkeld in Gunson, 1974: 67). Though broken, the presence of a sandstone grindstone in the immediate vicinity of the Project area is likewise of particular significance. These implements are known to have been used to grind not only seeds but also other materials such as animal products and minerals (Veth & O'Connor, 1996). However, in the absence of microscopic use-wear and/or residue data, the function(s) of the grindstone identified by AMBS (2009a) as site KK15 (37-6-1963) remains unclear.

Backed artefacts, two of which were identified during the current survey, are a near-ubiquitous element of the stone artefact record of the Hunter Valley and likely served as multifunctional tools in pre-contact times, with existing residue and use-wear data for the adjacent Sydney Region (e.g., Robertson, 2011) attesting to their use in range of craft and subsistence activities including bone-working, wood-working, plant processing and animal butchery. In southeastern Australia, backed artefacts are known to have been produced as early as 8,500 years BP (Attenbrow & Hiscock 1998). However, between 3,500 BP and 1,400 BP, they were manufactured and discarded in large quantities across numerous sites - the so called "backed artefact proliferation event" (Hiscock 2002). Recent research into this phenomenon, spearheaded by Hiscock (1994, 2002), has identified the onset of

an ENSO-dominated climatic pattern 4,000 to 5,00 years ago as a key causal trigger, with increased backed artefact manufacture interpreted as one of number of technological strategies employed by Aboriginal people to reduce subsistence risks incurred by increased climatic variability.

The thumbnail scraper identified within previously unrecorded artefact scatter Hydro-AS12-14 is an excellent example of its type. These morphologically and technologically distinctive implements, which McCarthy (1976) considered to be one of definitive tools of the Bondaian phase of the Eastern Regional Sequence (ERS), are shaped like thumbnails and are characterised by unifacially-retouched convex scraper edges located opposite the retouched flake's platform (Holdaway and Stern, 2004: 234-235, after Wright, 1970). As noted by Holdaway and Stern (2004: 235), thumbnail scrapers are unique amongst Australian Aboriginal scraper types in being of demonstrated temporal significance, albeit only in Tasmania where they are most numerous in deposits postdating the Last Glacial Maximum (LGM). Outside of Tasmania, thumbnail scrapers have been identified in both Pleistocene and Holocene contexts. However, some authors (e.g., Ross, 1984) have used them as chronological markers for the appearance of the Australian Small Tool Tradition.

In the absence of absolute dates obtained through controlled archaeological excavation and/or a detailed geomorphological dating program, establishing a chronological context for the identified surface Aboriginal archaeological resource of the Project area is difficult. As in other contexts (e.g., Fanning et al. 2008, 2009; Shiner 2008), establishing the temporal history of the various soil units present within the Project area will prove crucial to ascertaining the antiquity of the Aboriginal archaeological materials within it, both in surface and subsurface contexts. In view of the now well documented difficulties associated with the dating of detrital charcoal from duplex or texture contrast soil profiles (Dean-Jones & Mitchell 1993), the identification and dating of features of undoubted or probable anthropogenic origin (e.g. hearths, heat treatment pits) will likewise prove critical.

Although limited in respect to the chronological resolution that it offers, the technological and typological character of the stone artefact assemblage identified during survey offers some insight into the antiquity of Aboriginal occupation within the Project area. As highlighted in **Section 5.1.3**, McCarthy's (1967) ERS of stone artefact assemblages remains, with some modification, the dominant chronological framework for Aboriginal occupation of the Hunter Valley. Based on appreciable changes in the composition of chipped stone artefact assemblages over time, the ERS hypothesises a three phase sequence of 'Capertian' (earliest), 'Bondaian' and 'Eloueran' (most recent) assemblages and was developed on the basis of McCarthy's (1948, 1964) pioneering analyses of stratified chipped stone assemblages from Lapstone Creek rockshelter, on the lower slopes of the Blue Mountains eastern escarpment, and Capertee 3 rockshelter in the Capertee Valley north of Lithgow. At present, the most widely cited characterisation of the ERS is that of a four-phase sequence beginning with the *Pre-Bondaian* (McCarthy's *Capertian*) and moving successively through the Early, Middle and Late phases of the *Bondaian*, the last of which equates to McCarthy's (1967) *Eloueran* phase. The tripartite division of the Bondaian is based principally on the presence/absence and relative abundance of backed artefacts (Attenbrow, 2010: 101). However, other factors, such as changes in the abundance of bipolar artefacts and different stone materials, and the presence/absence of edge-ground hatchet-heads are also relevant.

While acknowledging the interpretive difficulties posed by the so-called 'palimpsest problem', technological and typological affinities between the stone artefact assemblage identified during the current survey and other Lower Hunter Valley assemblages, some of which have been dated, are suggestive of a broad Middle to Late Bondaian date (i.e., 4,000 BP to European contact). Typologically, identified tools of demonstrated or purported temporal significance include the edge-ground hatchet head identified in Hydro-AS02-14, the backed artefacts identified at Hydro-IA15-14 and Hydro-AS23-14 and the thumbnail scraper identified in Hydro-AS12-14. No definitive or potential artefacts manufactured out of bottle glass were identified during survey.

7.3.7 Assessment of Archaeological Predictions

In **Section 5.2.3**, a series of predictions regarding the Aboriginal archaeological record of the Project area were made. **Table 27** compares the predictions made with the results of the archaeological survey undertaken as basis for informing future archaeological investigations within and around the Project area.

Table 27 Evaluation of archaeological predictions

Prediction	Assessment
Material evidence of past Aboriginal activity within the Project area is likely to be restricted to flaked stone artefacts in surface and subsurface contexts. However, there remains reasonable potential for the presence of	The results of the current survey support this prediction. All identified sites consist of open artefact sites. No grinding groove sites, stone quarries or scarred trees were identified during survey.

Prediction	Assessment
grinding groove sites, stone quarries and scarred trees.	
Most areas, irrespective of the presence or absence of associated surface evidence, will contain subsurface archaeological deposits, albeit of highly variable character and extent.	Although a large scale subsurface testing program would be required to robustly assess the validity of this prediction, together with their respective find contexts, the widely distributed nature of identified surface sites across the Project area is suggestive of a more-or-less continuous subsurface distribution of artefacts across the non-swampy and non-grossly disturbed portions of the site, albeit one with highly variable densities reflective of variable land use.
Most, if not all, of the Aboriginal archaeological materials present within the Project area will be of mid-to-late Holocene antiquity.	As indicated above, technological and typological affinities between the stone artefact assemblage identified during the current survey and other Lower Hunter Valley assemblages, some of which have been dated, are suggestive of a broad Middle to Late Bondaian date (i.e., 4,000 BP to European contact).
Should their presence within the Project area be confirmed, aeolian sand deposits retain the greatest potential for the preservation of older evidence of Aboriginal occupation.	No definitive or suspected aeolian sand deposits were identified during the current survey. However, the potential for such deposits to exist is acknowledged.
Grinding groove sites, if present, will occur in direct association with watercourses.	No grinding groove sites or sandstone exposures were identified during survey. However, the potential for such sites and features to exist in unsurveyed areas is acknowledged.
Burial sites, if present, will occur in fluvial or aeolian sand deposits.	No burial sites were identified during survey. However, the potential for such sites to exist in unsurveyed and subsurface contexts is acknowledged.
The dominant raw material for flaked stone artefact production within the Project area will be silcrete, with silicified tuff the second most common material.	The results of the current survey support this prediction.
Knapping floors, if present, will exhibit evidence indicative of systematic backed artefact manufacture.	No knapping floors were identified during survey.
Complete and/or fragmentary backed artefacts will dominate the retouched components of surface and excavated assemblages.	The results of the current survey do not support this prediction. Miscellaneous retouched flakes were the most common tool type identified during survey. The function(s) of these tools in unclear.
Tool types of <i>demonstrated</i> temporal significance, if present, will be limited to edge-ground hatchet heads and backed artefacts.	The results of the current survey support this prediction. Although of demonstrated temporal significance in Tasmania, in southeastern Australia (including the Hunter Valley) the temporal significance of thumbnail scrapers has yet to be established.
Surface and subsurface artefact distribution within the Project area will vary significantly in relation to landform, distance to water and stream order.	The results of the current survey support this prediction, at least with respect to surface evidence. Spatial analyses completed for this assessment suggest that surface artefact distribution within the Project area varies significantly in relation to landform, distance to water, stream order and slope.
Elevated, low gradient landform elements adjacent to Wentworth Swamp and the Project area's higher order watercourses (e.g., Swamp Creek, Black Waterholes Creek) will contain larger and more complex flaked stone assemblages than landform elements in other contexts.	The results of the current survey support for this prediction.

7.4 Archaeological Sensitivity

Figure 24 presents AECOM's assessment of the archaeological sensitivity of land within the Project area. As indicated in Section 7.2.1, three levels of archaeological sensitivity are recognised on the basis of observed archaeology (i.e., its distribution and character), the results of previous Aboriginal heritage investigations within and surrounding the Project area, levels of past land disturbance and the predicted complexity of deposits within each category: Nil, Low and High.

As shown on **Figure 24**, the majority of land within the Project area has been assessed as being of low archaeological sensitivity. Areas of low sensitivity are defined here as those that:

- have not been grossly disturbed;
- are located more than 100 m from a mapped higher order (i.e., ≥ 2 order) stream;
- are located more than 200 m from Wentworth Swamp;
- do not comprise swamp; and
- have not been shown, through archaeological excavation, to contain significant cultural deposits²⁰.

Buffer sizes for higher order watercourses and Wentworth Swamp have been selected, in part, on the basis of the spatial data presented in but also take into account localised topographic conditions. Areas of low sensitivity within the Project area have the potential to contain subsurface archaeological deposit(s). However, the character of these deposits is predicted to differ to that identified in areas of high sensitivity in respect to artefact counts, densities and assemblage richness values.

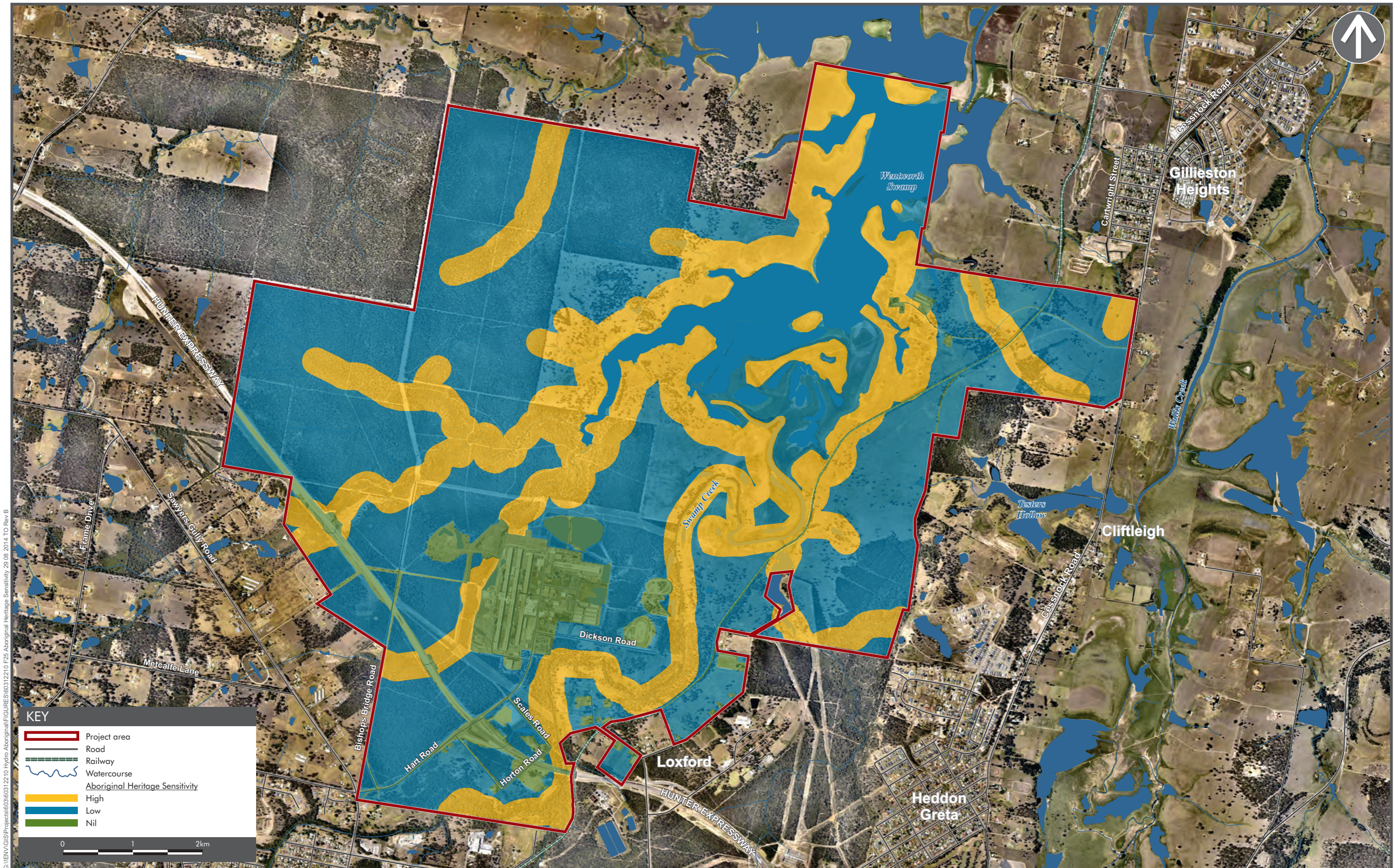
Areas of high archaeological sensitivity are defined here as those that:

- have not been grossly disturbed;
- are located within 100 m of a mapped higher order (i.e., ≥ 2 order) stream;
- are located within 200 m of Wentworth Swamp;
- do not comprise swamp; and/or
- have been shown, through archaeological excavation, to contain significant cultural deposits.

Relative to areas of low sensitivity, it is predicted that subsurface archaeological deposits located within areas of high sensitivity will exhibit higher mean artefact counts, densities and assemblage richness values (i.e., with respect to the representation of technological types and raw materials). Archaeological features such as knapping floors and hearths are also more likely to occur these areas.

Areas of 'nil' archaeological sensitivity within the Project area comprise those that have been grossly disturbed by modern and/or historic European land use practices. Aboriginal archaeological materials are unlikely to survive in these areas.

²⁰ Note that this provision applies specifically to the results of AMBS's 2010 archaeological salvage program.



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8.0 Significance Assessment

8.1 Principles of Assessment

Heritage sites hold value for different communities in a variety of different ways. All sites are not equally significant and thus not equally worthy of conservation and management (Pearson & Sullivan 1995: 17). One of the primary responsibilities of cultural heritage practitioners, therefore, is to determine which sites are worthy of preservation and management (and why) and, conversely, which are not (and why) (Smith & Burke 2007: 227). This process is known as *the assessment of cultural significance* and, as highlighted by Pearson and Sullivan (1995: 127), incorporates two interrelated and interdependent components. The first involves identifying, through documentary, physical or oral evidence, the elements that make a heritage site significant, as well as the type(s) of significance it manifests. The second involves determining the degree of value that the site holds for society (i.e., its cultural significance) (Pearson & Sullivan 1995: 126)

In Australia, the primary guide to the assessment of cultural significance is the *Australian ICOMOS Charter for Places of Cultural Significance* (1999), informally known as *The Burra Charter*, which defines cultural significance as the “aesthetic, historic, scientific, social or spiritual value for past, present or future generations” of a site or place (ICOMOS 1999: 2). Under the Burra Charter model, the cultural significance of a heritage site or place is assessed in terms of its aesthetic, historic, scientific and social values, none of which are mutually exclusive (**Table 28**). Establishing cultural significance under the Burra Charter model involves assessing all information relevant to an understanding of the site and its fabric (i.e., its *physical* make-up) (ICOMOS 1999: 12). The assessment of cultural significance and the preparation of a statement of cultural significance are critical prerequisites to making decisions about the management of any heritage site or place (ICOMOS 1999: 11).

With respect to Aboriginal sites and places, it is possible to identify two major streams in the overall significance assessment process: the assessment of *scientific value(s)* by archaeologists and the assessment of *social (or cultural) value(s)* by Aboriginal people. These values are discussed in **Sections 8.2** and **8.4** below.

Table 28 Values relevant to determining cultural significance, as defined by The Burra Charter (1999).

Value	Definition
Aesthetic	“Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric; the smells and sounds associated with the place and its use” (ICOMOS 1999: 12).
Historic	“Historic value encompasses the history of aesthetics, science and society...[a] place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may have historic value as the site of an important event” (ICOMOS 1999: 12).
Scientific	“The scientific or research value of a place will depend on the importance of the data involved, on its rarity, quality or representativeness, and on the degree to which the place may contribute further substantial information” (ICOMOS 1999:12).
Social	“Social value embraces the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a majority or minority group” (ICOMOS 1999: 12).

8.2 Scientific (Archaeological) Significance

The scientific (or archaeological) significance of Aboriginal archaeological sites relates primarily to their potential for providing information about past Aboriginal culture and is commonly assessed on the basis of their *research potential*, *representativeness* and *rarity*. Other criteria, such as aesthetic value and education potential, may also be relevant.

8.2.1 Research Potential

Research potential can be defined as the potential of an archaeological site to address what Bowdler (1981: 129) has referred to as “timely and specific research questions”. These questions may relate to any number of issues concerning past human lifeways and environments and, as suggested by Bowdler’s quote, will inevitably reflect current trends or problems in academic research (Burke & Smith 2004: 249). For their part, Bowdler and Bickford

(1984: 23-4) suggest that the research potential of an archaeological site can be determined by answering the following series of questions:

1. Can the site contribute knowledge which no other resource can?
2. Can the site contribute knowledge which no other such site can?
3. Is this knowledge relevant to general questions about human history or other substantive subjects?

Several criteria can be used to assess the research potential of an archaeological site. Particularly important in the context of Aboriginal archaeology are the intactness or integrity of the site in question, its complexity and its potential for archaeological deposit (NPWS 1997: 7). The connectedness of the site to other sites or natural landscape features may also be relevant.

Integrity refers to the extent to which a site has been disturbed by natural and/or anthropogenic phenomena and includes both the state of preservation of particular remains (e.g., animal bones, plant remains) and, where applicable, stratigraphic integrity. Assessments of archaeological integrity are predicated on the notion that undisturbed or minimally disturbed sites are likely to yield higher quality archaeological and/or environmental data than those whose integrity has been significantly compromised by natural and/or anthropogenic phenomena. Establishing levels of preservation or integrity in the context of a surface survey is difficult. Nonetheless, useful rating schemes are available for 'open' sites (Coultts & Witter 1977: 34) and scarred trees (Long 2003).

The *complexity* of a site refers primarily to the nature or character of the artefactual materials or features that constitute it but also includes site structure (e.g., the physical size of the site, spatial patterning in observed cultural materials). In the case of open artefact sites, for example, the principal criteria used to assess complexity are the site's size (i.e., number of artefacts and/or spatial extent), the presence, range and frequency of artefact and raw material types, and the presence of features such as hearths.

Potential for archaeological deposit refers to the potential of a site to contain subsurface archaeological evidence which may, through controlled excavation and analysis, assist in answering questions that are of contemporary archaeological interest. Assessing subsurface potential in the absence of subsurface investigation is difficult. Nonetheless, consideration of a range of factors, including the integrity of the site, the complexity of extant surface evidence, the nature of the local geomorphology (as established through surface observations and documentary research) and the results of previous archaeological excavations in the area, will help inform assessment of this criterion.

Connectedness concerns the relationship between archaeological sites within a given area and may be expressed through a combination of factors such as site location, type and contents. It may, for example, be possible to establish a connection between a stone quarry and hatchet found nearby. Demonstrating connectedness archaeologically, however, is far from straightforward, especially when dealing with surface evidence alone. Ultimately, this difficulty rests with the need to demonstrate contemporaneity between sites that may have been created hundreds, if not thousands, of years apart. As Shiner (2008: 13) has observed, "much of the surface archaeological record documents the accumulation of materials from multiple behavioural episodes occurring over long periods of discontinuous time". Contemporaneity, then, needs to be demonstrated not assumed.

8.2.2 Rarity and Representativeness

Rarity and *representativeness* are related concepts. *Rarity* refers to the relative uniqueness of a site within its local and regional context. The scientific significance of a site is assessed as higher if it is unique or rare within either context; conversely, it is considered to be of lower significance if it is common in one or both. The concept of *representativeness*, meanwhile, refers to the question of whether or not a site is "a good example of its type, illustrating clearly the attributes of its significance" (Burke & Smith 2004: 247). *Representativeness* is an important criterion as one of the primary goals of cultural heritage management is to preserve for future generations a representative sample of all archaeological site types in their full range of environmental contexts.

In common with *rarity*, assessments of *representativeness* within a region are dependent on the state of current knowledge concerning the number and type of archaeological sites present within that region²¹. This is a critical point, for as suggested by Kuskie (2000) and others (e.g., Bowdler 1981; Godwin 2011; Pearson & Sullivan 1995), the absence across most of Australia of regional-scale quantitative data for Aboriginal sites and places represents

²¹ There is, of course, a temporal fluidity to this criterion (i.e., as knowledge of the Aboriginal archaeology of a region increases, assessed levels of representativeness may change, a point of equal relevance to *rarity*).

a major constraint in assessments of representativeness and rarity. As stressed by Bowdler (1981) some 30 years ago, detailed regional-scale assessments of the Aboriginal archaeological record of Australia are required to address this issue.

8.3 Assessment of Scientific Significance

An assessment of the scientific significance of the 85 Aboriginal archaeological sites identified within the Project area is presented in **Table 29** below. Following AMBS (2009a, 2009b), a scored ranking system has been employed for the current assessment, with overall significance ratings based on a cumulative 'score' derived from a ranked assessment of the research potential, rarity and representativeness of each site on a local and regional scale. Rankings for each of the criteria discussed above are associated with one of three potentials scores: low (score = 1), moderate (score = 2) and high (score = 3). Overall significance ratings are defined as follows:

- Low significance: score 10-15
- Moderate significance: score 16-25
- High significance: score 26-30

Significance assessments for those previously recorded sites that were not relocated during the current survey (n = 11) have been made on the basis of associated site card and report data.

Table 29 Scientific significance assessment

Site	Site type	Rarity		Representativeness		Integrity		Complexity		PAD		Overall score	Overall significance
		L	R	L	R	L	R	L	R	L	R		
Hydro-AS01-14	AS	1	1	1	1	1	1	1	1	2	2	12	Low
Hydro-AS02-14	AS	1	1	3	2	1	1	3	2	3	3	20	Moderate
Hydro-AS03-14	AS	1	1	2	1	1	1	2	1	3	3	16	Moderate
Hydro-AS04-14	AS	1	1	2	1	1	1	2	1	3	3	16	Moderate
Hydro-AS05-14	AS	1	1	1	1	1	1	1	1	2	2	12	Low
Hydro-AS06-14	AS	1	1	1	1	1	1	1	1	3	3	14	Low
Hydro-AS07-14	AS	1	1	2	1	2	2	2	1	2	2	16	Moderate
Hydro-AS08-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS09-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS10-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS11-14	AS	1	1	1	1	2	2	1	1	2	2	14	Low
Hydro-AS12-14	AS	1	1	2	1	2	2	2	1	2	2	16	Moderate
Hydro-AS13-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS14-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS15-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS16-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS17-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low

Site	Site type	Rarity		Representativeness		Integrity		Complexity		PAD		Overall score	Overall significance
		L	R	L	R	L	R	L	R	L	R		
Hydro-AS18-14	AS	1	1	1	1	1	1	1	1	2	2	12	Low
Hydro-AS19-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS20-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS21-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS22-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS23-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS24-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS25-14	AS	2	1	2	1	2	2	2	1	3	3	18	Moderate
Hydro-AS26-14	AS	1	1	1	1	1	1	1	1	2	1	11	Low
Hydro-AS27-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS28-14	AS	1	1	1	1	1	1	1	1	2	1	11	Low
Hydro-AS29-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-AS30-14	AS	1	1	1	1	2	2	1	1	2	2	14	Low
Hydro-AS31-14	AS	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA01-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA02-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA03-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA04-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA05-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA06-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA07-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA08-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA09-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA10-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA11-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA12-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA13-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA14-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low

Site	Site type	Rarity		Representativeness		Integrity		Complexity		PAD		Overall score	Overall significance
		L	R	L	R	L	R	L	R	L	R		
Hydro-IA15-14	IA	1	1	1	1	1	1	2	1	1	1	11	Low
Hydro-IA16-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA17-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA18-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA19-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA20-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA21-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA22-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA23-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA24-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA25-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA26-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA27-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA28-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA29-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA30-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA31-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA32-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA33-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
Hydro-IA34-14	IA	1	1	1	1	1	1	1	1	1	1	10	Low
KK04	AS	1	1	3	2	2	2	3	2	3	3	25	Moderate
KK05	AS	1	1	1	1	2	2	1	1	2	2	14	Low
KK09	IA	1	1	1	1	1	1	1	1	1	1	10	Low
KK10	AS	1	1	1	1	1	1	1	1	1	1	10	Low
KK11	AS	1	1	1	1	1	1	1	1	1	1	10	Low
KK12	IA	1	1	1	1	1	1	1	1	1	1	10	Low
KK13	IA	1	1	1	1	1	1	1	1	1	1	10	Low
KK14	IA	1	1	1	1	1	1	1	1	1	1	10	Low

Site	Site type	Rarity		Represent- ativeness		Integrity		Complexity		PAD		Overall score	Overall significance
		L	R	L	R	L	R	L	R	L	R		
KK-IF-1	IA	1	1	1	1	1	1	1	1	1	1	10	Low
KK-IF-2	IA	1	1	1	1	1	1	1	1	1	1	10	Low
KR01	AS	1	1	1	1	1	1	1	1	1	1	10	Low
KR02	AS	1	1	1	1	1	1	1	1	1	1	10	Low
KR03	AS	1	1	1	1	1	1	1	1	1	1	10	Low
KR04	IA	1	1	1	1	1	1	1	1	1	1	10	Low
KR05	IA	1	1	1	1	1	1	1	1	1	1	10	Low
KR06	AS	1	1	1	1	1	1	1	1	1	1	10	Low
NST2	AS	1	1	1	1	1	1	1	1	2	2	12	Low
NST4	AS	1	1	2	1	2	2	2	1	3	3	18	Moderate
SCC4	IA	1	1	1	1	1	1	1	1	1	1	10	Low
SCC5	AS	1	1	1	1	1	1	1	1	2	2	12	Low

8.3.1 Sites of Low Scientific Significance

Seventy-seven sites have been assessed as being of low scientific significance. Low scientific significance ratings for these sites are consistent with them being locally and regionally common site types as well as poor examples of their type. Better examples of these sites exist locally and regional and offer comparable/greater research opportunities. In addition, identified open artefact sites of sites of low scientific significance within the Project area exhibit the following general characteristics:

- a) Small assemblage sizes. Forty-three are isolated artefacts;
- b) Formed objects (i.e., cores and retouched implements) are rare or absent in associated lithic assemblages;
- c) Associated lithic assemblages contain a restricted range of locally and regionally common raw materials;
- d) Generally poor integrity; and
- e) Limited or no potential for associated subsurface deposit(s).

8.3.2 Sites of Moderate Scientific Significance

Eight sites have been assessed as being of moderate scientific significance. All consist of artefact scatters associated with higher order watercourses and/or Wentworth Swamp. Although artefact scatters are a locally and regionally common site type, these sites are reasonable or good examples of their type. Identified artefact scatters of moderate scientific significance within the Project area exhibit the following general characteristics:

- a) Larger and/or more complex lithic assemblages;
- b) Generally higher levels of integrity; and
- c) Moderate to high potential for associated subsurface deposit(s).

8.3.3 Sites of High Scientific Significance

No sites of high scientific significance have been identified within the Project area to date. However, it is recognised that such sites exists may exist, particularly in subsurface contexts.

8.3.4 Scientific Significance Summary

Table 30 provides a summary of the scientific significance ratings assigned to newly and previously identified Aboriginal archaeological sites within the Project area.

Table 30 Summary of scientific significance assessment

Site Type	Scientific Significance Rating			
	High	Moderate	Low	Total
Artefact scatters	0	8	34	42
Isolated artefacts	0	0	43	43
Total	0	8	77	85

8.4 Social/Cultural Values

Social or cultural values refer to the spiritual, traditional, historical and contemporary associations and attachments a place or area has for Aboriginal people. As such, these values and their social significance can only be identified through consultation with Aboriginal people. Accordingly, throughout the assessment process, AECOM have actively sought the opinions of RAPs on this matter, both verbally and in writing. Opportunities for the provision of cultural information have been provided at all stages of the assessment process. Social or cultural values are applicable to sites, items and landscapes.

Throughout the assessment process, RAPs have identified the following social or cultural values for the Project area and its associated Aboriginal archaeological record:

- Wentworth Swamp would have been a focal resource feature for Aboriginal people camping within and passing through the Project area owing to it being a virtual 'supermarket' of floral and faunal resources.
- Mount Tomalpin, which is clearly visible from various parts of the Project area, would have been an important local landmark for Aboriginal people camping within and passing through the Project area and was likely only accessible to selected individuals;
- The concentration of sites around Wentworth Swamp and along Black Waterholes creeks shows that both areas were important hunting and gathering areas;
- The Project area contains a large number of edible and otherwise useful plants;
- The presence of sites in eroded areas shows that the Project area contains a large subsurface archaeological resource;
- All Aboriginal archaeological sites within the Project area are culturally significant as they attest to the use of the site by Aboriginal people in the past;
- The stone artefact assemblages identified during survey are typical of those found locally in terms of being dominated by silcrete artefacts and containing backed artefacts; and
- Stones used for flaked stone artefact manufacture within the Project area were likely sourced from the nearby Hunter River gravels.



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9.0 Preliminary Masterplan Assessment

9.1 Introduction

Hydro's Preliminary Masterplan for the Project area has been reviewed in relation to its impact on Aboriginal cultural heritage. This section describes the results of this review process.

Sections 7.3.2 and 7.4 have identified a series of Aboriginal heritage constraints within the Project area including previously and newly recorded Aboriginal archaeological sites (n = 85) and varying levels of archaeological sensitivity. Recorded Aboriginal archaeological sites within the Project area consist exclusively of open artefact sites (i.e., artefact scatters and isolated artefacts). Eight of these sites have been assessed as being of moderate scientific significance and the remaining 77 as being of low scientific significance. Verbal and written advice received from RAPs indicates that all Aboriginal archaeological sites within the Project area, regardless of content, are culturally significant and need to be cared for appropriately.

9.1.1 Aboriginal Archaeological Sites

As indicated, a total of 85 Aboriginal archaeological sites have been identified within the Project area. Consideration of the distribution of these sites in relation to the Preliminary Masterplan indicates that 50 sites, including five out of eight sites assessed as being of moderate scientific significance, are located in areas earmarked for conservation, rural land use and riparian corridor (or combinations thereof) (**Table 30**). These sites are unlikely to be directly impacted by future residential and employment-related development works within the Project area, as shown on the Preliminary Masterplan. A further four sites, two of which have been assessed as being of moderate scientific significance, extend into areas earmarked for employment land uses but are located principally in conservation or riparian corridor areas.

While recognising the potential for site impacts through environmental management works and ongoing rural land use activities, collectively, these 54 sites are considered to represent a significant preservation outcome for the surface Aboriginal archaeological record of the Project area. Compared with residential and employment-related development works, environmental management and ongoing rural land use activities are deemed significantly less likely to result in the destruction of identified sites.

Examination of the Preliminary Masterplan suggests that all remaining Aboriginal archaeological sites within the Project area (n = 31) are likely to be directly impacted by residential and employment-related development works. Impacted sites include 30 sites of low scientific significance and one site of moderate scientific significance. Archaeologically, the potential loss of these sites is considered to be offset by the retention, in conservation, rural land use and riparian corridor areas, of fifty-four sites of equal or greater scientific significance.

Table 31 Preliminary Masterplan assessment

Site	Site type	Scientific Significance	Land use category
Hydro-AS01-14	Artefact scatter	Low	Conservation
Hydro-AS02-14	Artefact scatter	Moderate	Conservation & Rural
Hydro-AS03-14	Artefact scatter	Moderate	Conservation
Hydro-AS04-14	Artefact scatter	Moderate	Conservation
Hydro-AS05-14	Artefact scatter	Low	Conservation
Hydro-AS06-14	Artefact scatter	Low	Conservation
Hydro-AS07-14	Artefact scatter	Moderate	Conservation
Hydro-AS08-14	Artefact scatter	Low	Conservation
Hydro-AS09-14	Artefact scatter	Low	Employment

Site	Site type	Scientific Significance	Land use category
Hydro-AS10-14	Artefact scatter	Low	Conservation
Hydro-AS11-14	Artefact scatter	Low	Conservation
Hydro-AS12-14	Artefact scatter	Moderate	Conservation
Hydro-AS13-14	Artefact scatter	Low	Conservation
Hydro-AS14-14	Artefact scatter	Low	Conservation
Hydro-AS15-14	Artefact scatter	Low	Conservation
Hydro-AS16-14	Artefact scatter	Low	Conservation
Hydro-AS17-14	Artefact scatter	Low	Conservation
Hydro-AS18-14	Artefact scatter	Low	Conservation
Hydro-AS19-14	Artefact scatter	Low	Conservation
Hydro-AS20-14	Artefact scatter	Low	Employment
Hydro-AS21-14	Artefact scatter	Low	Employment
Hydro-AS22-14	Artefact scatter	Low	Employment
Hydro-AS23-14	Artefact scatter	Low	Employment
Hydro-AS24-14	Artefact scatter	Low	Conservation
Hydro-AS25-14	Artefact scatter	Moderate	Isolated Employment
Hydro-AS26-14	Artefact scatter	Low	Riparian Corridor & Employment
Hydro-AS27-14	Artefact scatter	Low	Employment
Hydro-AS28-14	Artefact scatter	Low	Employment
Hydro-AS29-14	Artefact scatter	Low	Employment
Hydro-AS30-14	Artefact scatter	Low	Employment
Hydro-AS31-14	Artefact scatter	Low	Residential
Hydro-IA01-14	Isolated artefact	Low	Conservation
Hydro-IA02-14	Isolated artefact	Low	Rural
Hydro-IA03-14	Isolated artefact	Low	Residential
Hydro-IA04-14	Isolated artefact	Low	Conservation
Hydro-IA05-14	Isolated artefact	Low	Conservation
Hydro-IA06-14	Isolated artefact	Low	Conservation
Hydro-IA07-14	Isolated artefact	Low	Conservation

Site	Site type	Scientific Significance	Land use category
Hydro-IA08-14	Isolated artefact	Low	Conservation
Hydro-IA09-14	Isolated artefact	Low	Conservation
Hydro-IA10-14	Isolated artefact	Low	Conservation
Hydro-IA11-14	Isolated artefact	Low	Conservation
Hydro-IA12-14	Isolated artefact	Low	Conservation
Hydro-IA13-14	Isolated artefact	Low	Conservation
Hydro-IA14-14	Isolated artefact	Low	Conservation
Hydro-IA15-14	Isolated artefact	Low	Conservation
Hydro-IA16-14	Isolated artefact	Low	Employment
Hydro-IA17-14	Isolated artefact	Low	Conservation
Hydro-IA18-14	Isolated artefact	Low	Conservation
Hydro-IA19-14	Isolated artefact	Low	Conservation
Hydro-IA20-14	Isolated artefact	Low	Isolated Employment
Hydro-IA21-14	Isolated artefact	Low	Isolated Employment
Hydro-IA22-14	Isolated artefact	Low	Isolated Employment
Hydro-IA23-14	Isolated artefact	Low	Rural
Hydro-IA24-14	Isolated artefact	Low	Employment
Hydro-IA25-14	Isolated artefact	Low	Employment
Hydro-IA26-14	Isolated artefact	Low	Employment
Hydro-IA27-14	Isolated artefact	Low	Employment
Hydro-IA28-14	Isolated artefact	Low	Employment
Hydro-IA29-14	Isolated artefact	Low	Employment
Hydro-IA30-14	Isolated artefact	Low	Employment
Hydro-IA31-14	Isolated artefact	Low	Employment
Hydro-IA32-14	Isolated artefact	Low	Employment
Hydro-IA33-14	Isolated artefact	Low	Rural
Hydro-IA34-14	Isolated artefact	Low	Conservation
KK04	Artefact scatter	Moderate	Conservation & Employment
KK05	Artefact scatter	Low	Employment

Site	Site type	Scientific Significance	Land use category
KK09	Isolated artefact	Low	Employment
KK10	Artefact scatter	Low	Employment
KK11	Artefact scatter	Low	Employment
KK12	Isolated artefact	Low	Employment
KK13	Isolated artefact	Low	Conservation
KK14	Isolated artefact	Low	Conservation
KK-IF-1	Isolated artefact	Low	Rural
KK-IF-2	Isolated artefact	Low	Rural
KR01	Artefact scatter	Low	Rural
KR02	Artefact scatter	Low	Employment
KR03	Artefact scatter	Low	Employment
KR04	Isolated artefact	Low	Employment
KR05	Isolated artefact	Low	Employment
KR06	Artefact scatter	Low	Rural
NST2	Artefact scatter	Low	Conservation & Isolated Employment
NST4	Artefact scatter	Moderate	Conservation & Isolated Employment
SCC4	Isolated artefact	Low	Rural
SCC5	Artefact scatter	Low	Employment

9.1.2 Archaeological Sensitivity

Consideration of the suitability of the Preliminary Masterplan with respect to assessed levels of archaeological sensitivity across the Project area indicates a significant preservation outcome for land of high archaeological sensitivity, with the majority comprising conservation and rural land use land that will not be impacted by future residential and employment-related development works within the Project area. Attention is drawn, in particular, to the retention in conservation, rural land use and riparian corridor areas, of the majority of the highly sensitive land associated with Black Waterholes Creek, Swamp Creek and Wentworth Swamp. Land of low archaeological sensitivity is also well represented in areas zoned for conservation and continuing rural land use activities.

Proposed residential and employment-related development areas within the Project area correspond principally with areas of low to nil archaeological sensitivity.

10.0 Management Recommendations

10.1 Introduction

As indicated in **Section 1.1**, Aboriginal cultural heritage assessments conducted for rezoning projects differ from those carried out as part of the traditional development planning approval process in NSW in that physical impacts to identified Aboriginal heritage sites, places and values are not proposed as part of the rezoning process. Rather, the primary aim of these assessments is to identify Aboriginal heritage constraints and opportunities relevant to the development of site masterplans and to provide guidance around the appropriate management of identified values post-rezoning. Once rezoning has been completed, it is the responsibility of individual proponents to conduct, where appropriate, additional Aboriginal heritage investigations into the areas they propose to impact through their respective Development Applications (DAs). Where required, such assessments will involve opportunities for more detailed archaeological investigations (e.g., archaeological test excavation) and conservation outcomes.

As no ground surface impacts are proposed as part of Hydro's Planning Proposal, the current assessment will not be used to support applications for Aboriginal Heritage Impact Permits (AHIPs) under Section 90A of the *National Parks and Wildlife Act 1974* (NPW Act 1974). Such applications will need to be supported by standalone Aboriginal Cultural Heritage Assessment and Aboriginal Archaeological Reports prepared in accordance with the with OEH's *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010b). A process of Aboriginal community consultation carried out accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010a) would also need to be demonstrated.

10.2 Management Advice

Sections 7.3.2 and **7.4** have identified a series of Aboriginal heritage constraints within the Project area including previously and newly recorded Aboriginal archaeological sites (n = 85) and varying levels of archaeological sensitivity. This section provides appropriate management recommendations for these constraints in view of the master planning process currently underway.

10.2.1 Aboriginal Archaeological Sites

A total of 85 Aboriginal archaeological sites have been identified within the Project area, all of which consist of open artefact sites (i.e., artefact scatters and isolated artefacts). Where possible, these sites should be conserved as part of the master planning process, with decisions concerning their long-term management to be made in consultation with RAPs. However, where conservation is unfeasible, it is recommended that the Development Control Plan (DCP) for the Project area include a specific development control for known Aboriginal archaeological sites. This control should specify that any works which directly affect these sites will require an AHIP under Part 6 of the NPW Act 1974.

As indicated above, applications for an AHIP must be accompanied by Aboriginal Cultural Heritage Assessment and Aboriginal Archaeological Reports prepared in accordance with the with OEH's *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010b). Applications must also provide evidence of consultation with the Aboriginal communities. Consultation is required under Part 8A of the NPW Regulation and is to be conducted in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* DECCW, 2010a).

10.2.2 Archaeological Sensitivity

As indicated, three levels of Aboriginal archaeological sensitivity have been identified across the Project area on the basis of basis of observed archaeology (i.e., its distribution and character), the results of previous Aboriginal heritage investigations within and surrounding the Project area, levels of past land disturbance and the predicted complexity of deposits within each category. Appropriate management options and recommendations for each level of sensitivity are as follows:

Areas of *high archaeological sensitivity* warrant a full Aboriginal heritage assessment prior to any development impacts and it is recommended that the DCP for the Project area include a development control to this effect. Aboriginal cultural heritage assessments in areas of high archaeological sensitivity should be undertaken in accordance with OEH's *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*

(OEH, 2011), *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b) and *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010a).

Areas of *low archaeological sensitivity* warrant an Aboriginal archaeological due diligence assessment prior to any development impacts and it is recommended that the DCP for the Project area include a development control to this effect. Due diligence assessments in areas of low sensitivity should be undertaken in accordance with OEH's *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW, 2010c).

Areas of *nil archaeological sensitivity* do not contain any known Aboriginal heritage constraints and it is recommended that the DCP for the Project area contain a development control to this effect. Nonetheless, the development control should also specify that Aboriginal objects may still occur in these areas and that if impacts to any identified objects cannot be avoided, an AHIP will be required.

10.3 Aboriginal Heritage Controls for DCP

The following Aboriginal heritage controls are proposed for inclusion in the DCP for the Project area:

1. Known Aboriginal archaeological sites within the Project area are shown on [insert relevant figure number]. An AHIP issued under Part 6 of the National Parks and Wildlife Act 1974 (NPW Act 1974) is required for any works which directly affect these sites.
2. Areas of high archaeological sensitivity, shown on [insert relevant figure number], warrant a full Aboriginal cultural heritage assessment prior to any development works. If impacts to any Aboriginal objects identified through these assessments cannot be avoided, an AHIP issued under Part 6 of the National Parks and Wildlife Act 1974 (NPW Act 1974) will be required. Consultation with relevant Aboriginal persons and organisations is required under OEH policy when an application for an AHIP is considered and should be conducted in accordance with OEH's *Aboriginal Cultural Heritage Consultation Requirements for Proponents*.
3. Areas of low archaeological sensitivity, shown on [insert relevant figure number], warrant an Aboriginal archaeological due diligence assessment prior to any development works. This assessment is to be conducted in accordance with OEH's *Due Diligence Code of Practice for the protection of Aboriginal Objects in New South Wales*. Visual inspections undertaken for the purposes of a due diligence assessment should include an Aboriginal community representative. Depending on the results of the due diligence assessment undertaken, a full Aboriginal cultural heritage assessment may be required.
4. Areas of nil archaeological sensitivity, shown on [insert relevant figure number], do not contain any known Aboriginal heritage constraints. However, Aboriginal objects may still occur in these areas. If any Aboriginal objects are encountered during development, and impacts cannot be avoided, an AHIP issued under Part 6 of the National Parks and Wildlife Act 1974 (NPW Act 1974) will be required.

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Appendix A

Aboriginal Community Consultation Log

Date	To/From AECOM	Organisation	Contact person(s)	Method of contact	AECOM representative	Summary
10.02.14	From AECOM	OEH	-	Letter	A.McLaren	Letter to request information regarding Aboriginal individuals and/or organisations who may hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects/places in the area of the project.
10.02.14	From AECOM	Mindaribba LALC	-	Letter	A.McLaren	As above
10.02.14	From AECOM	Office of the Registrar	-	Letter	A.McLaren	As above
10.02.14	From AECOM	National Native Title Tribunal	-	Email with letter attachment	A.McLaren	As above
10.02.14	From AECOM	NTSCORP Limited	-	Letter	A.McLaren	As above
10.02.14	From AECOM	Maitland Shire Council	-	Letter	A.McLaren	As above
10.02.14	From AECOM	Cessnock Shire Council	-	Letter	A.McLaren	As above
10.02.14	From AECOM	Hunter-Central Rivers Catchment Management Authority	-	Letter	A.McLaren	As above
11.02.14	To AECOM	National Native Title Tribunal	Sylvia Jagtman	Email with letter attachment	A.McLaren	Response to AECOM's letter dated 10.02.14 advising results of Native Title search request.
13.02.14	To AECOM	Tocomwall Pty Ltd	Scott Franks	Phone	A.McLaren	Scott has advised receipt of project information through NTSCORP. Verbal registration of interest.
18.02.14	To AECOM	Lower Hunter Wonnarua Cultural Services	Thomas Miller	Email with letter attachment	A.McLaren	Email with letter attachment advising that LHWCS wish to register their interest in being consulted for the project. LHWCS have advised that they wish to be included in all aspects of the assessment in a paid capacity. Mr Miller advises that he is a registered Native Title Claimant in the Hunter Valley (Registration number: NC 02/07, N6008/02).
19.02.14	To AECOM	Mindaribba LALC	Steven Talbott	Email with letter attachment	A.McLaren	Response to AECOM's letter dated 10.02.14 advising that Mindaribba LALC wish to register their interest being consulted for in the project.

19.02.14	To AECOM	Ungooroo Aboriginal Corporation (UAC)	Jessi Garland	Email with letter attachment	A.McLaren	Letter advising that UAC wish to register their interest in being consulted for the project.
20.02.14	To AECOM	-	Amanda Heard	Email	A.McLaren	Email from A.Heard indicating that she wishes to register an interest in being consulted for the project.
20.02.14	To AECOM	Gomeroi Namoi	Greg Heard	Email	A.McLaren	Email from G.Heard indicating that Gomeroi Namoi wish to register their interest in being consulted for the project and have knowledge of the area through previous heritage assessments.
22.02.14	To AECOM	Office of the Registrar, <i>Aboriginal Land Rights Act 1983</i>	Tabatha Dantoine	Letter	A.McLaren	Response to AECOM's letter dated 10.02.14 advising that the Project area does not appear to have Registered Aboriginal Owners pursuant to Division 3 of the <i>Aboriginal Land Rights Act 1983</i> (NSW)
24.02.14	To AECOM	Wanaruah LALC	Noel Downs	Email with letter attachment	A.McLaren	E-mail with .pdf attachment containing requests for registration from Giwirri Consultants (signed R.Matthews), Hunter Valley Cultural Consultants (signed C.Archbold), Upper Hunter Heritage and Culture (signed D.Matthews) and Aboriginal Native Title Consultants (signed Margaret Matthews).
25.02.14	From AECOM	Wanaruah LALC	Noel Downs	Email	A.McLaren	Email to thank Mr Downs for passing on requests for registrations and request for clarification regarding Wanaruah LALC's intentions regarding registration.
25.02.14	To AECOM	Wanaruah LALC	Noel Downs	Email	A.McLaren	Response from Mr Downs advising that as the Project area is located in the Cessnock/Kurri Kurri area it likely falls outside of the Wanaruah LALC's boundaries.
06.03.14	To AECOM	OEH	Nicole Davis	Email with letter attachment	A.McLaren	Response to AECOM's letter dated 10.02.14 providing list of known Aboriginal parties for the Kurri Kurri area (n = 75).

11.03.14	From AECOM	All Aboriginal parties identified by OEH in letter dated 06.03.14 (n = 75)	Various	Letter	A.McLaren	Expression of Interest (EOI) letter with project information included.
12.03.14	To AECOM	Jarban & Mugrebea	Les Atkinson	Email with letter attachment	A.McLaren	Response to AECOM's EOI letter dated 11.03.14 advising that Jarban & Mugrebea wish to register their interest in being consulted for the project.
13.03.14	From AECOM	Gomeroi Namoi	Greg Heard	Email with letter attachment	A.McLaren	Expression of Interest (EOI) letter provided for Gomeroi Namoi's information/ records following registration request on 20.02.14.
13.03.14	From AECOM	-	Amanda Heard	Email with letter attachment	A.McLaren	Expression of Interest (EOI) provided for Ms Heard's information/ records following registration request on 20.02.14.
13.03.14	From AECOM	LHWCS	Tom Miller	Email with letter attachment	A.McLaren	Expression of Interest (EOI) letter with project information included. Provided for LHWCS's information/ records following registration request on 18.02.14.
13.03.14	To AECOM	E&T Culture & Heritage	Mervyn Leslie for Esther Tighe	Phone	A.McLaren	Phone call to register Esther Tighe's interest in being consulted for the Project.
14.03.14	To AECOM	Gidawaa Walang	Ann Hickey	Fax	A.McLaren	Fax to register interest in being consulted for the Project.
16.03.14	To AECOM	Cacatua General Services	Donna Sampson	Email with letter attachment	A.McLaren	Letter to register interest in being consulted for the Project.
16.03.14	To AECOM	AGA Services	Adam Sampson	Email with letter attachment	A.McLaren	Letter to register interest in being consulted for the Project.
17.03.14	To AECOM	Amanda Hickey Cultural Services	Amanda Hickey	Email	A.McLaren	Email to register interest in being consulted for the Project.
17.03.14	To AECOM	Widescope Indigenous Group	Steven Hickey	Email	A.McLaren	Email to register interest in being consulted for the Project.
17.03.14	To AECOM	A1 Indigenous Services	Carolyn Hickey	Email	A.McLaren	Email to register interest in being consulted for the Project.
18.03.14	To AECOM	Wallangan Cultural Services	Maree Waugh	Email	A.McLaren	Email to register interest in being consulted for the Project.
18.03.14	To AECOM	Yinarr Cultural Services	Kathie Kinchela	Email with letter attachment	A.McLaren	Letter to register interest in being consulted for the Project.
19.03.14	To AECOM	Culturally Aware	Tracey Skene	Email	A.McLaren	Email to register interest in being consulted for the Project.

19.03.14	From AECOM	Mindaribba LALC	Steve Talbott	Email with letter attachment	A.McLaren	Copy of EOI letter provided by email in response to a telephone query from Mr Talbott regarding the whereabouts of Mindaribba LALC's EOI letter. Advised that Mindaribba LALC's EOI was sent via post on 11 March 2014.
19.03.14	To AECOM	Giwirri Consultants	Rodney Matthews	Phone	A.McLaren	Verbal request to register interest in being consulted for the Project. Confirmed earlier registration through N.Downs.
19.03.14	To AECOM	HSB Consultants	Patricia Hampton	Email with letter attachment	A.McLaren	Letter to register interest in being consulted for the Project.
19.03.14	To AECOM	Wanaruah LALC	Suzie Worth	Email with letter attachment	A.McLaren	Letter to register interest in being consulted for the Project. Wanaruah LALC have advised that they do not wish to participate in fieldwork as the project falls outside of Wanaruah LALC boundary.
19.03.14	To AECOM	Kawul Wonn1 Contracting	Suzie Worth for Arthur Fletcher	Email with letter attachment	A.McLaren	Letter to register interest in being consulted for the Project.
20.03.14	To AECOM	Upper Hunter Wonnarua Council	Rhoda Perry	Phone	A.McLaren	Phone message to register interest in being consulted for the Project.
20.03.14	To AECOM	Yinarr Cultural Services	Kathie Kinchela	Email with letter attachment	A.McLaren	Copy of registration letter received on 18.03.14.
22.03.14	To AECOM	Ka-u-ma Pondee	Jill Green	Email	A.McLaren	Email to register interest in being consulted for the Project.
25.03.14	To AECOM	Tocomwall Pty Ltd	Scott Franks	Phone	A.McLaren	Verbal confirmation of registration
23.03.14	To AECOM	-	Jeff Matthews	Letter	A.McLaren	Letter to register interest in being consulted for the Project.
26.03.14	To AECOM	Lower Hunter Aboriginal Incorporated	David Ahoy	Email	A.McLaren	Email to register interest in being consulted for the Project.
31.03.14	To AECOM	Kawul Cultural Services	Vicky Slater	Email with letter attachment	A.McLaren	Letter to register interest in being consulted for the Project.
04.04.14	To AECOM	HECMO Consultants	Karen Boyd	Email with letter attachment	A.McLaren	Letter to register interest in being consulted for the Project.
07.04.14	To AECOM	HTO Environmental Management Services	Paulette Ryan	Phone	A.McLaren	Registering interest in being consulted for the Project.

07.04.14	To AECOM	HTO Environmental Management Services	Paulette Ryan	Email with attachments	A.McLaren	Email advising current contact details. Certificate of currency for business insurance also provided.
15.04.14	From AECOM	All RAPs	Various	Draft methodology	A.McLaren	Draft methodology for RAP review
28.04.14	From AECOM	Mindaribba LALC	Lea-Anne Ball	Letter	A.McLaren	Letter notifying Mindaribba LALC of RAPs for project
28.04.14	From AECOM	OEH	Nicole Davis	Letter	A.McLaren	Letter notifying Mindaribba LALC of RAPs for project
05.05.14	To AECOM	Giddawaa Walang Cultural Heritage	Annie Hickey	Email	A.McLaren	Response to draft methodology. GWCH agree with the methodology. Brief overview of skills/experience and insurance details also provided.
06.05.14	To AECOM	Lower Hunter Aboriginal Incorporated	David Ahoy	Email with letter attachment	A.McLaren	Response to draft methodology. LHAJ agree with the methodology and have indicated that all consultation has been "presented in the proper manner with respect to Aboriginal Culture and Values". Brief overview of skills/experience and insurance details also provided.
13.05.14	To AECOM	Kauwul Wonn1 Contracting	Suzie Worth for Arthur Fletcher	Email with letter attachment	A.McLaren	Response to draft methodology. Kauwul Wonn1 Contracting have reviewed the methodology and find it acceptable. Brief overview of skills/experience and insurance details also provided.
14.05.14	From AECOM	Amanda Hickey Cultural Services	Amanda Hickey	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. Message and contact details left on answerphone.
14.05.14	From AECOM	A1 Indigenous Services	Carolyn Hickey	Phone	A.McLaren	Phone call to discuss draft methodology. Carolyn will have a look today and provide response.
14.05.14	From AECOM	-	Amanda Heard	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. Message and contact details left on answerphone.
14.05.14	From AECOM	Widescope Indigenous Group	Steven Hickey	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. No answerphone service. AECOM phone number sent by text.
14.05.14	To AECOM	Amanda Hickey Cultural Services	Amanda Hickey	Phone	A.McLaren	Return call from earlier message. Organisation secretary is looking it over and will provide response.

14.05.14	From AECOM	Wallangan Cultural Services	Maree Waugh	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. No answerphone service.
14.05.14	From AECOM	Yinarr Cultural Services	Kathie Kinchela	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. Message and contact details left on answerphone.
14.05.14	From AECOM	AGA Services	Adam Sampson	Phone	A.McLaren	Phone call to discuss draft methodology. Adam agrees with the methodology.
14.05.14	From AECOM	Cacatua General Services	Donna Sampson	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. Message and contact details left on answerphone.
14.05.14	From AECOM	Aboriginal Native Title Elders Consultants	John Matthews	Phone	A.McLaren	Phone call to discuss draft methodology. John agrees with the methodology and has indicated that they have participated in a number of surveys in the Kurri Kurri area.
14.05.14	To	Wallangan Cultural Services	Maree Waugh	Phone	A.McLaren	Return call from earlier message. Maree agrees with the methodology.
14.05.14	From AECOM	Culturally Aware	Tracey Skene	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. Message and contact details left on answerphone.
14.05.14	From AECOM	Esther Tighe	Mervyn Leslie	Phone	A.McLaren	Phone call to discuss draft methodology. Mervyn has reviewed and agrees with draft methodology. Mervyn has indicated that Esther is also happy with the methodology.
14.05.14	From AECOM	Giwirri Consultants	Rodney Matthews	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. Message and contact details left on answerphone.
14.05.14	From AECOM	Hunter Valley Cultural Consultants	Christine Archbold	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. Message and contact details left on answerphone.
14.05.14	From AECOM	Upper Hunter Heritage & Culture	Darrel Matthews	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. Message and contact details left on answerphone.
14.05.14	From AECOM	HSB Heritage Consultants	Patricia Hampton	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. Message and contact details left on answerphone.
14.05.14	From AECOM	Jarban & Mugrebea	Les Atkinson	Phone	A.McLaren	Phone call to discuss draft methodology. Les has indicated

						that due to other commitments he has not had a chance to review the methodology. Should he get a chance, he will have a look over it and respond.
14.05.14	From AECOM	-	Jeff Matthews	Phone	A.McLaren	Phone call to discuss draft methodology. Jeff at work. Message asking Jeff to call A.McLaren provided.
14.05.14	From AECOM	Kauma Pondee Inc	Jill Green	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. No answerphone.
14.05.14	From AECOM	HECMO Consultants	Kerren Boyd	Phone	A.McLaren	Phone call to discuss draft methodology. Kerren agrees with the methodology.
14.05.14	From AECOM	HTO Environmental Management Services	Paulette Ryan	Phone	A.McLaren	Phone call to discuss draft methodology. Paulette is happy with the methodology.
14.05.14	From AECOM	Ungooroo Aboriginal Corporation	Jessi Garland	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. No answerphone.
14.05.14	From AECOM	Lower Hunter Wonnarua Cultural Services	Tom Miller	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. Name and contact details sent as text.
14.05.14	From AECOM	Wanaruah LALC	Noel Downs	Phone	A.McLaren	Phone call to discuss draft methodology. Noel has indicated that Wanaruah LALC is happy for their involvement to be limited to receiving assessment reports.
14.05.14	To AECOM	Lower Hunter Wonnarua Cultural Services	Tom Miller	Phone	A.McLaren	Return call from earlier message. Tom has indicated that he will review the methodology and provide response by email.
14.05.14	To AECOM	-	Amanda Heard	Phone	A.McLaren	Return call from earlier message. Amanda will look it over when she gets back to office and provide response by email.
14.05.14	From AECOM	Kawul Cultural Services	Vicky Slater	Phone	A.McLaren	Phone call to discuss draft methodology. No answer. No answerphone.
14.05.14	To AECOM	Kauma Pondee Inc	Jill Green	Phone	A.McLaren	Return call from earlier message. Jill will look it over tonight and has requested a phone call in the morning to discuss. A.McLaren to call.
14.05.14	To AECOM	Lower Hunter Wonnarua	Tom Miller	Email with letter	A.McLaren	Response to draft methodology provided as letter. Mr Miller

		Cultural Services		attachment		states that he has reviewed the draft methodology and believes that it is not a methodology but rather "just background information".
15.05.14	To AECOM	Tocomwall Pty Ltd	Scott Franks	Phone	A.McLaren	Return call from earlier message. Scott has reviewed the draft methodology and supports it.
15.05.14	From AECOM	Kauma Pondee Inc	Jill Green	Phone	A.McLaren	Follow-up phone call from 14.05.14. No answer. No answerphone.
15.05.14	To AECOM	Mindaribba LALC	Steve Talbott	Email with letter attachment	A.McLaren	Response to draft methodology provided as letter. Mindaribba LALC state that they support "the rezoning application in particular provided that a full Aboriginal Heritage Assessment is conducted and any recommendations that may follow such assessment are adhered to". In addition, they state that "Mindaribba believes the methodology that we have received is more of a back ground of the project".
15.05.14	To AECOM	Gomeroi Namoi	Greg Heard	Email	A.McLaren	Response to draft methodology. Mr Heard states that "Gomeroi Namoi support rezoning application providing a full Aboriginal Heritage Assessment is carried out on entire Project area". In addition, he states that "should there be any recommendations following such an assessment those recommendations are to be implemented or addressed prior to development approval".
15.05.14	To AECOM	Cacatua General Services	Donna Sampson	Phone	A.McLaren	Donna has reviewed the draft methodology and supports it.
10.06.14	From AECOM	All RAPs (excluding Wanaruah LALC)	Various	Email & phone	A.McLaren	Verbal and written requests for insurance certificates
13.06.14	From AECOM	All RAPs (excluding those without email)	Various	Email with letter attachment	A.McLaren	Provision of fieldwork notification letter & Subcontractor's Statement
13.06.14	From AECOM	All RAPs without email	Various	Letter (Express-post)	A.McLaren	Provision of fieldwork notification letter & Subcontractor's Statement
13.06.14	To AECOM	Lower Hunter Wannarua	Tom Miller	Email	A.McLaren	Response to fieldwork notification letter. Mr Miller has requested to know if there is

		Cultural Services				only one day of survey and, if not, why Lower Hunter Wonnarua Cultural Services has only received one day. Mr Miller notes the he has "walked the whole of this area as this is were [sic] my family grew up around my cousins lived out in this area". Response requested.
13.06.14	From AECOM	Lower Hunter Wonnarua Cultural Services	Tom Miller	Email	A.McLaren	Response to query above. Mr Miller informed that the survey is scheduled to run for a total of 8 days and that AECOM, under direction from Hydro, has developed a roster to provide all Registered Aboriginal Parties with an opportunity to be involved in the survey. Noted that a roster has been necessary given the large number of RAPs for this project (n = 31). Noted that Mindaribba LALC will be represented each day of the survey, as directed by Hydro, with all other RAPs spread across the survey period. Noted that any cultural information Mr Miller can provide before or after the survey would be most welcomed.
18.06.14	From AECOM	Upper Hunter Heritage and Culture	Darrel Matthews	Phone	A.McLaren	Phone call to follow up re insurances and Subcontractor's Statement. Darrel has confirmed he will send through.
18.06.14	From AECOM	Hunter valley Cultural Consultants	Christine Archbold	Phone	A.McLaren	Phone call to follow up re insurances and Subcontractor's Statement. No answer. Message left.
18.06.14	From AECOM	Mindaribba LALC	Steve Talbott	Phone	A.McLaren	Phone call to follow up re insurances and Subcontractor's Statement. No answer. Message left.
18.06.14	From AECOM	Cacatua General Services	Donna Sampson	Phone	A.McLaren	Phone call to follow up re Subcontractor's Statement. No answer. Message left.
18.06.14	To AECOM	Cacatua General Services	Donna Sampson	Phone	A.McLaren	Response to earlier phone message. Donna to provide Subcontractor's Statement by COB today.
18.06.14	From AECOM	Gidawaa Walang Cultural Heritage Consultancy	Annie Hickey	Phone	A.McLaren	Phone call to follow up re Subcontractor's Statement. No answer. Message left.
18.06.14	From	HSB Heritage	Patricia	Phone	A.McLaren	Phone call to follow up re Subcontractor's Statement.

	AECOM	Consultants	Hampton			Patricia will provide today.
18.06.14	To AECOM	Mindaribba LALC	Steve Talbott	Phone	A.McLaren	Response to earlier phone message. Steve will get admin to send through today. Steve will also arrange Subcontractor's Statement and Workers Compensation Insurance for Gomeri Namo.
01.07.14	To AECOM	Wurrumay Consultant	Kerrie Slater	Email	A.McLaren	Email from K.Slater regrading fieldwork and registration. Kerrie notes that she sent her EOI for the project by fax on 25-03-14 and is aware that fieldwork has been undertaken. Request to be involved in project.
02.07.14	From AECOM	Wurrumay Consultant	Kerrie Slater	Email	A.McLaren	Response to email above. Informed Kerrie that fieldwork has just been completed and that fax was never received. Offer to register interest in project and be provided with draft report extended.
02.07.14	To AECOM	Wurrumay Consultant	Kerrie Slater	Email	A.McLaren	Kerrie has confirmed that she would like to register her organisation for the project.
7.11.14	From AECOM	All RAPs	Various	Mail	A.McLaren	Draft report for RAP review
11.11.14	To AECOM	Wanaruah LALC	Suzie Worth	Phone	A.McLaren	Suzie Worth, on behalf of the Wanaruah LALC, advises that the LALC is happy with the report overall but request that the development control triggering due diligence be modified to state that an Aboriginal persons should be present for these assessments.
11.12.14	To AECOM	Gidawaa Walang Cultural Heritage Consultancy	Annie Hickey	Email	A.McLaren	Gidawaa Walang Cultural Heritage Consultancy support the management recommendations in the draft report.

Appendix B

Agency Responses



Dr Andrew P McLaren
Archaeologist
AECOM
PO Box Q410
QVB Post Office NSW 1230

Dear Dr McLaren

Re: Request for information on Aboriginal people who may hold cultural knowledge relevant to Kurri Kurri NSW

Thank you for your correspondence to the Office of Environment and Heritage (OEH) dated 10 February 2014, regarding Aboriginal cultural heritage consultation for the proposed rezoning for future residential and employment-related development. I apologise for the delay in responding.

Please find enclosed a list of known Aboriginal parties for the Kurri Kurri Area that OEH considers likely to have an interest in the proposal. Note this is not necessarily an exhaustive list of all interested Aboriginal parties. Receipt of this list does not remove the requirement for a proponent/consultant to advertise the proposal in the local print media and contact other bodies and community groups seeking interested Aboriginal parties, in accordance with the OEH 'Aboriginal cultural heritage consultation requirements for proponents 2010' (the CRs).

OEH would also like to take this opportunity to remind the proponent and consultant to:

- Ensure the project documents the full consultation process in the Aboriginal Cultural Heritage Assessment Report and to include copies of all correspondence sent or received from all relevant stakeholders (including Aboriginal stakeholders and the agencies listed in section 4.1.2 of the CRs). Omission of these records in the final report may cause delays in the assessment of the Aboriginal Heritage Impact Permit application or require parts of the consultation process to be repeated if the evidence provided to OEH does not demonstrate that the consultation process has been fair, equitable and transparent.
- Ensure OEH is provided with evidence that reasonable attempts have been made to contact the relevant parties associated with the CRs. If this is not provided then OEH will deem that the consultation process has not complied with the CRs. OEH considers evidence of reasonable efforts to contact relevant parties would include, but not be limited to, multiple forms of communication; faxes (with confirmation slips demonstrating successful transmission), an e-mail log, registered post details, copies of letters and a phone call log
- Full details of the consultation requirements and the relevant Fact Sheets can be located on the OEH website at: www.environment.nsw.gov.au/licences/consultation.htm.

- Forward to OEH any changes to the contact details of interested Aboriginal parties, or information regarding additional parties, so that OEH can update its records.
- Ensure that consultation is fair, equitable and transparent. If the Aboriginal parties express concern or are opposed to parts of or the entire project, OEH expects that evidence will be provided to demonstrate the efforts made to find common ground between the opponents and the proponent.

If you require further information or clarification please do not hesitate to contact me on (02) 4908 6825.

Yours sincerely

N412 06/3/2014

Nicole Davis
Archaeologist- Hunter Central Coast
Regional Operations and Heritage

ABORIGINAL PARTIES IN THE AREA OF INTEREST

1. Aboriginal Native Title Elders Consultants
Margaret Matthews
16a Mahogany St
MUSWELLBROOK NSW 2333
0417 725 956
2. Aiera French Trading
12 Haydon Street
MUSWELLBROOK NSW 2333
(02) 6541 2765
0421 299 963
Aiera.french.trading@hotmail.com
3. Alison Sampson
36 Hill Street
CAROONA NSW 2343
0401 151 124 or 0434 642 004
alliekat29@hotmail.com
4. Black Creek Aboriginal Corporation
Tracey White
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KURRI KURRI NSW 2327
(02) 4990 6747
(02) 4990 6747
blackcreek@idl.net.au
5. Bullen Bullen
Lloyd Mathews
16B Mahogany Avenue
MUSWELLBROOK NSW 2333
0417 725 956
6. Cacatua Culture Consultants
Donna & George Sampson
Unit 1b/11 Glenwood Drive
THORNTON NSW 2322
(02) 4028 6942
(02) 4028 6943
0403 765 019 - 0434 877 016
cacatua@resetsdsl.net.au
7. Carrawonga Consultants
Cheryl Moodie & Justin Matthews
11 Coolibah Close
MUSWELLBROOK NSW 2333
0411 958 511
0401 154 328
8. Culturally Aware
Tracey Skene
7 Crawford Place
MILLFIELD NSW 2325

9. D F T V Enterprises
Derrick Vale Sr
5 Mountbatten Close
RUTHERFORD NSW 2320
0438 812 197
deckavale@hotmail.com
10. Deslee Talbott Consultants
Deslee Matthews
Unit 2/19 South Street
GUNNEDAH NSW 2380
0431 205 336
11. Devine Diggers Aboriginal Cultural Consultants
Deidre Perkins
6 Ashleigh Street
HEDDON GRETA NSW 2321
(02) 49374573
(02) 49374573
0425 654 290
divinediggers@bigpond.com
12. DRM Cultural Management
Helen Faulkner
81 Wansbeck Valley Rd
CARDIFF NSW 2285
0412 369 661
13. Esther Tighe
1/86 Edward Street
GUNNEDAH NSW 2380
(02) 67427105
(02) 67422125
0422 648 350
14. Gidawaa Walang & Barkuma Neighbourhood Centre Inc.
Debbie Dacey-Sullivan
76 Lang Street
KURRI KURRI NSW 2327
(02) 4937 1094
0411 196 991
barkuma@hotmail.com
15. Giwiirr Consultants,
Michele Stair
8 Fitzgerald Avenue
MUSWELLBROOK NSW 2333
(02) 6541 0506
0432214402
16. Griffiths Group
Priscilla Priestley
7 Yeoman Ave
METFORD NSW 2333
0422 651 752

17. HECMO Consultants
Kerren Boyd
Lot 136 Main Street
BREEZA NSW 2381
0402 865 400
Chook7262@hotmail.com
18. Hielamon Cultural Consultants
Clifford Johnson
16B Mahogany Drive
MUSWELLBROOK NSW 2333
0478 828 745
19. HSB Heritage Consultants
Patricia Hampton
35 Larool Street
Sth TAMWORTH NSW 2340
0424 142 216
pamelaann@live.com.au
20. Hunter Traditional Owner,
Paulette Ryan
14 Barton Avenue
SINGLETON HEIGHTS
(02) 6574 4906
0432 672 273
21. Hunter Valley Aboriginal Corporation
Rhonda Griffith
PO Box 579
MUSWELLBROOK NSW 2333
22. Hunter Valley Cultural Consultants
Christine Matthews
40 Humphries Street
MUSWELLBROOK NSW 2333
(02) 6543 4521
0438 390 882
23. Hunter Valley Cultural Surveying
Luke Hickey
165 Susan St
SCONE NSW 2337
(02) 6541 0525
0402 446 223
0423 930 690
hvcs@bigpond.com
24. Hunter Valley Natural & Cultural Resources
David French
Flat1/72-11Tindale St
MUSWELLBROOK NSW 2333
0413 242 613

25. I & E Aboriginal Culture and Heritage
Ivy Jaeger
1/162 Myall Rd
CARDIFF NSW 2285
0402 943 540
ie.aboriginalcultureandheritage@hotmail.com
26. Jarban + Mugrebea
Les Atkinson
11 Nelson Street
CESSNOCK NSW 2325
0402 353 317
les.atkinson@hotmail.com
27. Jeff Matthews
6 Eucalypt Ave
MUSWELLBROOK, NSW 2333
(02) 6543 4791
28. JLC Cultural Services
Jenny-Lee Chambers
39 Goulburn Drive
SANDY HOLLOW NSW 2333
0432 087 829
29. Jumbunna Traffic Management Group Pty Ltd
Norm Archibald
27 Margaret Street
TERALBA NSW 2284
(02) 4965 8105
jtmanagement@live.com.au
30. Kauma Pondee Inc.
Jill Green
Unit 6/1 Central Street
NEW LAMBTON NSW 2305
0434 210 190
greenie@live.com
31. Kawul Cultural Services
Vicky Slater
PO Box 817
SINGLETON NSW 2330
0431 720 887
Kawul-Culturalservices@hotmail.com
32. KL. KG Saunders Trading Services
Krystal & Kylie Saunders
06 Bowfield Place
MUSWELLBROOK NSW 2333
0412 693 952 – 0434 553 307
33. Lorraine Towney
32 Dewhurst St
QUIRINDI NSW 2343
0403 427 894

34. Lower Hunter Aboriginal Incorporated
Les Ahoy
74 Hayden Brook Road
BOORAGUL NSW 2284
0411 095 249
lowerhunterai@gmail.com
35. Lower Hunter Wonnarua Council Inc.
Lea-Anne Ball Uncle Tommy Miller
51 Bowden Street
HEDDON GRETA NSW 2321
(02) 4937 2694
0447 266 590 (LM), 0402 636 521 (Uncle)
tn.miller@southernphone.com.au or lea-anne.ball@bigpond.com
36. Lower Wonnaruah Tribal Consultancy Pty Ltd
Barry Anderson
156 The Inlet Road
BULGA NSW 2330
0417 403 153
barry156@bigpond.com
37. Michelle Saunders
24 Walhallow Village
WALHALLOW NSW 2343
0458 516 775
michellesaunders@y7mail.com
38. Mindaribba Local Aboriginal Land Council
PO Box 401
EAST MAITLAND NSW 2323
(02) 4934 8511
(02) 4934 8544
0402 927 449
39. Mingga Consultants
Clifford Matthews
11 Coolibah Close
MUSWELLBROOK NSW 2333
(02) 6541 0751
0421 942 902
40. Mooki Plains Management
Stephen Matthews
28 Herbert Street
GUNNEDAH, NSW 2380
(02) 67425563
41. Mooki Plains Management
Les Field
4 Hinton Drive
GUNNEDAH, NSW 2380
(02) 67425563

42. Murrawan Cultural Consultants Pty Ltd
Robert Smith
33 Clift St
HEDDON GRETA NSW 2321
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murrawancc@gmail.com
43. Moreeites
Susan Cutmore
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0411 570 568
Suewong58@hotmail.com
44. Muswellbrook Cultural Consultants
Brian Horton
10 Scott Street
MUSWELLBROOK NSW 2333
45. Rebecca Lester
297 Pioneer Road
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0423 044 586
sandra_rebecca@y7mail.com
46. Ngarramang-Kuri Aboriginal Culture & Heritage Group
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0466 589 238
abie@yarnteen.com.au
47. Roger Noel Matthews Consultancy
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0403 139 411
laurarose2010@live.com.au
50. Scott Smith
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0403 139 411

51. Smith Dhagaans Cultural Group
Tim Smith
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0401 100 708
Smith.Dhagaans@hotmail.com
52. St Clair Singleton Aboriginal Corporation
Cultural Heritage Officer
PO Box 710
SINGLETON NSW 2330
53. Steven Saunders
35 Walhallow Village
CAROONA NSW 2343
0487 192 468
54. T & G Culture Consultants
19 O'Donnell Cres
METFORD NSW 2323
0428 147 417
55. Thawan Heritage Consultant
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0428 540 646
thawanheritageconsultant@hotmail.com
56. Trevor Robinson
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PEAK HILL NSW 2869
57. Ungooroo Aboriginal Corporation
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admin@ungooroo.com.au
58. Ungooroo Cultural & Community Services
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0450 754 199
ungooroo59@hotmail.com
59. Upper Hunter Heritage Consultants
Melissa & Darrel Matthews
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(02) 6541 3532
0439 556 641

60. Upper Hunter Wonnarua Council Inc.
Rhoda Perry & Georgina
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61. Valley Culture
Larry Van Vliet
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62. Waabi Gabinya Cultural Consultancy
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63. Wallangan Cultural Services
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64. Wanaruah Custodians,
David Foot
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(02) 6573 1712
0457 429 136
65. Wanaruah Local Aboriginal Land Council
PO Box 127
MUSWELLBROOK NSW 2333
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wanaruah@hunterlink.net.au
66. Warragil Cultural Services
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67. Wattaka Wonnarua C.C. Service
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68. Widescope Indigenous Group Pty Ltd
Steve Hickey
73 Russell St
EMU PLAINS NSW 2750
0425 232 056
0425 230 693
widescope.group@live.com
69. Wonn1 Contracting
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70. Wonnarua Culture Heritage
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0401 028 807
71. Wonnarua Nation Aboriginal Corporation
Laurie Perry
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SINGLETON NSW 2330
(02) 6571 5419
0412 593 020
72. Wonnaruah Elders Council
Uncle Tommy Miller
PO Box 184
SINGLETON NSW 2330
73. Wurrumay Consultants
Kerrie Slater
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0423 935 556
Wurrumay@hotmail.com
74. Yarrawalk (A division of Tocomwall Pty Ltd)
Scott Franks
PO Box 76
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0404 171 544
scott@tocomwall.com.au
75. Yinarr Cultural Services
Kathleen Steward
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(02) 6547 6077
0432 720 623
yinarrculturalservices@bigpond.com

Dr Andrew McLaren

AECOM Australia

PO BOX Q410

Sydney

NSW 2000

RE: ABORIGINAL CULTURAL HERITAGE ASSESSMENT HYDRO SMELTER SITE AND
SURROUNDING HYDRO OWNED BUFFER LAND AT KURRI KURRI

Hi Andrew

Mindaribba Local Aboriginal Land Council would like to register our interest in the above said project. We wish to be involved in all phases including the fieldwork and salvage should any be required.

Mindaribba LALC has an obligation under the NSW Aboriginal Land Rights Act to protect and preserve our culture and heritage and to ensure that such assessments are carried out in line with the various acts.

Thanking you

Stephen Talbott

Mindaribba LALC

Dr Andrew McLaren
AECOM
Level 21, 420 George Street
Sydney NSW 2000

Dear Mr McLaren


Re: Request - Search for Registered Aboriginal Owners

I refer to your letter dated 10 February 2014 regarding Aboriginal Cultural Heritage Assessment within Kurri Kurri area in NSW.

I have searched the Register of Aboriginal Owners and the project area described *does not appear* to have Registered Aboriginal Owners pursuant to Division 3 of the *Aboriginal Land Rights Act 1983 (NSW)*.

I suggest that you contact the Mindaribba Local Aboriginal Land Council. They will be able to assist you in identifying other Aboriginal stakeholders for this project.

Yours sincerely



Tabatha Dantoine

Administration Officer

Office of the Registrar, *Aboriginal Land Rights Act (1983)*

22 January 2014



National
Native Title
Tribunal



11 February 2014

Dr Andrew McLaren
AECOM Australia Pty Ltd
PO Box Q410, QVB PO
SYDNEY NSW 2000

Dear Dr McLaren

**Native Title Search Results for Freehold Tenure
within the Cessnock & Maitland Local Government Areas**

Thank you for your search request in relation to the above areas, received on 10 February 2014.

As it appears that your request was related to areas of land which are freehold, it should be noted that under the *Native Title Act 1993* (Cwlth), the valid grant of a freehold estate (other than certain types of Aboriginal and Torres Strait Islander land) on or before 23 December 1996 is known as a 'previous exclusive possession act'. This means that native title has been extinguished over the area.

Native title claimants are not allowed to include land and waters covered by previous exclusive possession acts in their applications; therefore they would normally exclude freehold areas. Although a native title application may be made over freehold land on the basis that freehold was invalidly granted, the chances of this happening are very low.

The Tribunal is not the custodian of the data for freehold estates. To determine whether a particular parcel of land is freehold land, you may wish to seek such information from the relevant state government custodian.

If you have any further queries, please do not hesitate to contact me on the numbers listed below.

Yours sincerely

Sylvia Jagtman | SENIOR CASE MANAGEMENT ASSISTANT

National Native Title Tribunal | Sydney Office

Level 16, Federal Law Courts Building, Queens Square, Sydney, New South Wales 2000

Telephone (02) 9227 4013 | Facsimile (02) 9227 4030 | Email sylvia.jagtman@nntt.gov.au

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Sydney Office, Operations East

Level 16
Law Courts Building
Queens Square
Sydney NSW 2000
GPO Box 9973
Sydney NSW 2001
Telephone (02) 9227 4000
Facsimile (02) 9227 4030

Our Reference: 6022/14SJ

Your Reference: Hydro Kurri Kurri



Searching the NNTT Registers in New South Wales

Search service

On request the National Native Title Tribunal may search its public registers for you. A search may assist you in finding out whether any native title applications (claims), determinations or agreements exist over a particular area of land or water.

In New South Wales native title cannot exist on privately owned land including family homes or farms.

What information can a search provide?

A search can confirm whether any applications, agreements or determinations are registered in a local government area. Relevant information, including register extracts and application summaries, will be provided.

In NSW because we cannot search the registers in relation to individual parcels of land we search by local government area.

Most native title applications do not identify each parcel of land claimed. They have an external boundary and then identify the areas not claimed within the boundary by reference to types of land tenure e.g., freehold, agricultural leasehold, public works.

What if the search shows no current applications?

If there is no application covering the local government area this only indicates that at the time of the search either the Federal Court had not received any claims in relation to the local government area or the Tribunal had not yet been notified of any new native title claims.

It does not mean that native title does not exist in the area.

Native title may exist over an area of land or waters whether or not a claim for native title has been made.

Where the information is found

The information you are seeking is held in three registers and on an applications database.

National Native Title Register

The National Native Title Register contains determinations of native title by the High Court, Federal Court and other courts.

Register of Native Title Claims

The Register of Native Title Claims contains applications for native title that have passed a registration test.

Registered claims attract rights, including the right to negotiate about some types of proposed developments.

Register of Indigenous Land Use Agreements

The Register of Indigenous Land Use Agreements contains agreements made with people who hold or assert native title in an area.

The register identifies development activities that have been agreed by the parties.

Schedule of Native Title Applications

The Schedule of Native Title Applications contains a description of the location, content and status of a native title claim.

This information may be different to the information on the Register of Native Title Claims, e.g., because an amendment has not yet been tested.

How do I request a native title search?

Download the Search Request Form from the Tribunal's website at -

<http://www.nntt.gov.au/Applications-And-Determinations/Registers/Pages/Search-The-Tribunal-Registers.aspx>

Email to: NSWEnquiries@nntt.gov.au

Post to: GPO Box 9973 Sydney NSW 2001

For additional enquiries: 02 9227 4000

Appendix C

Public Notice - Maitland Mercury

Call for Registrations

Aboriginal Cultural Heritage Assessment Hydro Aluminium Smelter Site and Associated Buffer Land, Hart Road, Kurri Kurri, NSW

AECOM Australia Pty Ltd (AECOM) is seeking to identify Aboriginal persons or organisations who wish to be consulted in relation to an Aboriginal cultural heritage assessment of the Hydro Aluminium smelter site and surrounding Hydro-owned buffer land at Kurri Kurri, New South Wales.

The assessment, which will include an archaeological survey component, will consider the potential rezoning and development by Hydro Aluminium Kurri Kurri Pty Ltd of part of the project area for residential and employment-related uses.

Interested Aboriginal persons and/or organisations are invited to register their interest in writing to:

Dr Andrew McLaren
AECOM Australia Pty Ltd
PO Box Q410, QVB PO
Sydney NSW 1230
Phone: +61 2 8934 0547
Fax: +61 2 8934 0001

Email: andrew.mclaren@aecom.com

Expressions of interest should include current contact details. The closing date for registration is Tuesday 25th March 2014.

Further information regarding the project will be provided upon registration.

The details of any Aboriginal person or organisation who registers an interest will be forwarded to the Office of Environment and Heritage (OEH) and the Mindaribba Local Aboriginal Land Council, unless requested otherwise at the time of registration.

Please note that registration does not guarantee employment during fieldwork.

Appendix D

RAP Responses to Draft Assessment Methodology

McLaren, Andrew

From: Barkuma <barkumanc@hotmail.com>
Sent: Monday, 5 May 2014 3:25 PM
To: McLaren, Andrew
Subject: Hydro Aluminium Smelter site

Dear Andrew,
Giddawaa Walang Cultural Heritage Consultancy agree with the proposed draft methodology for the above project. We have approx. 12 years experience in field work and have been involved in fieldwork within the study area. We have worked with Umwelt for the hunter expressway project, also with AMBS -Kurri to Redbank feeder and with Hunter Water on the Farley pipeline upgrade. I would prefer to talk about cultural values at a later date with you. I have also faxed our current insurances to you.

Thank You for the opportunity to register for this project.

Ann Hickey
Project Officer

Barkuma Neighbourhood Centre Inc.
76 Lang Street, Kurri Kurri NSW 2327
Phone: (02) 4937 1094
Fax: (02) 4936 4449
www.barkuma.org.au

McLaren, Andrew

From: stephen talbott <gomeroid.namoi@outlook.com>
Sent: Thursday, 15 May 2014 1:12 PM
To: McLaren, Andrew
Subject: response for smelter kurri kurri

Hi Andrew

Gomeroid Namoi support rezoning application providing a full Aboriginal Heritage Assessment is carried out on entire project area. Also should there be any recommendations following such an assessment those recommendations are to be implemented or addressed prior to development approval

Thanking you

Greg Heard

On behalf of Gomeroid Namoi T/O



Wonn1
Entity of Kauwul Pty Ltd

619 Main Road Glendale, 2285

PHONE: 0249547751 Mobile: 0402146193

ABN: 27 153 953 363

13 May 2014

Dr A P McLaren
Archaeologist
AECOM Australia
PO Box Q410
QVB Post Office NSW 1230
Email: andrew.mclaren@aecom.com

Dear Andrew

RE: EXPRESSION OF INTEREST – DRAFT ASSESSMENT METHODOLOGY FOR THE HYRO ALUMINIUM SMELTER SITE AND ASSOCIATED BUFFER LAND OFF HART ROAD AT KURRI KURRI NSW

In response to your letter dated 15 April 2014, Arthur Fletcher of Kauwul Pty Ltd trading as Wonn1 Contracting would like to resubmit an expression of interest to be consulted and to participate in any fieldwork required to express and determine the cultural significance of Aboriginal objects and places near and within the Kurri Kurri area.

We have reviewed the above draft Assessment Methodology and find that the process of assessment is acceptable. We therefore submit the following details:

Registered Aboriginal Party: Kauwul Wonn1 Contracting

Brief Description of Skills and Experience:

Arthur Fletcher has had many years' experience in cultural heritage/archaeological survey and excavation work within the Hunter Valley on projects including mining, infrastructure and development sites. He has worked with EnergyAustralia, Hunter Water, RTA/RMS including Hunter Expressway, ARTC and on many mine sites. Arthur has had sites training through NSW NPWS and continues to expand cultural heritage knowledge independently through his association with skilled knowledge-holder Elders within the Hunter Valley and further afield. He has undertaken many inductions for RTA, ARTC and carries SGS Induction cards for Xstrata and Rio Tinto Coal & Allied sites (Induction cards are available upon request).

(White Card: Arthur Fletcher Work Cover CG100787865SEQ1 11/03/2006)

Statement of Physical Fitness to Undertake the Necessary Sites Work:

Arthur is physically fit and will be able to complete the specific project tasks required within acceptable survey terrain limits and climate.

Statement of Cultural Knowledge and/or Connection with Country:

Arthur is a Wonnarua/Gringai elder with knowledge of cultural lore and a concentrated interest, knowledge and understanding of cultural heritage sites within the Lower Hunter and Upper Hunter regions, and spiritual beliefs of his traditional Country.

Organisations Commercial Rates and Terms of Engagement:

Total rates per day (including travel and GST) = \$700.00/day

Terms of payment is 14 day following your receipt of our invoice.

Certificates of Currency:

Both the Certificates of Currency for Workers Compensation and Public Liability Insurance are attached to this letter as requested.

Thank you once again for this opportunity to lodge an expression of interest for this project. We look forward to hearing from you soon.

Kind regards



Suzie Worth
For Arthur C Fletcher
Wonnl (Kauwul Pty Ltd)

(Attached)



Markey Insurance Brokers ABN 83 002 301 288
Cooks Hill Commercial Centre 235 Darby Street
(PO Box 909) Newcastle NSW 2300
Ph (02) 49256555 Fax (02) 49295156
Email: insurance@markeygroup.com.au
• Member of the National Insurance Brokers Association of Australia
• Registered General Insurance Brokers
• Australian Financial Services Licensee Lic No 240567

Issued: 30 October 2013

CERTIFICATE OF INSURANCE

In our capacity as insurance brokers, we confirm having arranged insurance as follows:

INSURED: Kauwul Pty Ltd T/As Wonnl

INSURANCE CLASS: Public and Products Liability

SITUATION: Australia Wide

BUSINESS DESCRIPTION: Cultural Site Officer

INTEREST: Legal Liability for Personal Injury or Property Damage within the Territorial Limits that happens in connection with the Insured's Business

LIMIT OF INDEMNITY:

PUBLIC LIABILITY	\$20,000,000
PRODUCTS LIABILITY	\$20,000,000

PERIOD OF INSURANCE: 31/10/2013 - 31/10/2014
4.00pm Local Standard Time at the Insured's head office

INSURER: QBE Insurance (Australia) Ltd

POLICY NUMBER: 120A691476BPK

This certificate is subject always to the terms, conditions and limitations of the policy and is issued as a matter of record only. It does not alter or extend the coverage provided by the policy or assume its continuity beyond the date stated or confer rights under the policy to any party other than the parties noted as the Insured. Please refer to your policy wording for full terms and conditions.

In arranging this certificate, we do not guarantee that the insurance outlined will continue to remain in force for the period referred to as the policy may be cancelled or altered by either party to the contract at any time in accordance with the terms and conditions of the policy or in accordance with the terms of the "Insurance Contracts Act". We accept no responsibility or liability to advise any party who may be relying on this certificate of such alteration to or cancellation of the policy of insurance.

We confirm insurance has been arranged in accordance with your details, please note this certificate is subject to the premium having been paid in full.

Signed by and on behalf of
MARKEY GROUP PTY LIMITED

Sarah Nixon
Internal Broker



CERTIFICATE OF CURRENCY



KAUWUL PTY LIMITED
619 Main Road
GLENDALE NSW 2285

Dear Sir/Madam,

1. STATEMENT OF COVERAGE

The following policy of insurance covers the full amount of the employer's liability under the Workers Compensation Act 1987.

This Certificate is valid from 31/10/2013 to 31/10/2014.

The information provided in this Certificate of Currency is correct at: 06/11/2013

2. EMPLOYERS INFORMATION

POLICY NUMBER WGB111112510122
LEGAL NAME KAUWUL PTY LIMITED
TRADING NAME WONN1 SITE ABBO
ABN 27153953363
TRUST NAME
TRUST ABN

WorkCover Industry Classification Number (WIC)	Industry	Numbers of Workers*	Wages**
782920	Technical Services nec	6	\$53,861.00

* Number of workers includes contractors/deemed workers

**Total wages estimated for the current period

3. IMPORTANT INFORMATION

Principals relying on this certificate should ensure it is accompanied by a statement under section 175B of the Workers Compensation Act 1987. Principals should also check and satisfy themselves that the information is correct and ensure that the proper workers compensation insurance is in place, ie. compare the number of employees on site to the average number of employees estimated; ensure that the wages are reasonable to cover the labour component of the work being performed; and confirm that the description of the industry/industries noted is appropriate.

A principal contractor may become liable for an outstanding premium of the sub contractor if the principal has failed to obtain a statement or has accepted a statement where there was reason to believe it was false.

Yours Faithfully

NICOLE BELL



CGU Workers Compensation (NSW) Ltd – Agent for the NSW WorkCover Scheme

ABN 83 564 379 108/007

Phone: 1300 666 506

Fax: 02 9088 9709

Lower Hunter Aboriginal Incorporated

5 Killara Drive
Cardiff South NSW 2285
Email – Lowerhunterai@gmail.com
ABN: 8192 4628 138



14/05/2014

Dr Andrew P McLaren
Archaeologist
AECOM Australia Pty Ltd
Level 21, 420 George St
Sydney NSW 2000

RE: Hydro Aluminium Smelter Site, Kurri Kurri.

Dear Dr Andrew

On behalf of Lower Hunter Aboriginal Incorporated (LHAI) I would to state that the LHAI traditional owners and relevant members have been presented with the proposed Aboriginal Cultural Heritage Assessment Methodology. LHAI members agreed with the methodology and that all consultation was presented in the proper manna with respect to Aboriginal Culture and Values.

My family has lived in the area for many generations and still currently live at Heddon Greta and Kurri Kurri.

The proposed area has stories of a hunting camps but no known sacred sites, it is still culturally significant to the Aboriginal People with artefacts already discovered it is a very good possibility of more being uncovered as well discovering the camping grounds.

LHAI would also like to be considered for paid participation for this project as this is in our family's area which we have lived for many years and have cultural knowledge past down from our ancestors.

We are fully insured and our rates are \$68.75 per hour (min 4 hours) + \$50 Travel allowance.

We have worked in ground surveying archaeological excavations and surveyed many areas and have worked with a number of organisations such as:

Umwelt, Mcheritage, RPS, Streat Archaeological, AMAC, RTA and many more.

Lower Hunter Aboriginal Incorporated

LHAI members would like to recommend:

- Stakeholders included in the survey and salvage operations to have Aboriginal identified Site Officers with necessary qualifications (Cultural & Heritage Sites Certificate) to ensure best results for the protection of Culture and Heritage. The interests and obligations of Aboriginal people relate to the protection of Aboriginal cultural heritage. It is only Aboriginal people who can determine who is accepted by their community as being authorised to speak for Country and its associated cultural heritage. Where there is a dispute about who speaks for Country, it is appropriate for Aboriginal people, not OEHL or the proponent, to resolve this dispute in a timely manner to enable effective consultation to proceed.
- Stakeholder working party is established with regular meetings where the proposed works can be updated and discussed.
- Potential significant features recorded and managed in a proper way with respect to Aboriginal Culture.
- Artefacts recovered to be reburied on site in an offset by the Proponent or stored at the Mindaribba LALC.

Executive Summary

The LHAI has Site Officers and members of the community and have been involved in public projects in the past and have vast knowledge of Aboriginal Culture and Heritage in and around the Hunter Valley.

Our Sites Officers have more than 30 years of experience and are properly certified with all the necessary qualifications.

The Lower Hunter Aboriginal Incorporated (LHAI) has a responsibility for ongoing protection and conservation of the Aboriginal Culture and Heritage in the hunter region and recommends that all proposed projects and cultural heritage works in Hunter Valley area to be assessed by a Lower Hunter Aboriginal Incorporated Cultural and Heritage Officer.

Yours sincerely

David Ahoy
Senior Sites Manager
LHAI
Mobile – 0411095249



Lower Hunter Wonnarua Cultural Services

ABN: 21 808 659 440



RE. DRAFT ASSESSMENT METHODOLOGY for the HYDRO ALUMINIUM SMELTER SITE of Hart Road, Kurri Kurri. Cessnock LGA

Dear Dr Andrew P McLaren,

I have reviewed your Draft Methodology for the Hydro Aluminium Smelter Site off Hart Road, Kurri Kurri. N.S.W. To me what I have seen is that this is not a METHODOLOGY but what it is just background information. There is lot of misinformation in those reports from other researcher/organization as I with other people from Mindaribba L.A.L.C.

Yours truly,

Thomas Miller
WONNARUA ELDER Lower Hunter Wonnarua Cultural Services

Postal Address: 51 Bowden Street Heddong Greta, NSW 2321 Mobile: 0402 636 521 Fax: 0249 372 694
email: tn.miller@southernphone.com.au

Andrew McClaren

AECOM Australia

PO BOX Q410

QUB Post Office

NSW 1230

RE: ABORIGINAL HERITAGE ASSESSMENT HYDRO ALUMINIMUM SMELTER SITE AND
ASSOCIATED BUFFER LAND KURRI KURRI NSW

Hi Andrew

Mindaribba Local Aboriginal Land Council supports the rezoning application in particular provided that a full Aboriginal Heritage Assessment is conducted and any recommendations that may follow such assessment are adhered to. Also Mindaribba believes the methodology that we have received is more of a back ground of the project .

Thanking you

Stephen Talbott

Sites Officer Mindaribba

Appendix E

RAP Fieldwork Notification



AECOM Australia Pty Ltd +61 2 8934 0000 tel
Level 21, 420 George Street +61 2 8934 0001 fax
Sydney NSW 2000 ABN 20 093 846 925
PO Box Q410
QVB Post Office NSW 1230
Australia
www.aecom.com

EXAMPLE

13 June 2014

Amanda Hickey
Amanda Hickey Cultural Services
41 Dempsey Street
Emu Heights NSW 2750

Dear Amanda,

Re: Archaeological field survey for Hydro Aluminium smelter site & associated buffer land, Kurri Kurri

AECOM is requesting **one field representative** from your organisation to participate in the archaeological survey component of the Aboriginal Cultural Heritage Assessment currently being undertaken for the Hydro Aluminium smelter site and associated buffer land, off Hart Road, at Kurri Kurri, NSW.

A representative from your organisation is requested for one day being **Friday 27 June 2014**

Field Representative Information

Project Description: Archaeological survey of Hydro Aluminium smelter site & associated buffer land

Meeting Place: Car Park 1, Hydro Aluminium smelter site, off Hart Rd, Kurri Kurri (see map below).

Meeting Time: Please be at the meeting place at 8:00am ready to sign in. A brief safety induction will be conducted on arrival prior to commencement of works. Work hours will be 8:00am to 4:00pm.

AECOM Contact: Andrew McLaren (02) 8934 0547 or 0403 753 165

What to Bring: Water, morning tea and lunch

PPE (High visibility clothing, hard hat, long pants, boots, safety/sun glasses, gloves)

Chair to sit on at lunchtime

Invoicing information:

Rate: \$600 per day (ex-GST)

Please address and send invoices to: Hydro Aluminium Kurri Kurri Pty Ltd
kurri.finance@hydro.com

Please note that if your company is not registered for GST this should not be included on your invoice. Incorrect invoices will not be processed by Hydro's finance department.

If you could please provide confirmation of availability of one field representative by **COB Friday 20 June 2014** and complete and return the attached Subcontractor's Statement it would be most appreciated.

Please note that completion of the attached Subcontractor's Statement is a mandatory requirement for engagement by Hydro and participation in the survey.

Should you have any questions please don't hesitate to contact me via email (andrew.mclaren@aecom.com), fax (02 8934 0001) or phone (02 8934 0547, 0403 753 165).



Figure 1 Survey meeting place

Yours faithfully,

Dr Andrew P McLaren
Archaeologist
andrew.mclaren@aecom.com

Mobile: 0403 753 165
Direct Dial: +61 2 8934 0547
Direct Fax: +61 2 8934 0001



SUBCONTRACTOR'S STATEMENT

REGARDING WORKERS COMPENSATION, PAY-ROLL TAX AND REMUNERATION (Note 1)

Workers Compensation
s175B Workers Compensation Act 1987

Pay-roll tax
Part 5B s31G-31J Pay-roll Tax Act 1971

Remuneration
ss127, 127A Industrial Relations Act 1996

Sub Contractor: _____ ABN: _____

(Business name)

of _____

(Address of subcontractor)

has entered into a contract with _____ (Note 2)

(Business name of principal contractor)

ABN: _____ For work between: ____/____/____ and ____/____/____ (Note 3)

Date

Date

and/or Payment Claim Details: _____ (Note 4)

Nature of contract work: _____ (Note 5)

DECLARATION

I, _____ a Director of / a person authorised by the subcontractor on whose behalf this
(delete as appropriate)
declaration is made, hereby state that the abovementioned subcontractor:

Is either

A sole trader or partnership without workers or subcontractors (Note 6).

OR

Has and will maintain in force valid workers compensation insurance, policy _____

(Policy Number)

held with _____ as indicated on the attached Certificate of

(Insurance Company)

Currency dated _____, in respect of work done in connection with the contract, during any period of the contract and has paid all workers compensation insurance premiums payable in connection with the contract (Note 7).

Is Is not also a principal contractor in connection with the work under contract (Note 8).

Has Has not been given a written statement by subcontractors in connection with the work.

Is Is not required to be registered as an employer under the *Pay-roll Tax Act 1971* _____
(Pay-roll tax client No.)

Has paid all pay-roll tax due in respect of employees who performed the work for the principal contractor, as required at the date of this statement (Note 9).

Has paid all remuneration payable to relevant employees, for work done under the contract during the period outlined above (Note 10).

Signature _____ Full Name _____

(please print)

Position/Title _____ Dated _____

WARNING

- Any subcontractor, who knowingly provides a principal contractor with a written statement that is false, is guilty of an offence (Maximum penalty 100 units or \$11,000).
- Any written statement will not relieve the principal contractor of liability if, at the time the written statement was provided, the principal contractor believed the written statement to be false.
- The principal contractor must retain a copy of any written statement for a period of not less than five years (Pay-roll tax), six years (Remuneration) or seven years (Workers compensation).
- **This statement must be accompanied by the relevant Certificate of Currency to comply with section 175B of the Workers Compensation Act 1987**

NOTES

1. This form is prepared for the purpose of section 175B of the *Workers Compensation Act 1987*, Part 5B section 31G-31J of the *Pay-roll Tax Act 1971* and section 127 of the *Industrial Relations Act 1996*. If this form is completed in accordance with these provisions, a principal contractor is relieved of liability for workers compensation premiums, pay-roll tax and remuneration payable by the subcontractor.
2. For the purpose of this statement, a principal contractor is a person (or other legal entity), who has entered into a contract with another person (or other legal entity), referred to as the subcontractor, and employees/workers of that subcontractor will perform the work under contract. The work must be connected to the business undertaking of the principal.
3. In order to meet the requirements of s127 *Industrial Relations Act 1996*, a statement in relation to remuneration must state the period to which the statement relates.

Section 127(6) *Industrial Relations Act 1996* defines remuneration as '*remuneration or other amounts payable to relevant employees by legislation, or under an industrial instrument, in connection with work done by the employees.*'

Section 127(11) of the *Industrial Relations Act 1996* states '*to avoid doubt, this section extends to a principal contractor who is the owner or occupier of a building for the carrying out of work in connection with the building so long as the building is owned or occupied by the principal contractor in connection with a business undertaking of the principal contractor.*'

4. Payment claim details – Where a subcontractor has entered into a payment schedule with a principal contractor they must identify the period or payment to which the statement applies.
5. An accurate description of the work covered by the contract must be included.
6. In completing the statement, a subcontractor declares that they are a sole trader or partnership without workers or subcontractors and is not required to hold workers compensation insurance.
7. In completing the statement, a subcontractor declares that workers compensation premiums payable up to and including the date(s) on the statement have been paid, and all premiums owing during the term of the contract will be paid.
8. It is important to note that a business could be both a subcontractor and a principal contractor, if a business 'in turn' engages subcontractors to carry out work. If your business falls within this category you should also obtain statements from your subcontractors.
9. In completing the statement, a subcontractor declares that all pay-roll tax payable relating to work undertaken as part of the contract has been paid.
10. In completing the statement, a subcontractor declares that all remuneration payable has been paid.

It is noted that definitions of employer, employee, remuneration, and specific provisions for employers of outworkers in the clothing trades are as defined in s127A of the *Industrial Relations Act 1996*.

11. Failure to complete this statement may result in the principal contractor withholding any payment due to the subcontractor. Any penalty for late payment under the contract does not apply to any payment withheld under this subsection. Subcontractors may wish to keep a copy of the statement for their own records.

For more information, please visit the WorkCover website www.workcover.nsw.gov.au, Office of State Revenue website www.osr.nsw.gov.au, or Office of Industrial Relations, Department of Commerce website www.commerce.nsw.gov.au. Copies of the *Workers Compensation Act 1987*, the *Pay-roll Tax Act 1971* and the *Industrial Relations Act 1996* can be found at www.legislation.nsw.gov.au.

Appendix F

RAP Responses to Draft Report

McLaren, Andrew

From: Barkuma <barkumanc@hotmail.com>
Sent: Thursday, 11 December 2014 3:59 PM
To: McLaren, Andrew
Subject: Hydro Aluminium

Hello Andy,

RE: Review of Draft Aboriginal Cultural Heritage Assessment Report for Hydro Aluminium Smelter Site & Associated Buffer Land, Kurri Kurri NSW.

Gidawaa Walang Cultural Heritage Consultancy support the Management Recommendations in the above Draft Report.

Yours sincerely
Ann Hickey

ps. I am sorry I missed the 8th of December

Barkuma Neighbourhood Centre Inc.
76 Lang Street, Kurri Kurri NSW 2327
Phone: (02) 4937 1094
Fax: (02) 4936 4449
www.barkuma.org.au

Appendix G

AHIMS Search Results

AECOM Australia Pty Ltd (previously HLA-Envirosciences)

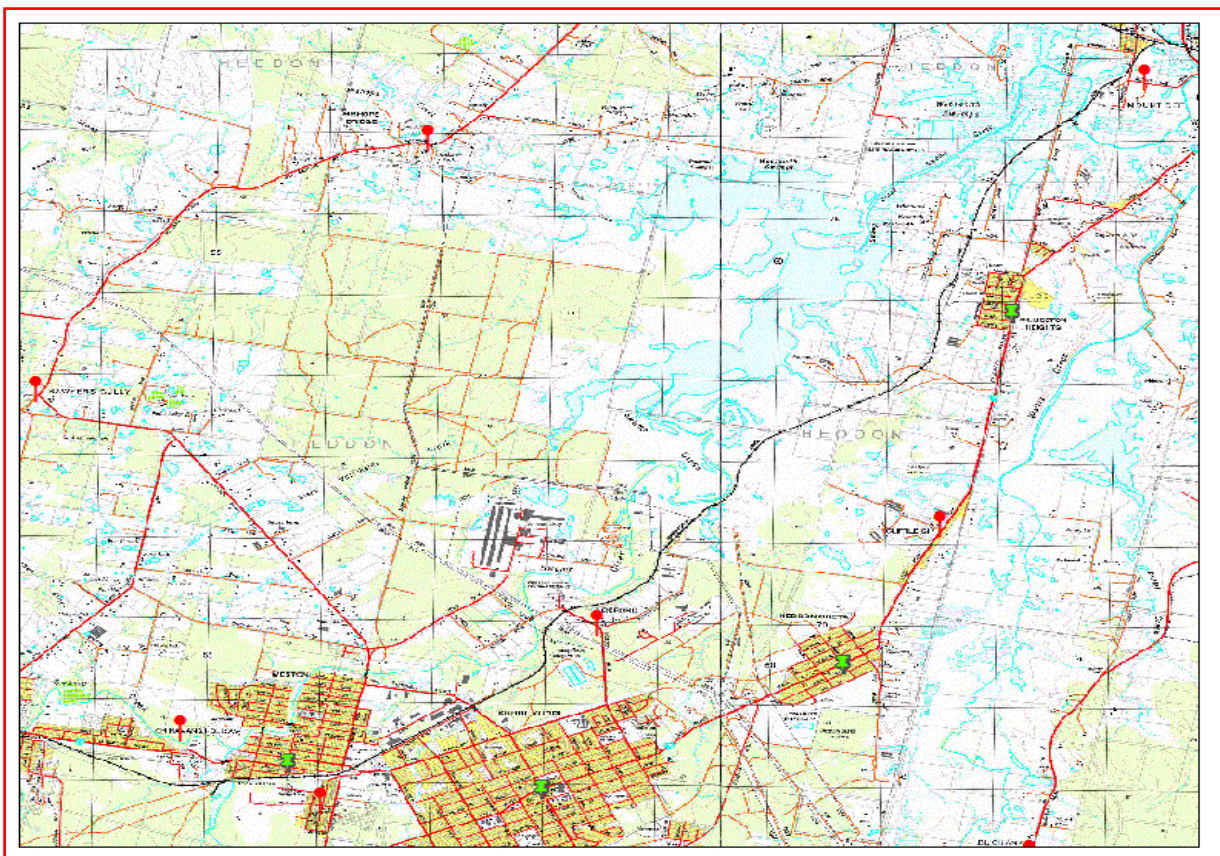
Date: 05 February 2014

Level 21 420 George Street
SYDNEY New South Wales 2000
Attention: Andrew Peter McLaren
Email: andrew.mclaren@aecom.com

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 353528 - 363528, Northings : 6367313 - 6377313 with a Buffer of 0 meters. Additional Info : Aboriginal Archaeological Assessment, conducted by Andrew Peter McLaren on 05 February 2014.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

107	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-1018	GH Campsite 1	AGD	56	363166	6374506	Open site	Valid	Aboriginal Resource and Gathering :-		100898,10098 7,102231,102388
	Contact Searle									
38-4-1019	GH PAD3	AGD	56	363190	6374880	Open site	Valid	Potential Archaeological Deposit (PAD) :-		100504,10089 8,100987,102231,102388
	Contact Searle									
38-4-1005	Gillieston Heights 1	AGD	56	362380	6374055	Open site	Destroyed	Artefact : 1		100966,102231,102388
	Contact									
38-4-1006	Gillieston Heights 2	GDA	56	362396	6374623	Open site	Destroyed	Artefact : 1		100966,102231,102388
	Contact S Scanlon									
38-4-1036	GHS IF1	AGD	56	362116	6373707	Open site	Valid	Artefact : 1		102231
	Contact									
38-4-1037	GHS PAD 1	AGD	56	362600	6373400	Open site	Valid	Potential Archaeological Deposit (PAD) :-		3555,3592
	Contact Lower Wonnarua Tribal Council									
38-4-1038	GHS PAD 2	AGD	56	362700	6373650	Open site	Valid	Potential Archaeological Deposit (PAD) :-		102231
	Contact Lower Wonnarua Tribal Council									
38-4-1306	STANFORD MERTHYR AS4	GDA	56	359890	6367977	Open site	Valid	Artefact :-		
	Contact									
38-4-1308	RPS STANFORD METHYR IF2	GDA	56	359982	6368022	Open site	Valid	Artefact :-		
	Contact									
38-4-1309	RPS STANFORD METHYR IF3	GDA	56	360196	6368134	Open site	Valid	Artefact :-		
	Contact									
38-4-1310	RPS STANFORD METHYR IF4	GDA	56	360233	6368157	Open site	Valid	Artefact :-		
	Contact									
38-4-1366	Wallis Creek RTA 8	GDA	56	360032	6368267	Open site	Valid	Artefact :-		
	Contact									
38-4-1367	Wallis Creek RTA 9	GDA	56	359970	6368362	Open site	Valid	Artefact :-		
	Contact									
38-4-1368	Wallis Creek RTA 10 IF	GDA	56	360221	6367962	Open site	Valid	Artefact : 1		
	Contact									

Report generated by AHIMS Web Service on 05/02/2014 for Andrew Peter McLaren for the following area at Datum :GDA, Zone : 56, Eastings : 353528 - 363528, Northings : 6367313 - 6377313 with a Buffer of 0 meters. Additional Info : Aboriginal Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects found is 107

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.



SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-1369	Wallis Creek RTA 11 IF	GDA	56	360275	6367838	Open site	Valid	Artefact : 1		
	Contact	Recorders				Umwelt (Australia) Pty Limited, Miss. Stephanie Howden				Permits
38-4-1330	Wallis Creek RTA19IF	GDA	56	360092	6367526	Open site	Valid	Artefact : 1		
	Contact	Recorders				Umwelt (Australia) Pty Limited, Miss. Stephanie Howden				Permits
38-4-1331	Wallis Creek RTA20IF	GDA	56	360110	6367448	Open site	Valid	Artefact : -		
	Contact	Recorders				Umwelt (Australia) Pty Limited, Miss. Stephanie Howden				Permits
38-4-1332	Wallis Creek RTA21IF	GDA	56	360123	6367319	Open site	Valid	Artefact : 1		
	Contact	Recorders				Umwelt (Australia) Pty Limited, Miss. Stephanie Howden				Permits
38-4-1334	Wallis Creek RTA23IF	GDA	56	359942	6367838	Open site	Valid	Artefact : 1		
	Contact	Recorders				Umwelt (Australia) Pty Limited, Miss. Stephanie Howden				Permits
38-4-1335	Wallis Creek RTA24IF	GDA	56	360006	6367695	Open site	Valid	Artefact : -		
	Contact	Recorders				Umwelt (Australia) Pty Limited, Miss. Stephanie Howden				Permits
38-4-1376	Figtree Lane Sewer Project Artefacts	GDA	56	361931	6375357	Open site	Valid	Artefact : 3		
	Contact Mr. Thomas Miller	Recorders				Ms. Mary Dallas				Permits 3433
38-4-1372	RPS Farley AS3	GDA	56	361725	6376715	Open site	Valid	Artefact : 32		
	Contact	Recorders				RPS Australia East Pty Ltd -Hamilton, Miss. Philippa Sokol				Permits
38-4-1373	RPS Farley IF1	GDA	56	361437	6376404	Open site	Valid	Artefact : 1		
	Contact	Recorders				RPS Australia East Pty Ltd -Hamilton, Miss. Philippa Sokol				Permits 3445
38-4-1374	FWW5	GDA	56	361438	6375865	Open site	Valid	Artefact : -		
	Contact	Recorders				Ms. Gillian Goode, RPS Australia East Pty Ltd -Hamilton				Permits 3445
38-4-1347	Lot 4 and 52 DP868890	GDA	56	362645	6375169	Open site	Valid	Aboriginal Resource and Gathering : -, Artefact : -		
	Contact Mindaribba Local Aboriginal L	Recorders				RPS Australia East Pty Ltd -Hamilton, Miss. Philippa Sokol				Permits 3412
37-6-0865	KK-IF-2	AGD	56	357640	6369450	Open site	Valid	Artefact : -	Isolated Find	98174,102135
	Contact	Recorders				Mrs. Robynne Mills				Permits
37-6-0866	KK-IF-1	AGD	56	358540	6371140	Open site	Valid	Artefact : -	Isolated Find	98174,102231
	Contact	Recorders				Mrs. Robynne Mills				Permits
37-6-1325	Swamp Creek RTA 10 IF (SWC RTA 10IF)	AGD	56	356447	6370271	Open site	Valid	Artefact : 1		
	Contact	Recorders				Umwelt (Australia) Pty Limited, Leila McAdam				Permits 2102
37-6-1233	Hebden Estate Isolated find	AGD	56	354550	6367700	Open site	Valid	Artefact : -		
	Contact	Recorders				Dominic Steele Archaeological Consulting				Permits 2047
37-6-1341	Black Waterholes Creek RTA 1 IF	AGD	56	355826	6371730	Open site	Valid	Artefact : 1		
	Contact	Recorders				Umwelt (Australia) Pty Limited, Leila McAdam				Permits 2102
37-6-1342	Black Waterholes Creek RTA 2 IF	AGD	56	355388	6372208	Open site	Valid	Artefact : 1		

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders						Permits		
37-6-1343	Black Waterholes Creek RTA 3 IF	AGD	56	356293	6371108	Open site	Valid	Artefact : 1	2102	102231
	Contact	Recorders						Permits		
37-6-1344	Black Waterholes Creek RTA 4 IF (BWC RTA 4 IF)	AGD	56	355416	6372102	Open site	Valid	Artefact : 1	2102	
	Contact	Recorders						Permits		
37-6-1345	Sawyers Gully RTA 1	AGD	56	354438	6373476	Open site	Valid	Artefact : 4	2102	
	Contact	Recorders						Permits		
37-6-1346	Sawyers Gully RTA 2 IF	AGD	56	354033	6373623	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
38-4-0898	Cliftleigh 1	AGD	56	361284	6371336	Open site	Valid	Artefact : 1		102231,102388
	Contact T Russell	Recorders						Permits		
38-4-0814	Swamp Creek RTA 2	AGD	56	359614	6368267	Open site	Destroyed	Artefact : 6		
	Contact	Recorders						Permits		
37-6-1355	Swamp Creek RTA 3	AGD	56	359052	6369135	Open site	Valid	Artefact : 10	2102	102388
	Contact	Recorders						Permits		
37-6-1356	Swamp Creek RTA 4	AGD	56	356557	6370688	Open site	Valid	Artefact : 4		
	Contact	Recorders						Permits		
37-6-1357	Swamp Creek RTA 5 IF	AGD	56	358943	6368993	Open site	Valid	Artefact : 1		102388
	Contact	Recorders						Permits		
37-6-1358	Swamp Creek RTA 6 IF	AGD	56	359229	6369057	Open site	Valid	Artefact : 1		102388
	Contact	Recorders						Permits		
37-6-1359	Swamp Creek RTA 7 IF	AGD	56	358425	6369259	Open site	Valid	Artefact : 1		102388
	Contact	Recorders						Permits		
37-6-1360	Swamp Creek RTA 8 IF	AGD	56	357269	6370282	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
37-6-1361	Swamp Creek RTA 9	AGD	56	357005	6370549	Open site	Valid	Artefact : 7		
	Contact	Recorders						Permits		
37-6-1362	Swamp Creek RTA 11 IF (formerly PAD9 Swamp Creek)	AGD	56	357630	6369700	Open site	Valid	Potential Archaeological Deposit (PAD) : 1, Artefact : -		
	Contact	Recorders						Permits	2096,2562	
37-6-1363	PAD11 Black Waterholes Creek	AGD	56	356091	6371356	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102231

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports		
	Contact	Recorders	Umwelt (Australia) Pty Limited,Leila McAdam						Permits	2096		
37-6-1364	Sawyers Gully RTA 11 (formerly PAD12 Sawyers Gully)	AGD	56	354542	6373239	Open site	Valid	Potential Archaeological Deposit (PAD) : 1, Artefact : -				
	Contact	Recorders	Umwelt (Australia) Pty Limited,Leila McAdam						Permits	2096,2562		
38-4-1059	GH PAD 2	AGD	56	363390	6374930	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		100898,10098 7		
	Contact	Recorders	Ms.Mary Dallas						Permits			
38-4-1044	GillMirv 1	AGD	56	362795	6373915	Open site	Destroyed	Artefact : 11		102388		
	Contact		Mindaribba Local Aboriginal L						Permits	2715,2954,3077		
38-4-1039	GH PAD 1	AGD	56	363020	6374500	Open site	Valid	Artefact : 117, Potential Archaeological Deposit (PAD) : -		100987,10109 7		
	Contact		Mr.Stephen Talbott						Recorders	Mary Dallas Consulting Archaeologists,Paul Irish Consultant Archaeologist	Permits	2962,3071,3604
37-6-1957	KK09	GDA	56	358372	6371638	Open site	Valid	Artefact : 1		102231		
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah						Permits	3203		
37-6-1958	KK10	GDA	56	357407	6371800	Open site	Valid	Artefact : 3		102231		
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah						Permits	3203		
37-6-1959	KK11	GDA	56	357079	6371849	Open site	Valid	Artefact : 1		102231		
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah						Permits	3203		
37-6-1960	KK12	GDA	56	356887	6371887	Open site	Valid	Artefact : 1		102231		
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah						Permits	3203		
38-4-1156	GHN 1 PAD	GDA	56	363068	6375437	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102231		
	Contact	Recorders	RPS Australia East Pty Ltd -Hamilton						Permits	3162		
37-6-2004	KR01	GDA	56	357959	6370106	Open site	Valid	Artefact : -				
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah						Permits	3201		
37-6-2005	KR02	GDA	56	357528	6370404	Open site	Valid	Artefact : -				
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah						Permits	3201		
37-6-2006	KR03	GDA	56	357491	6370454	Open site	Valid	Artefact : -				
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah						Permits	3201		
37-6-2007	KR04	GDA	56	357367	6370539	Open site	Valid	Artefact : -				
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah						Permits	3201		

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
37-6-2008	KR05	GDA	56	357171	6370683	Open site	Valid	Artefact : -		
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah					Permits	3201	
37-6-2009	KR06	GDA	56	356187	6371481	Open site	Valid	Artefact : -		102231
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah					Permits	3201	
37-6-2010	KR07	GDA	56	354120	6373825	Open site	Valid	Artefact : -		
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah					Permits	3201	
38-4-1138	GH PAD 1 (Berefield)	GDA	56	363120	6374650	Open site	Valid	Potential Archaeological Deposit (PAD) :-		100898
	Contact	Recorders	Mr.Paul Irish,Ms.Mary Dallas					Permits		
37-6-1961	KK13	GDA	56	356713	6372765	Open site	Valid	Artefact : 1		102231
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah					Permits	3203	
37-6-1962	KK14	GDA	56	356727	6372857	Open site	Valid	Artefact : 1		102231
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah					Permits	3203	
37-6-1963	KK15	GDA	56	356790	6373144	Open site	Valid	Artefact : 1		102231
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah					Permits		
37-6-1964	KK16	GDA	56	356790	6373144	Open site	Valid	Artefact : -		102231
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah					Permits		
38-4-1173	FWW 1 (Maitland)	GDA	56	361292	6376190	Open site	Valid	Artefact : 2		102231
	Contact	Recorders	Ms.Gillian Goode					Permits	3445	
38-4-1174	FWW 2 (Maitland)	GDA	56	361367	6376236	Open site	Valid	Artefact : 1		102231
	Contact	Recorders	Ms.Gillian Goode					Permits	3445	
38-4-1175	FWW 3 (Maitland)	GDA	56	361532	6376018	Open site	Valid	Artefact : 1		102231
	Contact	Recorders	Ms.Gillian Goode					Permits	3445	
38-4-1176	FWW 4 (Maitland)	GDA	56	361327	6376068	Open site	Valid	Artefact : 1		102231
	Contact	Recorders	Ms.Gillian Goode					Permits	3445	
38-4-1149	KK01 (Beresfield)	GDA	56	359679	6369869	Open site	Valid	Artefact : 3		
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah					Permits	3151	
38-4-1150	KK02 (Beresfield)	GDA	56	359819	6369944	Open site	Valid	Artefact : 3		
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah					Permits	3151	
37-6-1953	KK03	GDA	56	359355	6370790	Open site	Valid	Artefact : 10		
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah					Permits	3203	
37-6-1954	KK05	GDA	56	358577	6371627	Open site	Valid	Artefact : 17		102231
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah					Permits	3203	
37-6-1955	KK07	GDA	56	356742	6372396	Open site	Valid	Artefact : 2		102231

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah							
37-6-1956	KK08	GDA	56	359497	6370657	Open site	Destroyed	Artefact : 1	Permits	3151,3203
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Ms.Tessa Boer-Mah							
38-4-1615	Wallis Creek RTA 26 IF	GDA	56	360164	6368047	Open site	Valid	Artefact : 1	Permits	3203,3640
	Contact	Recorders	Umwelt (Australia) Pty Limited,Mr.Kirwan Williams							
38-4-1617	RPS Farley WSEA 1	GDA	56	361257	6376313	Open site	Valid	Potential Archaeological Deposit (PAD) : 1	Permits	
	Contact	Recorders	Ms.Tessa Boer-Mah,RPS							
38-4-1467	Wallis Creek RTA 13 IF	GDA	56	360056	6368233	Open site	Valid	Artefact : 1	Permits	
	Contact	Recorders	Umwelt (Australia) Pty Limited,Mr.Kirwan Williams							
38-4-1468	Wallis Creek RTA 12	GDA	56	360583	6367333	Open site	Valid	Artefact : 4	Permits	
	Contact	Recorders	Umwelt (Australia) Pty Limited							
38-4-1595	FWW2	GDA	56	361367	6376236	Open site	Valid	Artefact : 1	Permits	
	Contact	Recorders	Ms.Gillian Goode							
38-4-1589	Farley Quarry AS01	GDA	56	361956	6376969	Open site	Valid	Artefact : 1	Permits	3445
	Contact	Recorders	Hunter Water Corporation							
38-4-1590	Farley Quarry IA02	GDA	56	362017	6376998	Open site	Valid	Artefact : 1	Permits	3445
	Contact	Recorders	Hunter Water Corporation							
38-4-0076	Farley;	AGD	56	359800	6376100	Open site	Valid	Artefact : -	Open Camp Site	533,102231,102388
	Contact	Recorders	Len Dyall							
38-4-0077	Farley;W;	AGD	56	359900	6376800	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102231,102388
	Contact	Recorders	Len Dyall							
37-6-0172	Farley;Farley O;	AGD	56	356481	6376740	Open site	Valid	Artefact : -	Open Camp Site	102231,102646
	Contact	Recorders	Len Dyall							
37-6-0267	Kurri Kurri No.1;	AGD	56	359420	6369460	Open site	Valid	Artefact : -	Open Camp Site	783,102388
	Contact	Recorders	A Djekic							
37-6-0268	Kurri Kurri No 2.;	AGD	56	359450	6369680	Open site	Valid	Artefact : -	Open Camp Site	783
	Contact	Recorders	A Djekic							
37-6-0269	Kurri Kurri No.3;	AGD	56	359480	6369790	Open site	Valid	Artefact : -	Open Camp Site	783,102388
	Contact	Recorders	A Djekic							
37-6-0270	Kurri Kurri No.4;	AGD	56	359490	6369810	Open site	Valid	Artefact : -	Open Camp Site	783,102135,102388
	Contact	Recorders	A Djekic							

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
37-6-0271	Kurri Kurri No.5;	AGD	56	359520	6369890	Open site	Valid	Artefact : -	Open Camp Site	102135,102388
	Contact		Recorders	A Djekic				Permits		
37-6-0123	Bishop's Bridge Farley I	AGD	56	359223	6376792	Open site	Valid	Artefact : -	Open Camp Site	102231,102388,102646
	Contact		Recorders	Len Dyall				Permits		
37-6-0124	Bishop's Bridge Farley K	AGD	56	357395	6376758	Open site	Valid	Artefact : -	Open Camp Site	102231,102646
	Contact		Recorders	Len Dyall				Permits		
37-6-0125	Bishop's Bridge;Farley;M;	AGD	56	357666	6376946	Open site	Valid	Artefact : -	Open Camp Site	102231,102646
	Contact		Recorders	Len Dyall				Permits		
37-6-0126	Bishop's Bridge;Farley;J;	AGD	56	359423	6375882	Open site	Valid	Artefact : -	Open Camp Site	102231,102388,102646
	Contact		Recorders	Len Dyall				Permits		
37-6-0127	Bishop's Bridge;Farley;X;	AGD	56	358506	6376047	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102231,102388
	Contact		Recorders	Len Dyall				Permits		
37-6-0128	Bishop's Bridge Farley Y	AGD	56	358961	6376147	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102231,102388
	Contact		Recorders	Len Dyall				Permits		
37-6-0129	Bishop's Bridge;Farley;Z;	AGD	56	359234	6376244	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102231,102388,102646
	Contact		Recorders	Len Dyall				Permits		
37-6-1644	Swamp Creek Catchment 5	AGD	56	356949	6370574	Open site	Valid	Artefact : 2		100062
	Contact Searle		Recorders	Ms.Tudur Llwyd Davies				Permits	2520,2660	
37-6-1645	Swamp Creek Catchment 4	AGD	56	357603	6369908	Open site	Valid	Artefact : 1		100062
	Contact Searle		Recorders	Ms.Tudur Llwyd Davies				Permits	2520,2660	
37-6-1650	Northern Swamp Tributaries 4	AGD	56	356724	6371757	Open site	Valid	Artefact : 29		100062,102231
	Contact Searle		Recorders	Ms.Tudur Llwyd Davies				Permits	2520,2660,3151,3203	
37-6-1651	Northern Swamp Tributaries 3	AGD	56	357052	6374611	Open site	Valid	Artefact : 40		100062,102231
	Contact Searle		Recorders	Ms.Tudur Llwyd Davies				Permits	2520,2660,3151,3203	
37-6-1652	Northern Swamp Tributaries 2	AGD	56	356637	6372207	Open site	Valid	Artefact : 2		100062,102231
	Contact Searle		Recorders	Ms.Tudur Llwyd Davies				Permits	2520,2660,3151,3203	
37-6-1653	Northern Swamp Tributaries 1	AGD	56	353795	6375473	Open site	Valid	Artefact : 20		100062
	Contact Searle		Recorders	Ms.Tudur Llwyd Davies				Permits	2520,2660	

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<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
37-6-2090	Chinamans Hollow IF1	GDA	56	355094	6368443	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Doctor.Tim Owen					<u>Permits</u>		
37-6-2093	Chinamans Hollow PAD	GDA	56	355069	6368415	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Doctor.Tim Owen					<u>Permits</u>		

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Appendix H

Survey Coverage Data

Table H1: Survey Coverage Data

Transect Id	Landform unit(s) ¹	Length (m)	Survey unit area (m ²)	Visibility (%)	Exposure (%)	Effective coverage area (m ²)	Effective coverage (%)
01	2,3,8,9	1822.6	25582.7	70	30	5372.4	21
02	3,5,8,9	1188.2	16234.4	80	40	5195.0	32
03	3,8	1698.1	11957.8	80	10	956.6	8
04	2,3,8	2563.4	17865.0	70	30	3751.7	21
05	2,3,8,9	762.5	11362.1	90	40	4090.4	36
06	2,3,8,9	1129.7	7697.9	40	10	307.9	4
07	3,8	599.5	17474.3	70	30	3669.6	21
08	3,8,9	977.4	9850.7	80	40	3152.2	32
09	3,8	1740.3	1201.8	60	10	72.1	6
10	2,3,8,9	986.3	22207.7	70	20	3109.1	14
11	3,8,9	3318.3	9855.3	80	30	2365.3	24
12	3,8,9	1429.6	5132.1	90	40	1847.5	36
13	3,5,8,9	505.5	14369.4	90	40	5173.0	36
14	3,8,9	1029	16349.1	90	40	5885.7	36
15	3,8	531.6	5392.0	70	20	754.9	14
16	3,8,9	1627.6	10360.1	90	50	4662.1	45
17	3,5,8,9	2740	12822.8	90	20	2308.1	18
18	3,8,9	843.7	18680.8	90	60	10087.6	54
19	3,5,8,9	1101.3	7476.7	90	50	3364.5	45
20	3,8,9	291.3	2989.8	70	30	627.9	21
21	3,5,8	740	11084.7	80	30	2660.3	24
22	3,5,8,9	761.5	32687.5	90	40	11767.5	36
23	8	1175.3	3783.7	50	10	189.2	5
24	3,5,8,10	370.6	11828.9	90	30	3193.8	27
25	3,8,9	1619.1	7690.4	90	40	2768.5	36
26	3,5,8,9	782.3	4047.9	60	10	242.9	6
27	3,5,8	397.1	7896.2	90	40	2842.6	36
28	4,5,8	761.9	17442.4	90	30	4709.5	27
29	3,5,8	1152	7689.5	90	10	692.1	9

Transect Id	Landform unit(s) ¹	Length (m)	Survey unit area (m ²)	Visibility (%)	Exposure (%)	Effective coverage area (m ²)	Effective coverage (%)
30	3,8,9	471.3	14959.6	90	40	5385.4	36
31	3,8	372	13273.2	90	60	7167.6	54
32	4,8	1126.4	17061.7	90	10	1535.6	9
33	4,8	648.4	3797.5	90	40	1367.1	36
34	4,8	987.1	7242.4	90	30	1955.5	27
35	2,3,4,6,8	1030.1	20893.7	90	40	7521.7	36
36	2,3,4,6,8	1093	22152.2	80	30	5316.5	24
37	4,6,8	922.1	18742.3	80	30	4498.2	24
38	3,4,8	2458.9	12603.4	60	10	756.2	6
39	5,8	3503.7	2424.8	60	20	291.0	12
40	1,4,8	1424.3	8509.1	40	10	340.4	4
41	3,8	692.7	6999.3	80	70	3919.6	56
42	3,4,6,8,9	556.3	26676.5	70	10	1867.4	7
43	3,5,8,10	234.8	176439.0	90	10	15879.5	9
44	2,3,5,8,9	615.1	124684.0	70	10	8727.9	7
45	3,6,8,9	757.9	50142.2	70	10	3510.0	7
46	2,3,4,8	2495.9	15464.9	50	10	773.2	5
47	1,3,5,6,8,9,10	4494.2	226295.2	90	10	20366.6	9
48	3,4,5,8,9	799.9	88944.3	60	10	5336.7	6
49	3,8,9	2978	16305.4	70	10	1141.4	7
50	2,3,8	4729.7	44696.1	50	30	6704.4	15
51	3,7,8,9,10	2220.3	89692.8	80	10	7175.4	8

¹Landform: 1 = Creek terrace; 2 = Crest; 3 = Drainage depression; 4 = Disturbed; 5 = Elevated flat; 6 = Flood-prone flat; 7 = Residual rise; 8 = Simple slope; 9 = Spur crest; 10 = Swamp

Appendix I

AHIMS Site Cards



National Parks and Wildlife Service

Box 1967, Hurstville NSW 2220. Tel: (02) 9585 6444

Standard Site Recording Form

Revised 5/88

NPWS Code

1:250,000 map sheet: _____

AMG Grid reference 250K 250K

3	5	7	6	4	0	mE	5/6	6	3	6	9	4	5	0	mN
25K								25K							

Full reference - please include leading digits

Scale of map used for grid reference [] 25K, 50K [] 100K [] 250K
 Please use largest scale available (preferred)

1:25K, 50K, 100K map name: CESSNOCK

HEAD OFFICE USE ONLY:

NPWS Site no: 37-6-0865

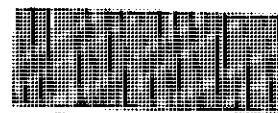
Site types:

Accessioned by: _____ Date: _____

Data entered by: _____ Date: _____

Owner/Manager:

Address:



37-6-0865

Site name: KK-1F-2 Locality/property name.

NPWS District: _____ Region: _____

Reason for investigation

UPGRADE OF KURRI KURRI SEWERAGE TREATMENT PLANT.

Portion no:

Parish:

Photos taken?
 How many attached? 1

How to get to the site (refer to permanent features, give best approach to site on _____ from _____, please give _____)
 (Draw) Kurri Kurri is located 8km east of Cessnock and approximately 280km south-west of Sydney. The Sewerage Treatment Plant is located approximately 1km due north of the town. Access is from McLeod Road.

Other sites in locality? YES Site Types include: OLS, 1F.
 Are sites in NPWS Register? YES

Have artefacts been removed from site? NO When? /NO.
 By whom? _____ Deposited where? /NO.

Is site important to local Aborigines? _____
 Give contact(s) name(s) + address(es) NO

Contacted for this recording? BARRY ANDERSON, TRACY MULLER WONGAHAM TRIBAL COUNCIL
 (Attach additional information separately) If not, why not?

Verbal/written reference sources (including _____): A Heritage Assessment for the proposed new wastewater Treatment plant at Kurri Kurri

NPWS Report Catalogue #

Checklist:
 surface visibility
 damage/disturbance/
 threat to site

Condition of site:
HIGHLY DISTURBED

Recommendations for management & protection (attach separate sheet if necessary):

Avoid. IF NOT POSSIBLE APPLICATION FOR CONSENT TO DESTROY WITHOUT FURTHER INVESTIGATION

Site recorded by: Robynne Mills
 Address/institution: 60 Warring Street
Newtown NSW 2042

Date: 10/6/99.

SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no:

1. Land form a. beach/hill slope/ridge top, etc: b. site aspect: c. slope:
 d. mark on diagram provided or on your own sketch the position of the site: e. Describe briefly:



f. Local rock type: *SHALE* g. Land use/effect: *FARMED / GRAZED / CLEARED*

2. Distance from drinking water: *1km* Source: *SWAMP CREEK*

3. Resource Zone associated with site (estuarine, riverine, forest etc): *FOREST*

4. Vegetation: *TEE TREE, SCRAM, Blackbutt*

5. Edible plants noted: *NIL*

6. Faunal resources (include shellfish): *NIL*

7. Other exploitable resources (river pebbles, ochre, etc): *NIL*

Site type:

DESCRIPTION OF SITE & CONTENTS.

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

This isolated artefact was located approximately 150m west of the main pumping station, on the north western boundary of the development site ((Map 2, Sketch 2, Photo 6). The artefact was located on the northern side of the access track to the pumping station. Visibility in the vicinity of the artefact was approximately 20%. No other artefacts or PAD areas were identified. The artefact is a quartzite hammerstone 10.2 x 8.7 x 4cm. There is an abraded area on one end and the stone fits well in the hand. There is a smooth area on one face but no evidence of the artefact having been used as an anvil.

CHECKLIST TO HELP:

length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock.

DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types.

ART area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination.

BURIALS: number & condition of bone, position, age, sex, associated artefacts.

TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth

QUARRIES: rock type, debris, recognisable artefacts, percentage quarried.

OTHER SITES EG. structures (fish traps, stone arrangements, bora rings, mia mias), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate



Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate north, show scale.

Attach annotated photos (stereo where useful) showing scale, particularly for art sites.



National Parks and Wildlife Service

Box 1967, Hurstville NSW 2220. Tel: (02) 9585 6444

Standard Site Recording Form

Revised 5/88

NPWS Code

HEAD OFFICE USE ONLY:

NPWS Site no: **37-6-0866**

Site types:

Accessioned by: _____ Date: _____

Data entered by: _____ Date: _____

Owner/Manager:

Address:

1:250,000 map sheet: _____

AMG Grid reference **358540** mE **6371140** mN
 Full reference - please include leading digits
 25K 25K 5/6 25K

Scale of map used for grid reference [] 25K, 50K [] 100K [] 250K
 Please use largest scale available (preferred)

1:25K, 50K, 100K map name: **Cessnock**

Site name: **KK-1F-1** Locality/property name: **SEWERAGE TREATMENT WORKS**

NPWS District: _____ Region: _____

Reason for investigation

UPGRADE OF TREATMENT WORKS



Portion no:

Parish:

Photos taken?
 How many attached? **IN REPORT.**

How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff)

(Draw on) **Kurri Kurri is located 8km east of Cessnock and approximately 280km south-west of Sydney. The Sewerage Treatment Plant is located approximately 1km due north of the town. Access is from McLeod Road.**

Other sites in locality? **YES** Site Types include: **OCS,**
 Are sites in NPWS Register? **YES**

Have artefacts been removed from site? **No** When? **/**
 By whom? **No** Deposited where? **/**

Is site important to local Aborigines? **No**
 Give contact(s) name(s) + address(es)

Contacted for this recording? **BARRY ANDERSON WONARUAH TRIBAL COUNCIL**
 (Attach additional information separately) If not, why not?

Verbal/written reference sources (including full title of accompanying report)

NPWS Report Catalogue #

A HERITAGE ASSESSMENT FOR THE PROPOSED WASTEWATER SEWERAGE PLANT, KURRI KURRI

Checklist:
 surface visibility
 damage/disturbance/
 threat to site

Condition of site:
HEAVILY DISTURBED

Recommendations for management & protection (attach separate sheet if necessary)

AVOID OR APPLICATION FOR CONSENT TO DESTROY

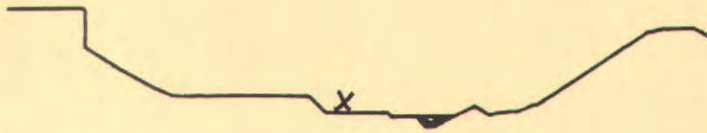
Site recorded by: **Robynne Mills**
 Address/institution: **60 Watkin Street
 Newtown NSW 2042**

Date: **10/6/99.**

SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no:

1. Land form a. beach/hill slope/ridge top, etc: b. site aspect: c. slope:
 d. mark on diagram provided or on your own sketch the position of the site: e. Describe briefly: **CREEK TERRACE**



- f. Local rock type: **SHALE** g. Land use/effect: **ELECTRICITY EASEMENT**

2. Distance from drinking water: **500m** Source: **SWAMP CREEK.**

3. Resource Zone associated with site (estuarine, riverine, forest etc): **FOREST / RIVERINE**

4. Vegetation: **OPEN FOREST**

5. Edible plants noted: **NIL**

6. Faunal resources (include shellfish): **NIL**

7. Other exploitable resources (river pebbles, ochre, etc): **NIL**

Site type:

**ISOLATED
FIND**

DESCRIPTION OF SITE & CONTENTS.

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

This isolated artefact was located on the northern boundary of the proposed development area (Map 2, Sketch 1, Photo 5). The artefact was located on an ant's nest on the edge of a cleared area approximately 5m x 8m. Visibility in the vicinity of the artefact was approximately 20%. No other artefacts or PAD areas were identified. The artefact is a yellow/red chert flake 1.8 x 1.5 x 0.4cm with 40% water worn cortex. This flake has a bulb, platform (focal) and euralia scar. 2 negative flake scars are present on the dorsal surface extending from the platform and the termination is absent.

CHECKLIST TO HELP:
 length, width, depth,
 height of site, shelter,
 deposit, structure,
 element eg. tree scar,
 grooves in rock.

DEPOSIT: colour,
 texture, estimated
 depth, stratigraphy,
 contents-shell, bone,
 stone, charcoal, density
 & distribution of these,
 stone types, artefact
 types.

ART: area of surface
 decorated, motifs,
 colours, wet, dry
 pigment, technique of
 engraving, no. of
 figures, sizes,
 patination.

BURIALS: number &
 condition of bone,
 position, age, sex,
 associated artefacts.

TREES: number, alive,
 dead, likely age, scar
 shape, position, size,
 patterns, axe marks,
 regrowth

QUARRIES: rock type,
 debris, recognisable
 artefacts, percentage
 quarried.

OTHER SITES EG.
 structures (fish traps,
 stone arrangements,
 bora rings, mia mias),
 mythological sites, rock
 holes, engraved groove
 channels, contact sites
 (missions massacres
 cemeteries) as
 appropriate



Attach sketches etc. eg. plan & section of shelter, show relation between site contents, indicate north, show scale.

Attach annotated photos (stereo where useful) showing scale, particularly for art sites.



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

New Recording Additional

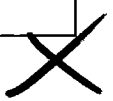
information

Site name	Swamp Creek Catchment 5		NPWS Site Number	37-6-1644	
Owner/manager					
Owner Address					
Location	approx half way across the easement from Hart Road to Bishops Bridge Road, 20m west of an area of reeds associated with a dry swamp				
How to get to the site	follow Hart Road north-east to the junction with the electricity easement, turn left (north-west) and follow the easement for c100m.				
1:250,000 map name	Cessnock		NPWS map code		
AMG Zone	56	AMG Easting	356949	AMG Northing	6370574
Method for grid reference	Hand-held GPS	Map scale (if method = map)		Map name	
NPWS District			NPWS Zone	Northern Zone	
Portion no.	N/A		Parish	Heddon	
Site type(s)	open stone artefact scatter site		Site type code (NPWS use only)		
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead. likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	<p>two artefacts, one mudstone, one silcrete, were found within 10m of each other on aeolian sands</p> <p>exposed area of sparse vegetation cover beneath the electricity cables</p> <p>the potential for subsurface deposits containing further archaeological artefacts is high</p>				

Version: June 1998

Data entered by:

Date entered:





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

	<p>Attach photographs and sketches, eg. plan & section of shelter. Do NOT dig, disturb or damage site or contents.</p>
--	--



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

Land form	flat	Aspect		Slope	
Mark position of the site					
Local rock type	?	Land use/effect	electricity easement		
Distance from drinking water	c20m	Source	swamp		
Resource zone (eg. estuarine, river, forest)	forest	Vegetation	eucalypt		
Edible plants		Faunal resources (include shellfish)			
Other exploitable resources (eg. ochre)					
Are there other sites in the locality	Yes	Are they in the Sites Register	No	Other site types include	artefact scatters
Site condition	Disturbed	disturbance and soil displacement associated with the construction of the electricity easement, including holes for the electrical poles			
Management recommendations	Monitoring under a s90 consent				
Have artefacts been removed from site	No	When			
By whom		Deposited at			
Consent applied for	<input type="checkbox"/>	Consent issued	<input type="checkbox"/>		
Date of issue		Consent number			
Reason for investigation	A survey was commissioned by Harper Somers O'Sullivan as part of an REF for a pipeline route from Seahampton to Rutherford				
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addresses	Lower Hunter Wonnarua Council Inc 19 O'Donnell Cres Metford NSW 2323 Lower Wonnarua Tribal Consultancy Pty Ltd 156 The Inlet Rd Bulga NSW 2330 Mindaribba Local Aboriginal Land Council Lot 475 Chelmsford Medford NSW 2323 PO Box 401 EAST MAITLAND NSW 2320		





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

Is the site important to local Aborigines	yes		
Verbal/written reference sources	ERM (2004) Heritage assessment for the proposed gas pipeline from Seahampton to Rutherford	ASR report number(s)	C- C-
Photographs taken	Yes	No of Photos attached	1
Site recorded by	Tudur Llwyd Davies	Date of recording	21 May, 2004
Address/institution	Environmental Resources Management Australia, Building C, 33 Saunders Street, Pyrmont, NSW 2009		



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

New Recording Additional

information

Site name	Swamp Creek Catchment 4		NPWS Site Number	37-6-1645	
Owner/manager					
Owner Address					
Location	on the easement directly to the south of Scales Road, c5m south of a first order tributary of Swamp Creek				
How to get to the site	follow Hart Road north-east to Scales road, turn right (south-east) into Scales road and proceed c400m				
1:250,000 map name	Cessnock	NPWS map code			
AMG Zone	56	AMG Easting	357603	AMG Northing	6369908
Method for grid reference	Hand-held GPS	Map scale (if method = map)		Map name	
NPWS District			NPWS Zone	Northern Zone	
Portion no.	N/A		Parish	Heddon	
Site type(s)	isolated stone artefact site		Site type code (NPWS use only)		
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	<p>one blade core found 5m south of the tributary of Swamp Creek</p> <p>visibility low over most of site, with c4x15m area clear of vegetation and heavily disturbed.</p> <p>the potential for subsurface deposits containing further archaeological artefacts is moderate</p>				

Version: June 1998

Data entered by:

Date entered:

X



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

Attach photographs and sketches, eg. plan & section of shelter.
Do NOT dig, disturb or damage site or contents.



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

Land form	within open depression associated with creek		Aspect		Slope	
Mark position of the site						
Local rock type	?		Land use/effect	vehicle track, electricity easement		
Distance from drinking water	c5m		Source	1st order tributary of Swamp Creek		
Resource zone (eg. estuarine, river, forest)	forest		Vegetation	eucalypt		
Edible plants			Faunal resources (include shellfish)			
Other exploitable resources (eg. ochre)						
Are there other sites in the locality	Yes	Are they in the Sites Register	No	Other site types include	artefact scatters	
Site condition	Disturbed		disturbance and soil displacement associated with heavy vehicle use, and the construction, including post hole excavation, of a fence line and the electricity easement			
Management recommendations	Monitoring under a s90 consent					
Have artefacts been removed from site	No		When			
By whom			Deposited at			
Consent applied for	<input type="checkbox"/>		Consent issued	<input type="checkbox"/>		
Date of issue			Consent number			
Reason for investigation	A survey was commissioned by Harper Somers O'Sullivan as part of an REF for a pipeline route from Seahampton to Rutherford					
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present		Names and addresses	Lower Hunter Wonnarua Council Inc 19 O'Donnell Cres Metford NSW 2323 Lower Wonnarua Tribal Consultancy Pty Ltd 156 The Inlet Rd Bulga NSW 2330 Mindaribba Local Aboriginal Land Council Lot 475 Chelmsford Medford NSW 2323 PO Box 401 EAST MAITLAND NSW 2320		

Version: June 1998

Data entered by:

Date entered:





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

Is the site important to local Aborigines	yes		
Verbal/written reference sources	ERM (2004) Heritage assessment for the proposed gas pipeline from Seahampton to Rutherford	ASR report number(s)	C- C-
Photographs taken	Yes	No of Photos attached	2
Site recorded by	Tudur Llwyd Davies	Date of recording	20 May, 2004
Address/institution	Environmental Resources Management Australia, Building C, 33 Saunders Street, Pyrmont, NSW 2009		



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220
Standard Site Recording Form

New Recording Additional

information

Site name	Northern Swamp Tributaries 4	NPWS Site Number	37-6-1650
Owner/manager			
Owner Address			
Location	west of an unnamed track running south from Wollombi Road in Bishops Bridge		
How to get to the site	travel c.185m down unnamed track which begins c.185 m west of the bridge over Bishops Creek on Wollombi Road, c.500 m south-west of its junction with Ravensfield Road		
1:250,000 map name	Greta <i>Cassnock</i>	NPWS map code	
AMG Zone	56	AMG Easting	356724
		AMG Northing	6371757
Method for grid reference	Hand-held GPS	Map scale (if method = map)	Map name
NPWS District		NPWS Zone	Northern Zone
Portion no.	N/A	Parish	Gosforth
Site type(s)	open stone artefact scatter site	Site type code (NPWS use only)	
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	artefacts found eroding from a bulldozed section of a bank composed of aeolian sands. Total of twenty-nine artefacts were found - one blade, one retouched flake and twenty seven flakes. exposure - 30m bulldozed section of bank and either side of track which runs through the bank. Vegetation cover obscures view outside these areas the potential for subsurface deposits containing further archaeological artefacts is high		

Version: June 1998

Data entered by:

Date entered:

X



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220
Standard Site Recording Form

Land form	southern bank of an open depression associated with the creek	Aspect		Slope	
Mark position of the site					
Local rock type	?	Land use/effect	vehicle track		
Distance from drinking water	c40m	Source	tributary of Bishops Creek		
Resource zone (eg. estuarine, river, forest)	forest	Vegetation	eucalypt		
Edible plants		Faunal resources (include shellfish)			
Other exploitable resources (eg. ochre)					
Are there other sites in the locality	Yes	Are they in the Sites Register	No	Other site types include	artefact scatters
Site condition	Very disturbed	site is heavily disturbed as a bulldozed section transects the site. Other disturbance is associated with vehicle use through the bulldozed cutting			
Management recommendations	Monitoring under an s90 consent				
Have artefacts been removed from site	No		When		
By whom			Deposited at		
Consent applied for	<input type="checkbox"/>		Consent issued	<input type="checkbox"/>	
Date of issue			Consent number		
Reason for investigation	A survey was commissioned by Harper Somers O'Sullivan as part of an REF for a pipeline route from Seahampton to Rutherford				
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addresses	Lower Hunter Wonnarua Council Inc 19 O'Donnell Cres Mefford NSW 2323 Lower Wonnarua Tribal Consultancy Pty Ltd 156 The Inlet Rd Bulga NSW 2330 Mindaribba Local Aboriginal Land Council Lot 475 Chelmsford Medford NSW 2323 PO Box 401 EAST MAITLAND		

Version: June 1998

Data entered by:

Date entered:





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

			NSW 2320
is the site important to local Aborigines	yes		
Verbal/written reference sources	ERM (2004) Heritage assessment for the proposed gas pipeline from Seahampton to Rutherford	ASR report number(s)	C- C-
Photographs taken	Yes	No of Photos attached	2
Site recorded by	Tudur Llwyd Davies	Date of recording	21 May, 2004
Address/institution	Environmental Resources Management Australia, Building C, 33 Saunders Street, Pyrmont, NSW 2009		



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220
Standard Site Recording Form

New Recording Additional

information

SITE IDENTIFICATION				
Site name	37-6-1650		NPWS Site Number	
Owner/manager	Crown land			
Owner Address	Crown land			
LOCATION				
Location	Junction of Black Waterholes Creek and Bishops Bridge road			
How to get to the site	Head north from Weston, Hunter Valley, NSW to Bishops Bridge Road, site is located at the junction of Black Waterholes Creek and Bishops Bridge road.			
1:250,000 map name			NPWS map code	
GDA Zone	56	GDA Easting	See below	GDA Northing
Method for grid reference	Hand-held GPS	Map scale (if method = map)	1:25,000	Map name
NPWS District			NPWS Zone	Coffs Harbour
Portion no.			Parish	
SITE DESCRIPTION				
Site type(s)			Site type code (NPWS use only)	
<p>Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried</p>	<p>As observed in recent survey site extends from E356828,6371934N to E356810, N6372132, GDA94 Zone 56</p> <p>This site is located north of Black Waterholes Creek. Terrain ranges from flat to gentle slopes (near the watercourses). Artefacts were observed eroding from the road cutting, particularly on the western edge of the easement, as well as a substantial scatter of artefacts across the access track.</p> <p>Fifty-two artefacts were identified and were produced primarily from silcrete, although silicified tuff and chert were also present. Yellow silcrete artefacts were most common, closely followed by red silcrete. Approximately, 78 percent of artefacts at the site were flakes, of which 75 percent were less than 30mm in length. The mean length of complete flakes was 27.3mm, 19.4mm for width and 9mm for thickness.</p> <p>Other artefact types identified included cores, core fragments and broken flakes, but were present in small quantities. All artefacts identified were associated with stone tool manufacture and not tools were identified.</p>			

Version: June 1998

Data entered by:

Date entered:



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220
Standard Site Recording Form

SITE ENVIRONMENT					
Land form	Simple slope	Aspect	south	Slope	5
Mark position of the site					
Local rock type	Mudstone, sandstone, shale	Land use/effect	Electricity easement		
Distance from drinking water	235m	Source	Black Waterholes ck		
Resource zone (eg. estuarine, river, forest)	Inland	Vegetation	Kurri Sand Swamp Woodland		
Edible plants	None observed	Faunal resources (include shellfish)	None observed		
Other exploitable resources (eg. ochre)	None observed				
Are there other sites in the locality	yes	Are they in the Sites Register	Yes	Other site types include	Artefact Scatters
SITE MANAGEMENT					
Site condition	Good, but very disturbed in track				
Management recommendations					
Have artefacts been removed from site	No	When			
By whom		Deposited at			
Consent applied for	<input type="checkbox"/>	Consent issued			
Date of issue		Consent number			
SITE INSPECTION AND RECORDING					
Reason for investigation					
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addresses	Mindaribba Local Aboriginal Land Council, PO Box 401, EAST MAITLAND NSW 2323; Barkuma Neighbourhood Centre/ Gidawaa Walang, 76 Lang Street, KURRI KURRI NSW 2327; Aboriginal Native Title Consultants, 16A Mahogany Ave, MUSWELLBROOK NSW 2333; Hunter Valley Aboriginal Corporation, PO BOX 579, MUSWELLBROOK NSW 2333; Wonnarua Culture Heritage, 19 O'Donnell Crescent, METFORD 2322		
Is the site important to local Aborigines	Although this site is important for demonstrating Aboriginal occupation of the area, it does not have specific cultural significance to the Aboriginal community				
Verbal/written reference sources	AMBS (2009) <i>Kurri Kurri Aboriginal Heritage Assessment for the 33kV Kurri-Rutherford Feeder Split</i> , report to EnergyAustralia		ASR report number(s)	C- C-	
Photographs taken	Yes		No of Photos attached		
Site recorded by	Christopher Langeluddecke & Tessa Boer-Mah		Date of recording	Feb 2009	
Address/institution					

Version: June 1998

Data entered by:

Date entered:

Table Proportion of Stone Raw Materials at AHIMS#37-6-1650

Artefact Type	Count	Percent
Silcrete	42	80.2
Silicified Tuff	5	9.6
Chert	5	9.6
Total	52	

Table Silcrete Colour

Colour	Count	Percent
Yellow	22	52.4
Red	18	42.9
Orange	1	2.4
White	1	2.4
Total	52	

Table Types of Artefacts at AHIMS#37-6-1650

Artefact Type	Count	Percent	Association
Flake	40	76.9	Stone Tool Manufacture 100%
Core Fragment	5	9.6	
Broken Flake	5	9.6	
Core	2	3.8	
Total			

Table Size distribution of complete flakes at AHIMS#37-6-1650

Size Range in mm	Count	Percent
10-19	8	20.0
20-29	22	55.0
30-39	4	10.0
40-49	4	10.0
50-59	1	2.5
60-69	1	2.5
10-19	8	20.0
20-29	22	55.0
Total	67	

Table Length, Width and Thickness of complete flakes from AHIMS#37-6-1650

	Minimum	Maximum	Mean	Standard Deviation
Length	10.0	68.0	27.3	11.6
Width	7.0	31.0	19.4	6.7
Thickness	3.0	34.0	9.0	5.7



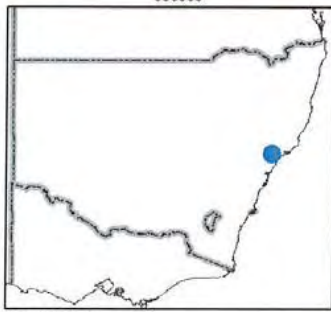
Figure AHIMS Site #37-6-1650, view to west. Artefacts present along eroded section adjacent to the track.



Figure AHIMS#37-6-1650, view to north



Figure Artefacts from AHIMS#37-6-1650



Key Map 1



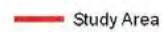
Key Map 2

Legend Main Map



Site

Key Map 2 Legend



Study Area



Background Topographic data © Land and Property Information NSW (2001) Cessnock 9132-2N 1:25000 Topographic and Orthophoto Map, 2nd Edition
Horizontal datum: GDA94/MGA Zone 56





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220
Standard Site Recording Form

New Recording Additional

information

Site name	Northern Swamp Tributaries 2		NPWS Site Number	37-6-1652	
Owner/manager					
Owner Address					
Location	on Bishops Bridge Road, 50m south of a 1st order tributary of Black Waterholes Creek				
How to get to the site	From Hart Road (north of Kurri Kurri), travel c2.75km north along Bishops Bridge Road				
1:250,000 map name	Cessnock	NPWS map code			
AMG Zone	56	AMG Easting	356637	AMG Northing	6372207
Method for grid reference	Hand-held GPS	Map scale (if method = map)		Map name	
NPWS District		NPWS Zone	Northern Zone		
Portion no.	N/A	Parish	Heddon		
Site type(s)	open stone artefact scatter site	Site type code (NPWS use only)			
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	<p>Two silcrete flakes found in an area of sparse vegetation on flat ground overlooking a first order tributary of Black Waterholes Creek</p> <p>Exposure - c. 7x2 m area of sparse vegetation directly to the west of the vehicle track</p> <p>The potential for subsurface deposits containing further archaeological artefacts is high</p>				

Version: June 1998

Data entered by:

Date entered:





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

Land form	crest flat	Aspect		Slope	
Mark position of the site					
Local rock type	?	Land use/effect	vehicle track/electricity easement		
Distance from drinking water	c.50 m	Source	1st order tributary of Black Waterholes Creek		
Resource zone (eg. estuarine, river, forest)	forest	Vegetation	eucalypt		
Edible plants		Faunal resources (include shellfish)			
Other exploitable resources (eg. ochre)					
Are there other sites in the locality	Yes	Are they in the Sites Register	No	Other site types include	artefact scatters
Site condition	Disturbed	disturbance associated with the construction of the electricity easement, including post hole excavation and vehicle use			
Management recommendations	monitoring under an s90 consent				
Have artefacts been removed from site	No	When			
By whom		Deposited at			
Consent applied for	<input type="checkbox"/>	Consent issued	<input type="checkbox"/>		
Date of issue		Consent number			
Reason for investigation	A survey was commissioned by Harper Somers O'Sullivan as part of an REF for a pipeline route from Seahampton to Rutherford				
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addresses	Lower Hunter Wonnarua Council Inc 19 O'Donnell Cres Metford NSW 2323 Lower Wonnarua Tribal Consultancy Pty Ltd 156 The Inlet Rd Bulga NSW 2330 Mindaribba Local Aboriginal Land Council Lot 475 Chelmsford Medford NSW 2323 PO Box 401 EAST MAITLAND NSW 2320		

Version: June 1998

Data entered by:

Date entered:





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

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Is the site important to local Aborigines	yes		
Verbal/written reference sources	ERM (2004) Heritage assessment for the proposed gas pipeline from Seahampton to Rutherford	ASR report number(s)	C- C-
Photographs taken	Yes	No of Photos attached	1
Site recorded by	Tudur Llwyd Davies	Date of recording	20 May, 2004
Address/institution	Environmental Resources Management Australia, Building C, 33 Saunders Street, Pyrmont, NSW 2009		

Version: June 1998

Data entered by:

Date entered:



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

New Recording

Additional

information

SITE IDENTIFICATION																																	
Site name	37-6-1652		NPWS Site Number																														
Owner/manager	Crown land																																
Owner Address	Crown land																																
LOCATION																																	
Location	300m north of the junction of Black Waterholes Creek and Bishops Bridge road																																
How to get to the site	Head north from Weston, Hunter Valley, NSW to Bishops Bridge Road, site is located 300 m north of the junction of Black Waterholes Creek and Bishops Bridge road.																																
1:250,000 map name			NPWS map code																														
GDA Zone	56	GDA Easting	See below																														
		GDA Northing																															
Method for grid reference	Hand-held GPS	Map scale (if method = map)	1:25,000																														
		Map name																															
NPWS District			NPWS Zone																														
			Coffs Harbour																														
Portion no.			Parish																														
SITE DESCRIPTION																																	
Site type(s)			Site type code (NPWS use only)																														
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	<p>As observed in recent survey site extends from E356790,N6372217 to E355695, N6372616, GDA 94 Zone 56</p> <p>This site was previously recorded by ERM (2004) north of an unnamed tributary of Black Waterhole's Creek.</p> <p>Twelve artefacts were identified made from silcrete, silicified tuff and indurated mudstone. The exposed ground surface comprised sandy silt with small ironstone gravels (>5mm).</p> <p>Proportion of Stone Raw Materials at AHIMS# 37-6-1652</p> <table border="1"> <thead> <tr> <th>Artefact Type</th> <th>Count</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Silcrete</td> <td>8</td> <td>66.7</td> </tr> <tr> <td>Silicified Tuff</td> <td>3</td> <td>25.0</td> </tr> <tr> <td>Indurated Mudstone</td> <td>1</td> <td>8.3</td> </tr> <tr> <td>Total</td> <td>12</td> <td></td> </tr> </tbody> </table> <p>Types of Artefacts at AHIMS# 37-6-1652</p> <table border="1"> <thead> <tr> <th>Artefact Type</th> <th>Count</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Flake</td> <td>8</td> <td>66.7</td> </tr> <tr> <td>Flake-Core</td> <td>3</td> <td>25.0</td> </tr> <tr> <td>Graver</td> <td>1</td> <td>8.3</td> </tr> <tr> <td>Total</td> <td>12</td> <td></td> </tr> </tbody> </table> <p>Reference: ERM (2004) <i>Heritage Assessment for the Proposed Gas Pipeline from Seahampton to</i></p>			Artefact Type	Count	Percent	Silcrete	8	66.7	Silicified Tuff	3	25.0	Indurated Mudstone	1	8.3	Total	12		Artefact Type	Count	Percent	Flake	8	66.7	Flake-Core	3	25.0	Graver	1	8.3	Total	12	
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Total	12																																

Version: June 1998

Data entered by:

Date entered:



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

SITE ENVIRONMENT					
Land form	Simple slope	Aspect	south	Slope	5
Mark position of the site					
Local rock type	Mudstone, sandstone, shale	Land use/effect	Electricity easement		
Distance from drinking water	235m	Source	Black Waterholes ck		
Resource zone (eg. estuarine, river, forest)	Inland	Vegetation	Kurri Sand Swamp Woodland		
Edible plants	None observed	Faunal resources (include shellfish)	None observed		
Other exploitable resources (eg. ochre)	None observed				
Are there other sites in the locality	yes	Are they in the Sites Register	Yes	Other site types include	Artefact Scatters
SITE MANAGEMENT					
Site condition	Good, but very disturbed in track				
Management recommendations					
Have artefacts been removed from site	No	When			
By whom		Deposited at			
Consent applied for	<input type="checkbox"/>	Consent issued			
Date of issue		Consent number			
SITE INSPECTION AND RECORDING					
Reason for investigation					
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addresses	Mindaribba Local Aboriginal Land Council, PO Box 401, EAST MAITLAND NSW 2323; Barkuma Neighbourhood Centre/ Gidawaa Walang, 76 Lang Street, KURRI KURRI NSW 2327; Aboriginal Native Title Consultants, 16A Mahogany Ave, MUSWELLBROOK NSW 2333; Hunter Valley Aboriginal Corporation, PO BOX 579, MUSWELLBROOK NSW 2333; Wonnarua Culture Heritage, 19 O'Donnell Crescent, METFORD 2322		
Is the site important to local Aborigines	Although this site is important for demonstrating Aboriginal occupation of the area, it does not have specific cultural significance to the Aboriginal community				
Verbal/written reference sources	AMBS (2009) <i>Kurri Kurri Aboriginal Heritage Assessment for the 33kV Kurri-Rutherford Feeder Split</i> , report to EnergyAustralia		ASR report number(s)	C- C-	
Photographs taken	Yes		No of Photos attached		
Site recorded by	Christopher Langeluddecke & Tessa Boer-Mah		Date of recording	Feb 2009	
Address/institution					

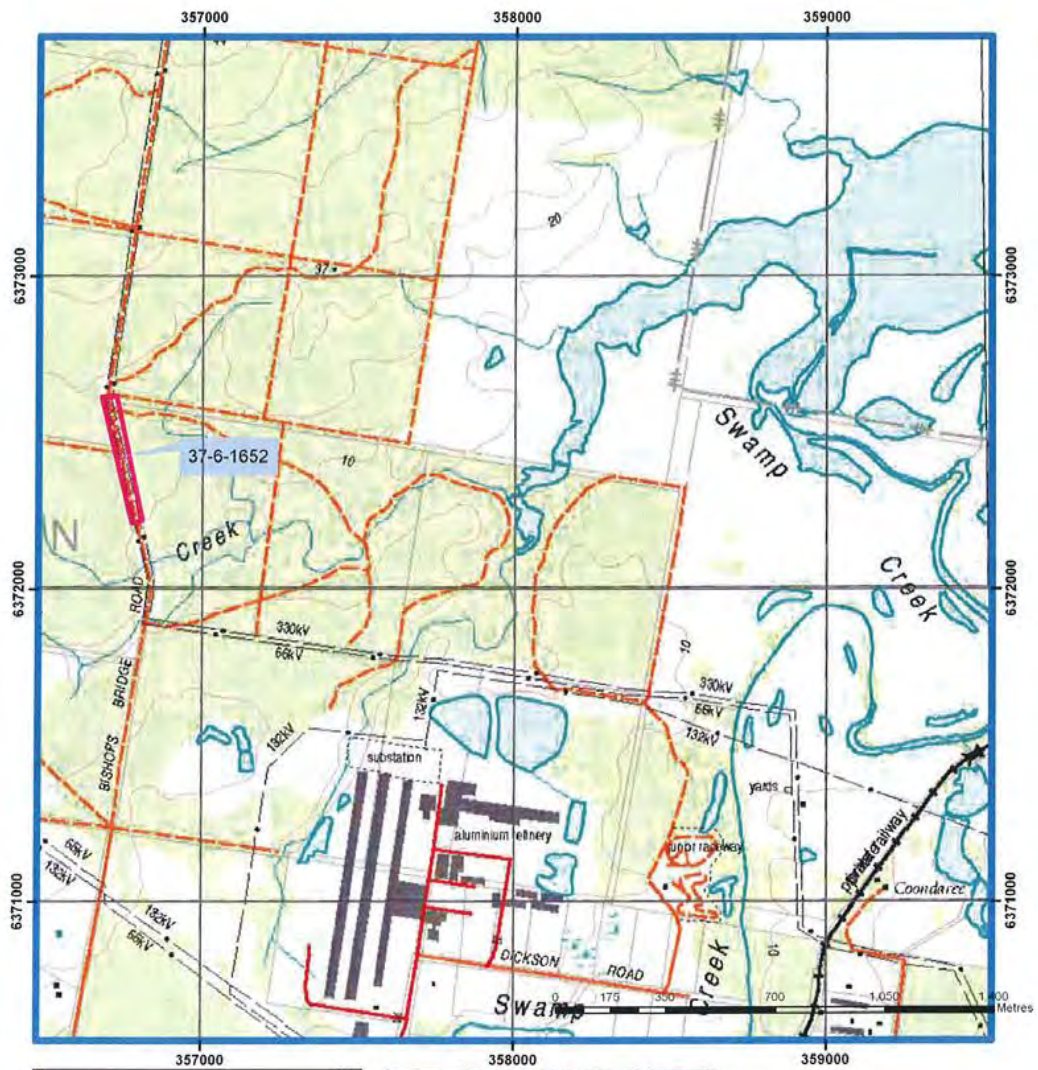
Version: June 1998

Data entered by:

Date entered:



View north of AHIMS# 37-6-1652, artefacts marked with orange flags.




Key Map 1




Key Map 2

Legend Main Map

 Site Recording by AMBS

Key Map 2 Legend

 Study Area



Background Topographic data © Land and Property Information NSW (2001) Cessnock 9132-2N 1:25000 Topographic and Orthophoto Map, 2nd Edition
Horizontal datum: GDA94/MGA Zone 56





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220
Standard Site Recording Form

New Recording Additional

information

SITE IDENTIFICATION																					
Site name	KK05		NPWS Site Number 37-6-1954																		
Owner/manager	Hydro Aluminium																				
Owner Address	Hydro Aluminium Buffer Manager: Kerry McNaughton, Hart Rd., Loxford, NSW 2326, Australia																				
LOCATION																					
Location	2.5km North north west of Kurri Sub-Transmission Station																				
How to get to the site	Take Main road north from Kurri Kurri towards Heddon Greta, turn left to Kurri Sub-Transmission Station (at junction of Main Road, Stanford Road and Lang St), site is 2.5km north north west of sub-transmission station.																				
1:250,000 map name	Cessnock	NPWS map code																			
GDA Zone	56	GDA Easting 358577	GDA Northing 6371627																		
Method for grid reference	Hand-held GPS	Map scale (if method = map)	Map name																		
NPWS District			NPWS Zone Coffs Harbour																		
Portion no.	Lot 317 DP755231		Parish																		
SITE DESCRIPTION																					
Site type(s)	Artefact Scatter		Site type code (NPWS use only)																		
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	Artefacts were identified west of Swamp Creek, in the vicinity of the existing electricity poles. Artefacts were located within the vehicle track on slight slope with a gradual gradient.																				
	Seventeen artefacts were identified at KK05, the majority of which were made from silcrete, although silicified tuff, chert and quartzite artefacts were also present. Artefact types identified were flakes and complete flakes.																				
Table Proportion of Stone Raw Materials at KK05																					
<table border="1"> <thead> <tr> <th>Artefact Type</th> <th>Count</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Silcrete</td> <td>13</td> <td>76.5</td> </tr> <tr> <td>Silicified Tuff</td> <td>2</td> <td>11.8</td> </tr> <tr> <td>Chert</td> <td>1</td> <td>5.9</td> </tr> <tr> <td>Quartzite</td> <td>1</td> <td>5.9</td> </tr> <tr> <td>Total</td> <td>17</td> <td></td> </tr> </tbody> </table>				Artefact Type	Count	Percent	Silcrete	13	76.5	Silicified Tuff	2	11.8	Chert	1	5.9	Quartzite	1	5.9	Total	17	
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Table Types of Artefacts at KK05																					
<table border="1"> <thead> <tr> <th>Artefact Type</th> <th>Count</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Flake</td> <td>13</td> <td>76.5%</td> </tr> <tr> <td>Broken Flake</td> <td>4</td> <td>23.5%</td> </tr> <tr> <td>Total</td> <td>17</td> <td></td> </tr> </tbody> </table>				Artefact Type	Count	Percent	Flake	13	76.5%	Broken Flake	4	23.5%	Total	17							
Artefact Type	Count	Percent																			
Flake	13	76.5%																			
Broken Flake	4	23.5%																			
Total	17																				

Version: June 1998

Data entered by:

Date entered:



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

SITE ENVIRONMENT					
Land form	Simple slope	Aspect	east	Slope	10
Mark position of the site					
Local rock type	Mudstone, sandstone, shale	Land use/effect	Electricity easement		
Distance from drinking water	50-400m	Source	Swamp ck		
Resource zone (eg. estuarine, river, forest)	Inland	Vegetation	Kurri Sand Swamp Woodland		
Edible plants	None observed	Faunal resources (include shellfish)	None observed		
Other exploitable resources (eg. ochre)	None observed				
Are there other sites in the locality	yes	Are they in the Sites Register	yes	Other site types include	Artefact scatters
SITE MANAGEMENT					
Site condition	Generally good				
Management recommendations					
Have artefacts been removed from site	No		When		
By whom			Deposited at		
Consent applied for	<input type="checkbox"/>		Consent issued		
Date of issue			Consent number		
SITE INSPECTION AND RECORDING					
Reason for investigation	Proposed works to electricity easement				
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addresses	Mindaribba Local Aboriginal Land Council, PO Box 401, EAST MAITLAND NSW 2323; Barkuma Neighbourhood Centre/ Gidawaa Walang, 76 Lang Street, KURRI KURRI NSW 2327; Aboriginal Native Title Consultants, 16A Mahogany Ave, MUSWELLBROOK NSW 2333; Hunter Valley Aboriginal Corporation, PO BOX 579, MUSWELLBROOK NSW 2333; Wommarua Culture Heritage, 19 O'Donnell Crescent, METFORD 2322		
Is the site important to local Aborigines	Although this site is important for demonstrating Aboriginal occupation of the area, it does not have specific cultural significance to the Aboriginal community				
Verbal/written reference sources	AMBS (2009) <i>Kurri Kurri Aboriginal Heritage Assessment for the 33kV Kurri-Rutherford Feeder Split</i> , report to EnergyAustralia		ASR report number(s)	C- C-	
Photographs taken	Yes		No of Photos attached		
Site recorded by	Christopher Langeluddecke & Tessa Boer-Mah		Date of recording	Feb 2009	
Address/institution	AMBS 6 College Street, Sydney, NSW 2010				

Version: June 1998

Data entered by:

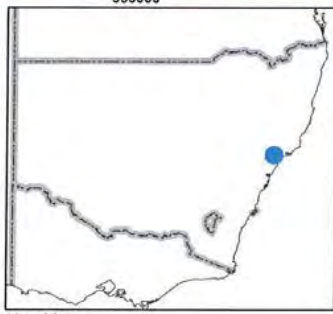
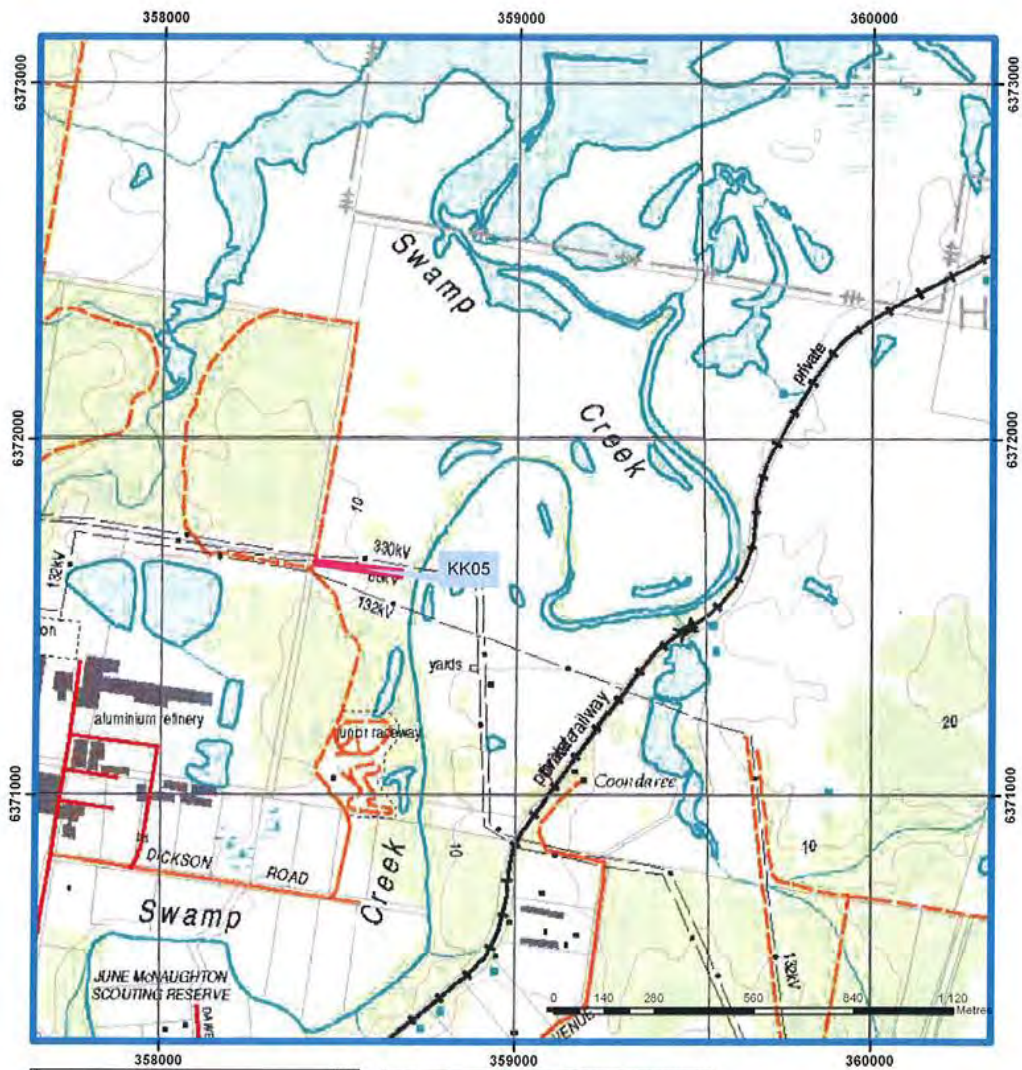
Date entered:



View west at KK05 towards Swamp Creek, artefact to the right of the 0.5m scale in the foreground



Silcrete flake, overshoot termination KK05#02 ventral view/side view



Key Map 1



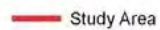
Key Map 2

Legend Main Map



Site

Key Map 2 Legend



Study Area



Background Topographic data © Land and Property Information NSW (2001) Cessnock 9132-2N 1:25000 Topographic and Orthophoto Map, 2nd Edition
Horizontal datum: GDA94/MGA Zone 56





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

New Recording Additional

information

SITE IDENTIFICATION

Site name	KK10		NPWS Site Number	37-6-1958
Owner/manager	Hydro Aluminium			
Owner Address	Hydro Aluminium Buffer Manager: Kerry McNaughton, Hart Rd., Loxford, NSW 2326, Australia			

LOCATION

Location	3.3km north west of Kurri Sub-Transmission Station				
How to get to the site	Take Main road north from Kurri Kurri towards Heddon Greta, turn left to Kurri Sub-Transmission Station (at junction of Main Road, Stanford Road and Lang St), site is 3.3 km north west of sub-transmission station.				
1:250,000 map name	Cessnock		NPWS map code		
GDA Zone	56	GDA Easting	357407	GDA Northing	6371800
Method for grid reference	Hand-held GPS	Map scale (if method = map)		Map name	
NPWS District			NPWS Zone	Coffs Harbour	
Portion no.			Parish		

SITE DESCRIPTION

Site type(s)	Isolated Find	Site type code (NPWS use only)																																											
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	<p>This scatter is located on a crest between two unnamed tributaries of Swamp Creek. Six artefacts were identified including three flakes were identified along with two broken flakes. One flake core was identified which is likely related to the Redbank reduction strategy (Hiscock 1993).</p> <p>KK10 artefact details, dimensions in millimetres</p> <table border="1"> <thead> <tr> <th>Artefact Type</th> <th>Raw material</th> <th>Colour</th> <th>Max. Length</th> <th>Max. Width</th> <th>Max. Thickness</th> </tr> </thead> <tbody> <tr> <td>Flake</td> <td>Silcrete</td> <td>Orange</td> <td>43</td> <td>50</td> <td>12</td> </tr> <tr> <td>Flake</td> <td>Silicified Tuff</td> <td>Cream</td> <td>19</td> <td>17</td> <td>6</td> </tr> <tr> <td>Flake</td> <td>Silcrete</td> <td>Red</td> <td>41</td> <td>19</td> <td>10</td> </tr> <tr> <td>Flake-Core</td> <td>Indurated Mudstone</td> <td>Orange</td> <td>33</td> <td>38</td> <td>55</td> </tr> <tr> <td>Broken Flake</td> <td>Silcrete</td> <td>Red</td> <td>17</td> <td>18</td> <td>6</td> </tr> <tr> <td>Broken Flake</td> <td>Silicified Tuff</td> <td>Cream</td> <td>12</td> <td>12</td> <td>3</td> </tr> </tbody> </table> <p>Hiscock, P (1993) "Bondaian technology in the Hunter Valley, New South Wales". <i>Archaeology in Oceania</i> 28(2): 64-75.</p>			Artefact Type	Raw material	Colour	Max. Length	Max. Width	Max. Thickness	Flake	Silcrete	Orange	43	50	12	Flake	Silicified Tuff	Cream	19	17	6	Flake	Silcrete	Red	41	19	10	Flake-Core	Indurated Mudstone	Orange	33	38	55	Broken Flake	Silcrete	Red	17	18	6	Broken Flake	Silicified Tuff	Cream	12	12	3
	Artefact Type	Raw material	Colour	Max. Length	Max. Width	Max. Thickness																																							
Flake	Silcrete	Orange	43	50	12																																								
Flake	Silicified Tuff	Cream	19	17	6																																								
Flake	Silcrete	Red	41	19	10																																								
Flake-Core	Indurated Mudstone	Orange	33	38	55																																								
Broken Flake	Silcrete	Red	17	18	6																																								
Broken Flake	Silicified Tuff	Cream	12	12	3																																								



Aboriginal Sites Register of NSW

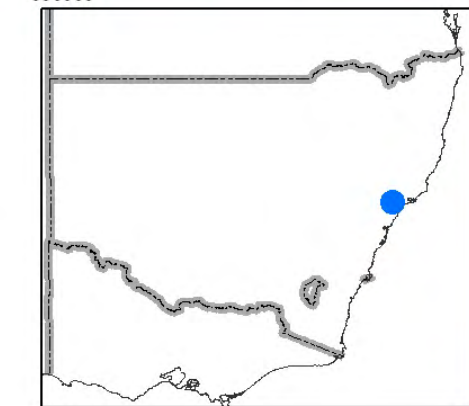
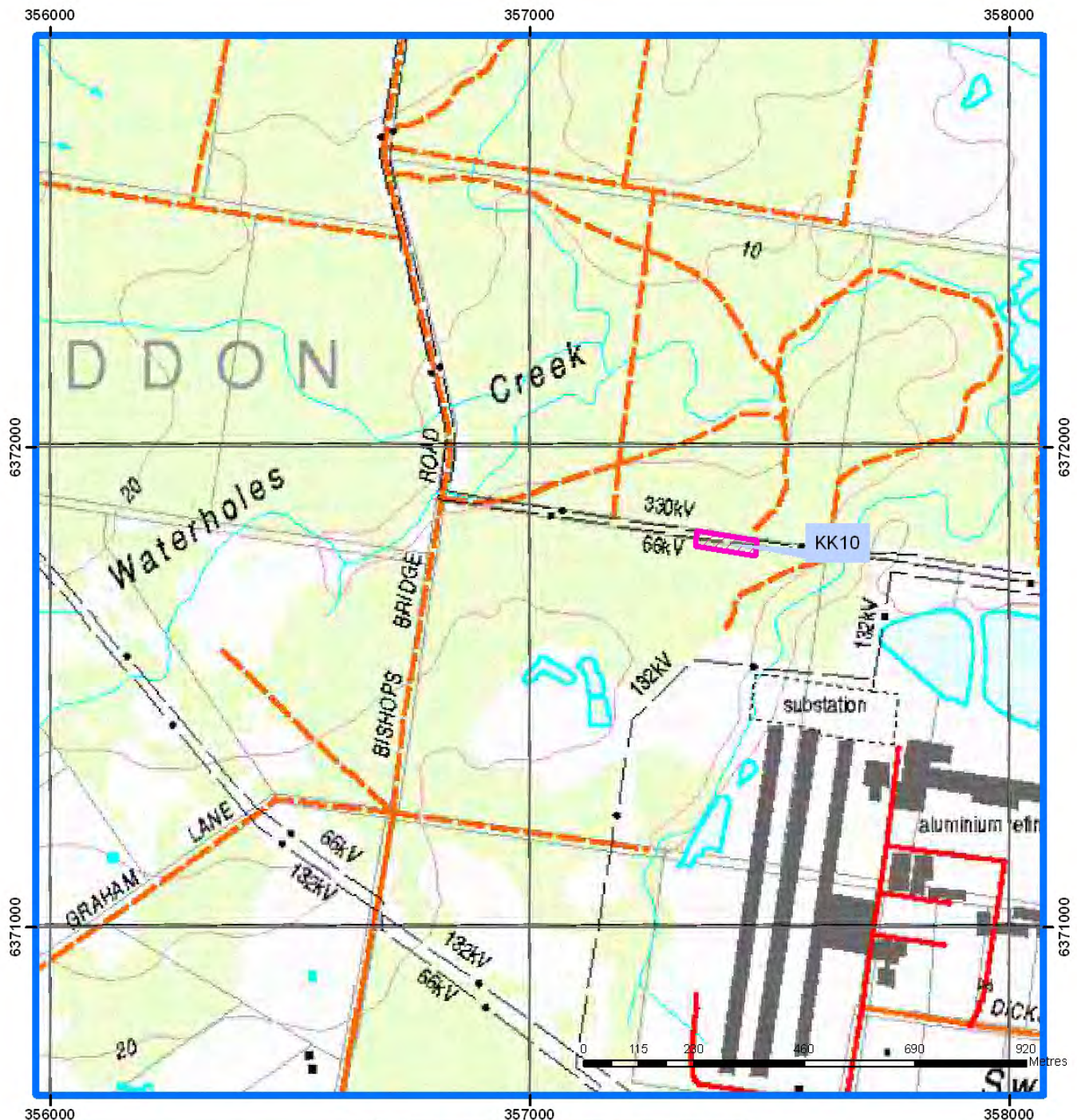
NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

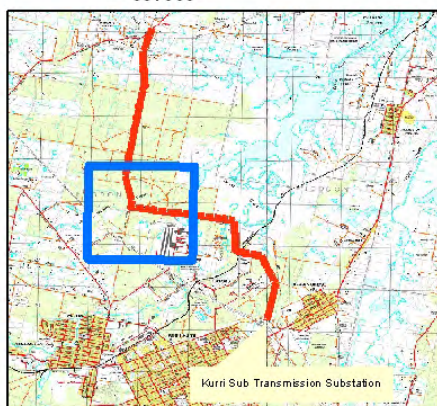
SITE ENVIRONMENT						
Land form	crest		Aspect	0	Slope	0
Mark position of the site						
Local rock type	Mudstone, sandstone, shale		Land use/effect	Electricity easement		
Distance from drinking water	190m		Source	Tributary of Black Waterholes ck		
Resource zone (eg. estuarine, river, forest)	Inland		Vegetation	Kurri Sand Swamp Woodland		
Edible plants	None observed		Faunal resources (include shellfish)	None observed		
Other exploitable resources (eg. ochre)	None observed					
Are there other sites in the locality	yes	Are they in the Sites Register	yes	Other site types include	Artefact scatters	
SITE MANAGEMENT						
Site condition	Good					
Management recommendations						
Have artefacts been removed from site	No		When			
By whom			Deposited at			
Consent applied for	<input type="checkbox"/>		Consent issued			
Date of issue			Consent number			
SITE INSPECTION AND RECORDING						
Reason for investigation	Proposed works to electricity easement					
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addresses	Mindaribba Local Aboriginal Land Council, PO Box 401, EAST MAITLAND NSW 2323; Barkuma Neighbourhood Centre/ Gidawaa Walang, 76 Lang Street, KURRI KURRI NSW 2327; Aboriginal Native Title Consultants, 16A Mahogany Ave, MUSWELLBROOK NSW 2333; Hunter Valley Aboriginal Corporation, PO BOX 579, MUSWELLBROOK NSW 2333; Wonnarua Culture Heritage, 19 O'Donnell Cresent, METFORD 2322			
Is the site important to local Aborigines	Although this site is important for demonstrating Aboriginal occupation of the area, it does not have specific cultural significance to the Aboriginal community					
Verbal/written reference sources	AMBS (2009) <i>Kurri Kurri Aboriginal Heritage Assessment for the 33kV Kurri-Rutherford Feeder Split</i> , report to EnergyAustralia		ASR report number(s)	C- C-		
Photographs taken	Yes		No of Photos attached			
Site recorded by	Christopher Langeluddecke & Tessa Boer-Mah		Date of recording	Feb 2009		
Address/institution	AMBS 6 College Street, Sydney, NSW 2010					



View to west, KK10



Key Map 1




Key Map 2

Legend Main Map

 Site

Key Map 2 Legend

 Study Area



Background Topographic data © Land and Property Information NSW (2001) Cessnock 9132-2N 1:25000 Topographic and Orthophoto Map, 2nd Edition
 Horizontal datum: GDA94/MGA Zone 56





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

New Recording Additional

information

SITE IDENTIFICATION

Site name	KK11	NPWS Site Number	37-6-1959
Owner/manager	Hydro Aluminium		
Owner Address	Hydro Aluminium Buffer Manager: Kerry McNaughton, Hart Rd., Loxford, NSW 2326, Australia		

LOCATION

Location	3.5km north west of Kurri Sub-Transmission Station		
How to get to the site	Take Main road north from Kurri Kurri towards Heddon Greta, turn left to Kurri Sub-Transmission Station (at junction of Main Road, Stanford Road and Lang St), site is 3.5 km north west of sub-transmission station.		
1:250,000 map name	Cessnock	NPWS map code	
GDA Zone	56	GDA Easting	357079
		GDA Northing	6371849
Method for grid reference	Hand-held GPS	Map scale (if method = map)	Map name
NPWS District		NPWS Zone	Coffs Harbour
Portion no.		Parish	

SITE DESCRIPTION

Site type(s)	Artefact Scatter	Site type code (NPWS use only)																								
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead. likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	This scatter is located on a crest between two unnamed tributaries of Swamp Creek, approximately 230m west of KK10. Three artefacts were identified including two flakes and one broken flake. One flake was which was yellow in surface colour was slightly damaged revealing that the interior stone colour was red-brown in colour which indicates that the artefact surface is extremely weathered. There was no evidence for heat damage, caused by bushfire, (or similar) on this artefact.																									
	KK11 artefact details, dimensions in millimetres <table border="1"> <thead> <tr> <th>Artefact Type</th> <th>Raw material</th> <th>Colour</th> <th>Max. Length</th> <th>Max. Width</th> <th>Max. Thickness</th> </tr> </thead> <tbody> <tr> <td>Flake</td> <td>Indurated Mudstone</td> <td>Yellow (Red)</td> <td>15</td> <td>15</td> <td>4</td> </tr> <tr> <td>Flake</td> <td>Indurated Mudstone</td> <td>Yellow</td> <td>12</td> <td>15</td> <td>3</td> </tr> <tr> <td>Broken Flake</td> <td>Silicified Tuff</td> <td>Cream</td> <td>11</td> <td>30</td> <td>6</td> </tr> </tbody> </table>			Artefact Type	Raw material	Colour	Max. Length	Max. Width	Max. Thickness	Flake	Indurated Mudstone	Yellow (Red)	15	15	4	Flake	Indurated Mudstone	Yellow	12	15	3	Broken Flake	Silicified Tuff	Cream	11	30
Artefact Type	Raw material	Colour	Max. Length	Max. Width	Max. Thickness																					
Flake	Indurated Mudstone	Yellow (Red)	15	15	4																					
Flake	Indurated Mudstone	Yellow	12	15	3																					
Broken Flake	Silicified Tuff	Cream	11	30	6																					

Version: June 1998

Data entered by:

Date entered:



Aboriginal Sites Register of NSW

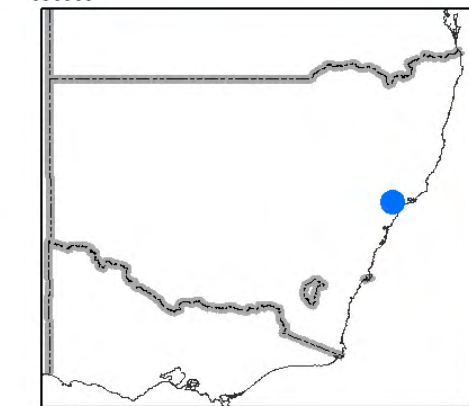
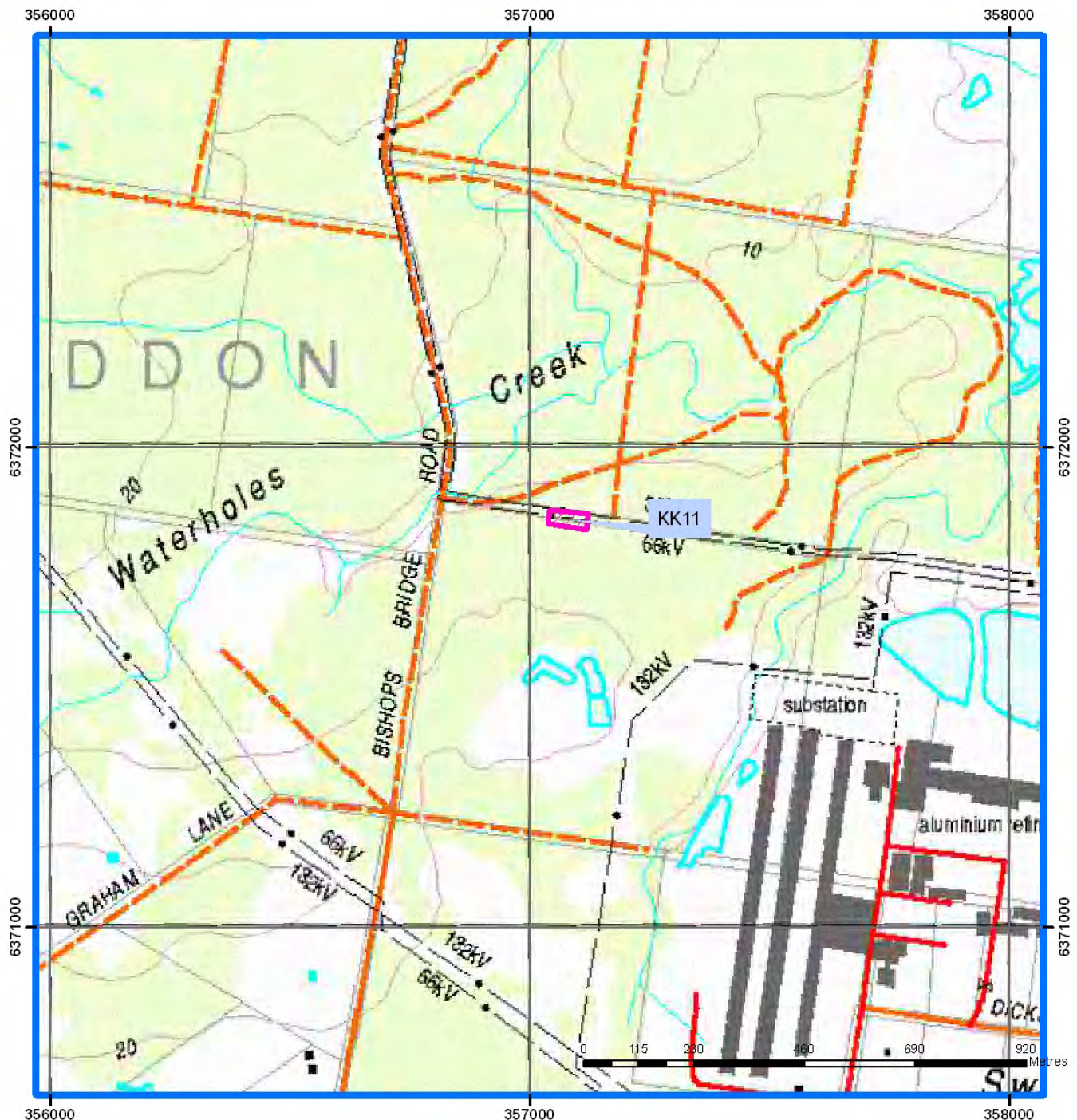
NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

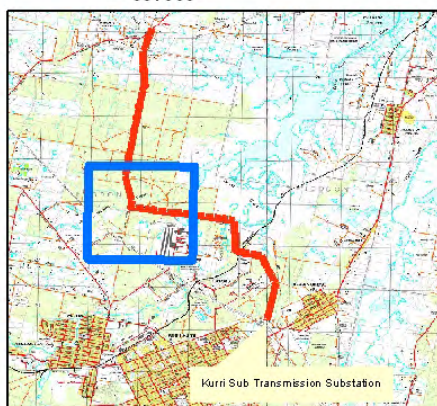
SITE ENVIRONMENT						
Land form	crest		Aspect	0	Slope	0
Mark position of the site						
Local rock type	Mudstone, sandstone, shale		Land use/effect	Electricity easement		
Distance from drinking water	190m		Source	Tributary of Black Waterholes ck		
Resource zone (eg. estuarine, river, forest)	Inland		Vegetation	Kurri Sand Swamp Woodland		
Edible plants	None observed		Faunal resources (include shellfish)	None observed		
Other exploitable resources (eg. ochre)	None observed					
Are there other sites in the locality	yes	Are they in the Sites Register	yes	Other site types include	Artefact scatters	
SITE MANAGEMENT						
Site condition	Good					
Management recommendations						
Have artefacts been removed from site	No		When			
By whom			Deposited at			
Consent applied for	<input type="checkbox"/>		Consent issued			
Date of issue			Consent number			
SITE INSPECTION AND RECORDING						
Reason for investigation	Proposed works to electricity easement					
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addresses	Mindaribba Local Aboriginal Land Council, PO Box 401, EAST MAITLAND NSW 2323; Barkuma Neighbourhood Centre/ Gidawaa Walang, 76 Lang Street, KURRI KURRI NSW 2327; Aboriginal Native Title Consultants, 16A Mahogany Ave, MUSWELLBROOK NSW 2333; Hunter Valley Aboriginal Corporation, PO BOX 579, MUSWELLBROOK NSW 2333; Wonnarua Culture Heritage, 19 O'Donnell Cresent, METFORD 2322			
Is the site important to local Aborigines	Although this site is important for demonstrating Aboriginal occupation of the area, it does not have specific cultural significance to the Aboriginal community					
Verbal/written reference sources	AMBS (2009) <i>Kurri Kurri Aboriginal Heritage Assessment for the 33kV Kurri-Rutherford Feeder Split</i> , report to EnergyAustralia		ASR report number(s)	C- C-		
Photographs taken	Yes		No of Photos attached			
Site recorded by	Christopher Langeluddecke & Tessa Boer-Mah		Date of recording	Feb 2009		
Address/institution	AMBS 6 College Street, Sydney, NSW 2010					



View to west, KK11 (Flagged artefacts, beneath white arrows)



Key Map 1




Key Map 2

Legend Main Map

 Site

Key Map 2 Legend

 Study Area



Background Topographic data © Land and Property Information NSW (2001) Cessnock 9132-2N 1:25000 Topographic and Orthophoto Map, 2nd Edition
Horizontal datum: GDA94/MGA Zone 56





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

New Recording Additional

information

SITE IDENTIFICATION

Site name	KK13		NPWS Site Number	37-6-1961
Owner/manager	Crown land			
Owner Address	Crown land			

LOCATION

Location	4.5 km north west of Kurri Sub-Transmission Station			
How to get to the site	Take Main road north from Kurri Kurri towards Heddon Greta, turn left to Kurri Sub-Transmission Station (at junction of Main Road, Stanford Road and Lang St), site is 4.5 km north west of sub-transmission station.			
1:250,000 map name	Cessnock		NPWS map code	
GDA Zone	56	GDA Easting	356713	GDA Northing
Method for grid reference	Hand-held GPS	Map scale (if method = map)		Map name
NPWS District			NPWS Zone	Coffs Harbour
Portion no.			Parish	

SITE DESCRIPTION

Site type(s)	Isolated Find	Site type code (NPWS use only)													
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead. likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	This isolated find was adjacent to the access track. This flake-scraper had usewear along both its lateral margins and was made from cream coloured silcrete. Only the proximal end of this tool was present, having been broken through its middle.														
	KK13 artefact details, dimensions in millimetres														
	<table border="1"> <thead> <tr> <th>Artefact Type</th> <th>Raw material</th> <th>Colour</th> <th>Max. Length</th> <th>Max. Width</th> <th>Max. Thickness</th> </tr> </thead> <tbody> <tr> <td>Flake-Scrapers</td> <td>Silcrete</td> <td>Cream</td> <td>67</td> <td>45</td> <td>16</td> </tr> </tbody> </table>	Artefact Type	Raw material	Colour	Max. Length	Max. Width	Max. Thickness	Flake-Scrapers	Silcrete	Cream	67	45	16		
Artefact Type	Raw material	Colour	Max. Length	Max. Width	Max. Thickness										
Flake-Scrapers	Silcrete	Cream	67	45	16										

Version: June 1998

Data entered by:

Date entered:



Aboriginal Sites Register of NSW

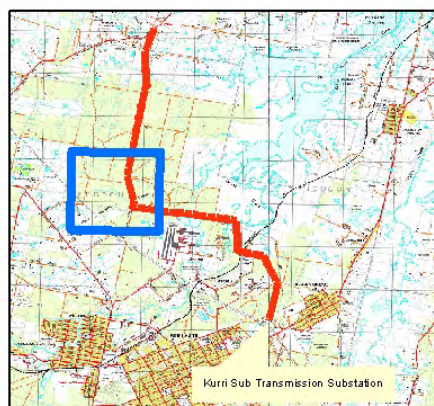
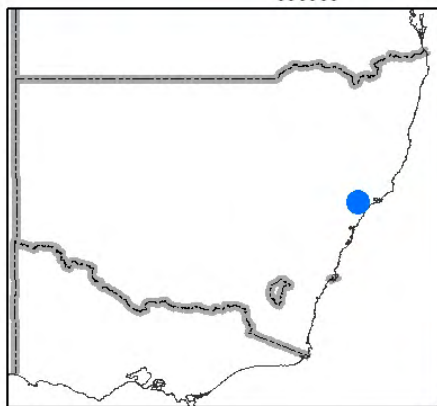
NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

SITE ENVIRONMENT						
Land form	crest		Aspect	0	Slope	0
Mark position of the site						
Local rock type	Mudstone, sandstone, shale		Land use/effect	Electricity easement		
Distance from drinking water	235m		Source	Black Waterholes ck		
Resource zone (eg. estuarine, river, forest)	Inland		Vegetation	Hunter-Macleay Dry Sclerophyll Forest		
Edible plants	None observed		Faunal resources (include shellfish)	None observed		
Other exploitable resources (eg. ochre)	None observed					
Are there other sites in the locality	yes	Are they in the Sites Register	yes	Other site types include	Artefact scatters	
SITE MANAGEMENT						
Site condition	Good					
Management recommendations						
Have artefacts been removed from site	No		When			
By whom			Deposited at			
Consent applied for	<input type="checkbox"/>		Consent issued			
Date of issue			Consent number			
SITE INSPECTION AND RECORDING						
Reason for investigation	Proposed works to electricity easement					
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addresses	Mindaribba Local Aboriginal Land Council, PO Box 401, EAST MAITLAND NSW 2323; Barkuma Neighbourhood Centre/ Gidawaa Walang, 76 Lang Street, KURRI KURRI NSW 2327; Aboriginal Native Title Consultants, 16A Mahogany Ave, MUSWELLBROOK NSW 2333; Hunter Valley Aboriginal Corporation, PO BOX 579, MUSWELLBROOK NSW 2333; Wonnarua Culture Heritage, 19 O'Donnell Cresent, METFORD 2322			
Is the site important to local Aborigines	Although this site is important for demonstrating Aboriginal occupation of the area, it does not have specific cultural significance to the Aboriginal community					
Verbal/written reference sources	AMBS (2009) <i>Kurri Kurri Aboriginal Heritage Assessment for the 33kV Kurri-Rutherford Feeder Split</i> , report to EnergyAustralia		ASR report number(s)	C- C-		
Photographs taken	Yes		No of Photos attached			
Site recorded by	Christopher Langeluddecke & Tessa Boer-Mah		Date of recording	Feb 2009		
Address/institution	AMBS 6 College Street, Sydney, NSW 2010					




Flake-Scraper (dorsal view left, ventral view right)



Legend Main Map

 Site

Key Map 2 Legend

 Study Area



Background Topographic data © Land and Property Information NSW (2001) Cessnock 9132-2N 1:25000 Topographic and Orthophoto Map, 2nd Edition
Horizontal datum: GDA94/MGA Zone 56





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

New Recording Additional

information

SITE IDENTIFICATION

Site name	KK14		NPWS Site Number	37-6-1962
Owner/manager	Crown land			
Owner Address	Crown land			

LOCATION

Location	4.6 km north west of Kurri Sub-Transmission Station			
How to get to the site	Take Main road north from Kurri Kurri towards Heddon Greta, turn left to Kurri Sub-Transmission Station (at junction of Main Road, Stanford Road and Lang St), site is 4.6 km north west of sub-transmission station.			
1:250,000 map name	Cessnock		NPWS map code	
GDA Zone	56	GDA Easting	356727	GDA Northing
Method for grid reference	Hand-held GPS	Map scale (if method = map)		Map name
NPWS District			NPWS Zone	Coffs Harbour
Portion no.			Parish	

SITE DESCRIPTION

Site type(s)	Isolated Find	Site type code (NPWS use only)				
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead. likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	This isolated find was identified approximately 4m from the access track. This indurated mudstone flake was slightly damaged, but revealed that the yellow surface colour was produced by weathering and that the internal colour of the stone was red-brown.					
	KK14 artefact details, dimensions in millimetres					
	Artefact Type	Raw material	Colour	Max. Length	Max. Width	Max. Thickness
	Flake	Indurated Mudstone	Yellow (Red)	18	15	6

Version: June 1998

Data entered by:

Date entered:



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

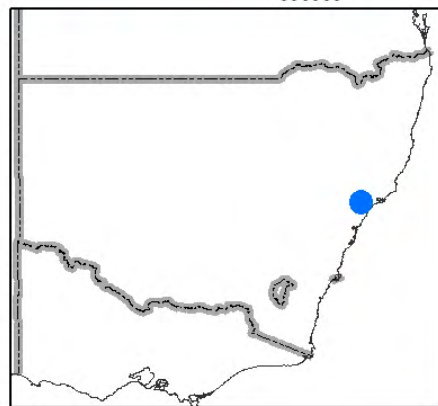
SITE ENVIRONMENT						
Land form	crest		Aspect	0	Slope	0
Mark position of the site						
Local rock type	Mudstone, sandstone, shale		Land use/effect	Electricity easement		
Distance from drinking water	280m		Source	Black Waterholes ck		
Resource zone (eg. estuarine, river, forest)	Inland		Vegetation	Hunter-Macleay Dry Sclerophyll Forest		
Edible plants	None observed		Faunal resources (include shellfish)	None observed		
Other exploitable resources (eg. ochre)	None observed					
Are there other sites in the locality	yes	Are they in the Sites Register	yes	Other site types include	Artefact scatters	
SITE MANAGEMENT						
Site condition	Good					
Management recommendations						
Have artefacts been removed from site	No		When			
By whom			Deposited at			
Consent applied for	<input type="checkbox"/>		Consent issued			
Date of issue			Consent number			
SITE INSPECTION AND RECORDING						
Reason for investigation	Proposed works to electricity easement					
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addresses	Mindaribba Local Aboriginal Land Council, PO Box 401, EAST MAITLAND NSW 2323; Barkuma Neighbourhood Centre/ Gidawaa Walang, 76 Lang Street, KURRI KURRI NSW 2327; Aboriginal Native Title Consultants, 16A Mahogany Ave, MUSWELLBROOK NSW 2333; Hunter Valley Aboriginal Corporation, PO BOX 579, MUSWELLBROOK NSW 2333; Wonnarua Culture Heritage, 19 O'Donnell Cresent, METFORD 2322			
Is the site important to local Aborigines	Although this site is important for demonstrating Aboriginal occupation of the area, it does not have specific cultural significance to the Aboriginal community					
Verbal/written reference sources	AMBS (2009) <i>Kurri Kurri Aboriginal Heritage Assessment for the 33kV Kurri-Rutherford Feeder Split</i> , report to EnergyAustralia		ASR report number(s)	C- C-		
Photographs taken	Yes		No of Photos attached			
Site recorded by	Christopher Langeluddecke & Tessa Boer-Mah		Date of recording	Feb 2009		
Address/institution	AMBS 6 College Street, Sydney, NSW 2010					



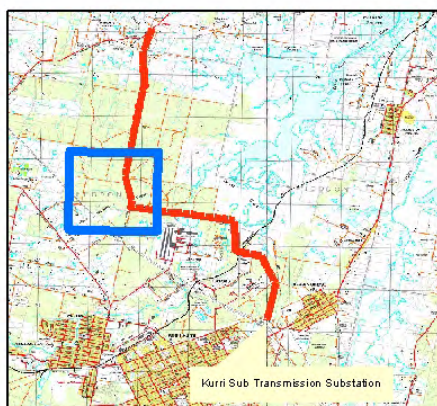
Mudstone flake KK14 (dorsal view)



KK14, view to South



Key Map 1




Key Map 2

Legend Main Map

 Site

Key Map 2 Legend

 Study Area



Background Topographic data © Land and Property Information NSW (2001) Cessnock 9132-2N 1:25000 Topographic and Orthophoto Map, 2nd Edition
 Horizontal datum: GDA94/MGA Zone 56





Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

New Recording Additional Information

SITE IDENTIFICATION					
Site name	KR01		NPWS Site Number	37-6-2004	
Owner/manager					
Owner Address					
LOCATION					
Location	Electricity Easement (Please see report)				
How to get to the site	Map attached				
1:250,000 map name	Singleton SI5601		NPWS map code		
GDA Zone	56	GDA Easting	357959	GDA Northing	6370106
Method for grid reference	Hand-held GPS	Map scale (if method = map)	1:25,000	Map name	
NPWS District	Northern		NPWS Zone	Northeast	
Portion no.	Lot722, DP755231		Parish		
SITE DESCRIPTION					
Site type(s)	Artefact Scatter		Site type code (NPWS use only)		
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	The artefact scatter was identified within, and on the margins of, vehicle track and was 40 x 14m in area. The scatter mainly comprises flakes, made from silicified tuff, silcrete and indurated mudstone.				
Attach photographs and sketches, eg. plan & section of shelter. Do NOT dig, disturb or damage site or contents.					

Version: June 1998

Data entered by:

Date entered:



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

SITE ENVIRONMENT						
Land form	Simple Slope		Aspect	NW	Slope	2°
Mark position of the site						
Local rock type	Please see report		Land use/effect	Please see report		
Distance from drinking water	135m		Source	Swamp Creek		
Resource zone (eg. estuarine, river,	Please see report		Vegetation	Please see report		
Edible plants	None observed		Faunal resources (include shellfish)	None observed		
Other exploitable resources (eg.	Please see report					
Are there other sites in the locality	Yes	Are they in the Sites Register	Yes	Other site types include	Artefact Scatters, Isolated Finds, PADs	
SITE MANAGEMENT						
Site condition	Disturbed					
Management recommendations						
Have artefacts been removed	No		When			
By whom			Deposited at			
Consent applied for	<input type="checkbox"/>		Consent issued			
Date of issue			Consent number			
SITE INSPECTION AND RECORDING						
Reason for investigation	Proposed upgrade to the 132kV Kurri-Redbank Feeder 953/95R					
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present		Names and addresses	Mindaribba LALC (PO Box 401 EAST MAITLAND NSW 2323) and others please see report.		
Is the site important to local Aborigines						
Verbal/written reference sources	AMBS. 2009. Kurri-Redbank Feeder 953/95R (132kV) Upgrade: Aboriginal Heritage Assessment, Hunter Valley NSW. Report to EnergyAustralia		ASR report number(s)	C- C-		
Photographs taken	Yes		No of Photos attached			
Site recorded by	Tessa Boer-Mah and Ngaire Richards		Date of recording	May 2009		
Address/institution	AMBS, 6 College St, Sydney NSW 2010					

Version: June 1998

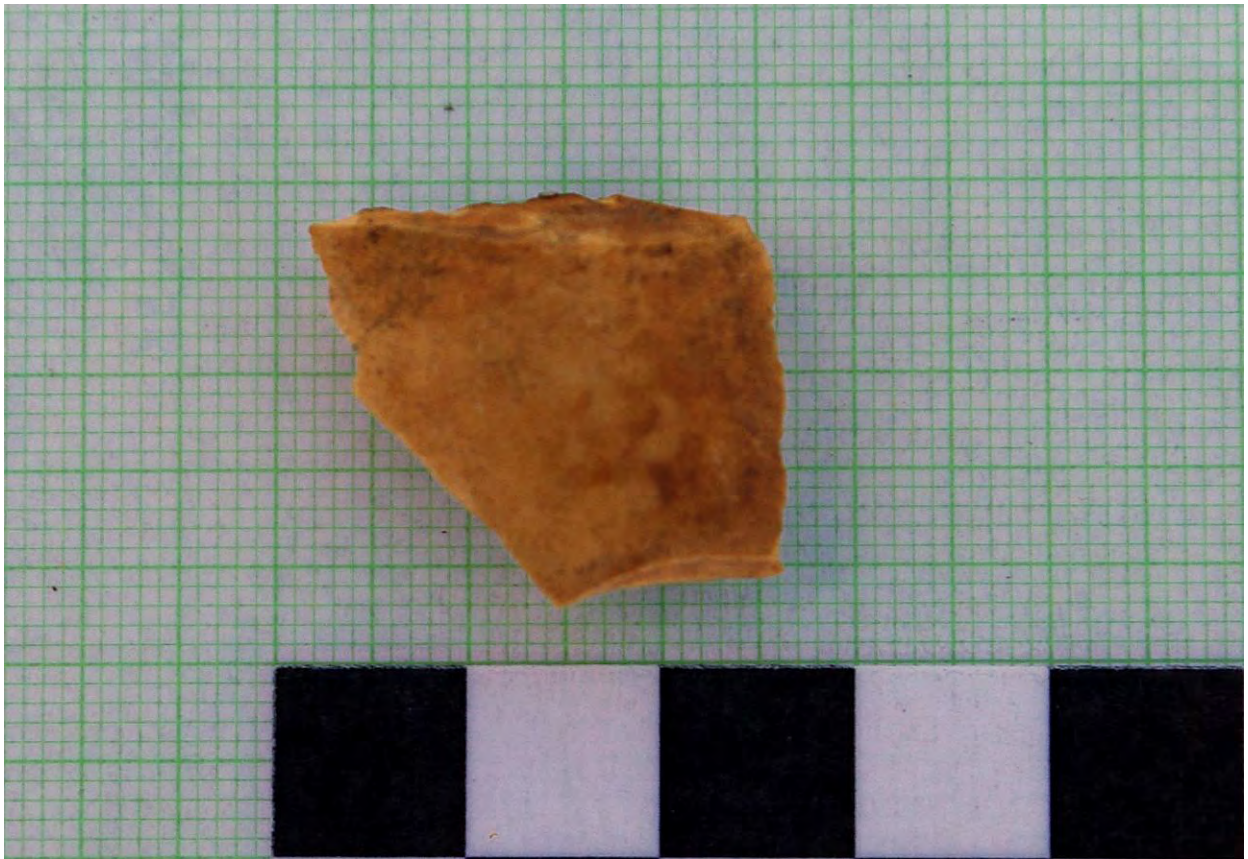
Data entered by:

Date entered:

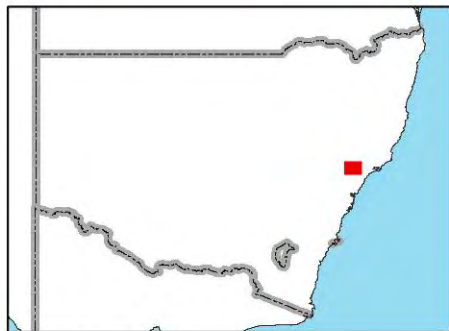
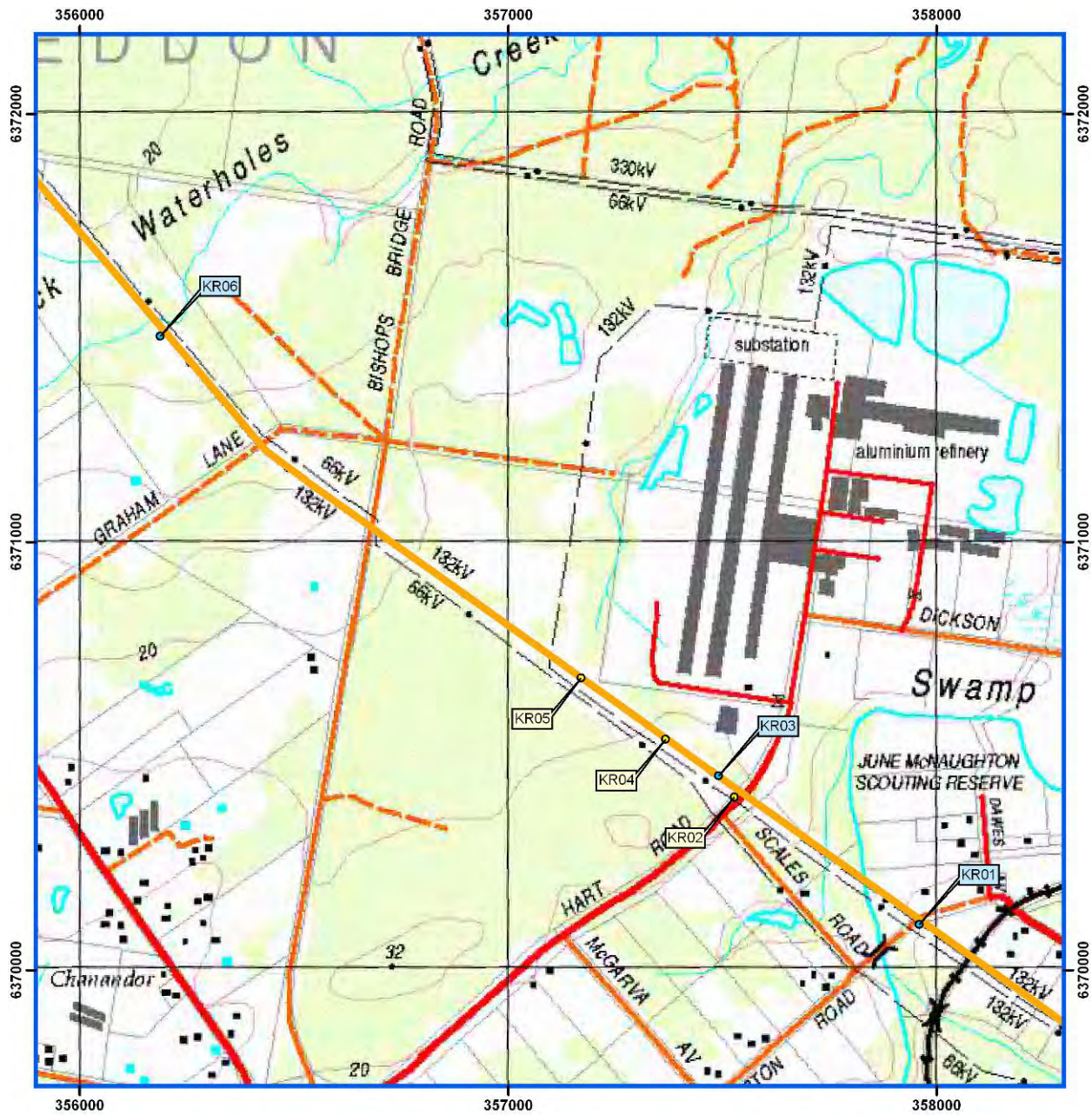
Site	Artefact Type	Raw Material	Colour	Max Length (mm)	Max Width (mm)	Max Thickness (mm)	Weight (g)	Cortex (%)
KR01	Flake	Silicified Tuff	Cream	18	15	12	2.1	0
KR01	Broken Flake	Silicified Tuff	Brown	19	19	7	3.6	0
KR01	Flake	Silicified Tuff	Red/Yellow	18	7	3	0.4	0
KR01	Flake	Silcrete	Red	22	14	3	1.1	0
KR01	Flake	Indurated Mudstone	Brown	11	4	3	0.0	0



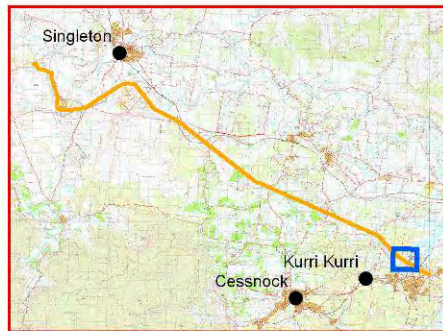
Site KR01, artefacts scattered across track



Artefact from KR01



Key Map 1



Key Map 2

Legend

- Isolated Find
- Artefact Scatter
- Easement
- Built-Up Areas

N



Background data © Land and Property Information NSW (2001) 1:25000 Topographic and Orthophoto Map
Horizontal datum: GDA94/MGA Zone 56



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

New Recording Additional Information

SITE IDENTIFICATION					
Site name	KR02			NPWS Site Number	37-6-2005
Owner/manager					
Owner Address					
LOCATION					
Location	Electricity Easement (Please see report)				
How to get to the site	Map attached				
1:250,000 map name	Singleton SI5601			NPWS map code	
GDA Zone	56	GDA Easting	357528	GDA Northing	6370404
Method for grid reference	Hand-held GPS	Map scale (if method = map)	1:25,000	Map name	
NPWS District	Northern			NPWS Zone	Northeast
Portion no.	Lot16, DP1082775			Parish	
SITE DESCRIPTION					
Site type(s)	Isolated Find			Site type code (NPWS use only)	
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead. likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	This isolated find was identified along a fence line, in an area with obvious disturbance from the road easement as well as the installation of the fence. One broken flake was identified (proximal portion only) made from fine grained volcanic material.				
Attach photographs and sketches, eg. plan & section of shelter. Do NOT dig, disturb or damage site or contents.					

Version: June 1998

Data entered by:

Date entered:



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

SITE ENVIRONMENT						
Land form	Simple Slope		Aspect	SE	Slope	1°
Mark position of the site						
Local rock type	Please see report		Land use/effect	Please see report		
Distance from drinking water	250m		Source	Unnamed		
Resource zone (eg. estuarine, river,	Please see report		Vegetation	Please see report		
Edible plants	None observed		Faunal resources (include shellfish)	None observed		
Other exploitable resources (eg.	Please see report					
Are there other sites in the locality	Yes	Are they in the Sites Register	Yes	Other site types include	Artefact Scatters, Isolated Finds, PADs	
SITE MANAGEMENT						
Site condition	Disturbed					
Management recommendations						
Have artefacts been removed	No		When			
By whom			Deposited at			
Consent applied for	<input type="checkbox"/>		Consent issued			
Date of issue			Consent number			
SITE INSPECTION AND RECORDING						
Reason for investigation	Proposed upgrade to the 132kV Kurri-Redbank Feeder 953/95R					
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addresses	Mindaribba LALC (PO Box 401 EAST MAITLAND NSW 2323) and others please see report.			
Is the site important to local Aborigines						
Verbal/written reference sources	AMBS. 2009. Kurri-Redbank Feeder 953/95R (132kV) Upgrade: Aboriginal Heritage Assessment, Hunter Valley NSW. Report to EnergyAustralia		ASR report number(s)	C- C-		
Photographs taken	Yes		No of Photos attached			
Site recorded by	Tessa Boer-Mah and Ngaire Richards		Date of recording	May 2009		
Address/institution	AMBS, 6 College St, Sydney NSW 2010					

Version: June 1998

Data entered by:

Date entered:

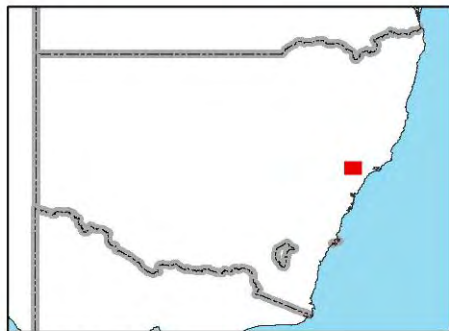
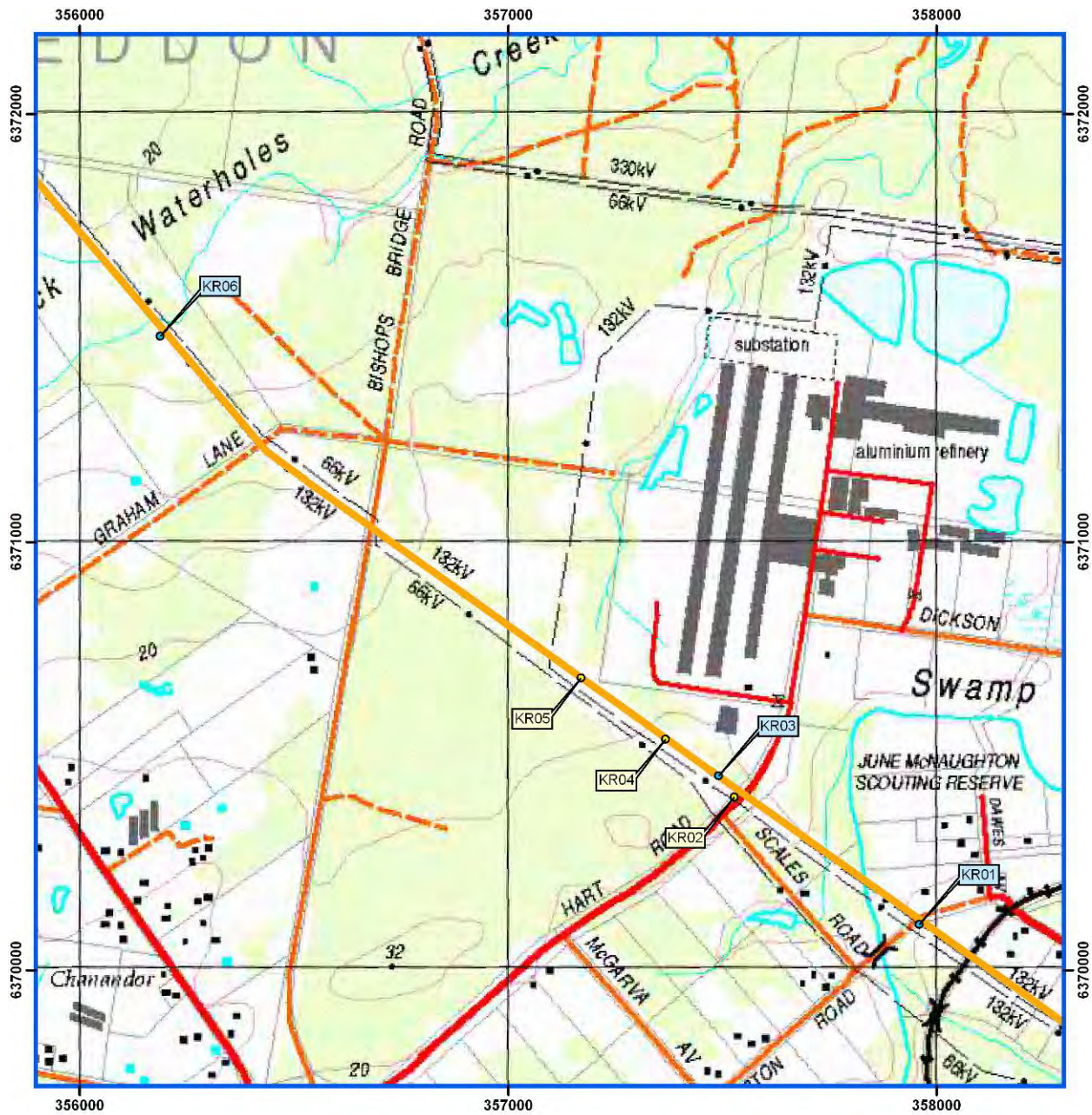
Site	Artefact Type	Raw Material	Colour	Max Length (mm)	Max Width (mm)	Max Thickness (mm)	Weight (g)	Cortex (%)
KR02	Broken Flake	Volcanic	Grey	26	30	7	3.9	0



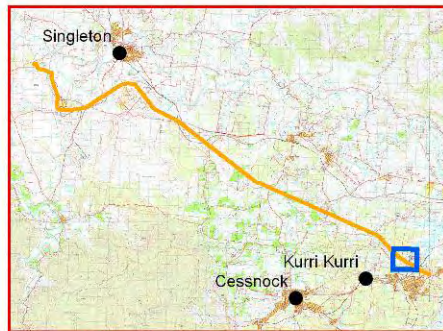
Site KR02



Artefact from KR02



Key Map 1



Key Map 2

Legend

- Isolated Find
- Artefact Scatter
- Easement
- Built-Up Areas

N



Background data © Land and Property Information NSW (2001) 1:25000 Topographic and Orthophoto Map
 Horizontal datum: GDA94/MGA Zone 56



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

New Recording Additional Information

SITE IDENTIFICATION					
Site name	KR03			NPWS Site Number	37-6-2006
Owner/manager					
Owner Address					
LOCATION					
Location	Electricity Easement (Please see report)				
How to get to the site	Map attached				
1:250,000 map name	Singleton SI5601			NPWS map code	
GDA Zone	56	GDA Easting	357491	GDA Northing	6370454
Method for grid reference	Hand-held GPS	Map scale (if method = map)	1:25,000	Map name	
NPWS District	Northern			NPWS Zone	Northeast
Portion no.	Lot16, DP1082775			Parish	
SITE DESCRIPTION					
Site type(s)	Artefact Scatter			Site type code (NPWS use only)	
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead. likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	Two flakes were identified both made from grey silcrete. Artefacts were located within current vehicle track 15m apart.				
Attach photographs and sketches, eg. plan & section of shelter. Do NOT dig, disturb or damage site or contents.					

Version: June 1998

Data entered by:

Date entered:



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

SITE ENVIRONMENT						
Land form	Crest		Aspect	0	Slope	
Mark position of the site						
Local rock type	Please see report		Land use/effect	Please see report		
Distance from drinking water	300m		Source	Unnamed		
Resource zone (eg. estuarine, river,	Please see report		Vegetation	Please see report		
Edible plants	None observed		Faunal resources (include shellfish)	None observed		
Other exploitable resources (eg.	Please see report					
Are there other sites in the locality	Yes	Are they in the Sites Register	Yes	Other site types include	Artefact Scatters, Isolated Finds, PADs	
SITE MANAGEMENT						
Site condition	Disturbed					
Management recommendations						
Have artefacts been removed	No		When			
By whom			Deposited at			
Consent applied for	<input type="checkbox"/>		Consent issued			
Date of issue			Consent number			
SITE INSPECTION AND RECORDING						
Reason for investigation	Proposed upgrade to the 132kV Kurri-Redbank Feeder 953/95R					
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addresses	Mindaribba LALC (PO Box 401 EAST MAITLAND NSW 2323) and others please see report.			
Is the site important to local Aborigines						
Verbal/written reference sources	AMBS. 2009. Kurri-Redbank Feeder 953/95R (132kV) Upgrade: Aboriginal Heritage Assessment, Hunter Valley NSW. Report to EnergyAustralia		ASR report number(s)	C- C-		
Photographs taken	Yes		No of Photos attached			
Site recorded by	Tessa Boer-Mah and Ngaire Richards		Date of recording	May 2009		
Address/institution	AMBS, 6 College St, Sydney NSW 2010					

Version: June 1998

Data entered by:

Date entered:

Site	Artefact Type	Raw Material	Colour	Max Length (mm)	Max Width (mm)	Max Thickness (mm)	Weight (g)	Cortex (%)
KR03	Broken Flake	Silcrete	Grey	26	12	9	2.9	0
KR03	Flake	Silcrete	Grey	24	25	6	4.9	0



Site KR03



Artefact from KR03