

4.2.2 Marsden Park Locality & Project Area

Existing AHIMS data indicate that a large number (100+) of Aboriginal archaeological investigations have been carried out in the greater Marsden Park area¹¹ over the past three decades. As in other parts of the Cumberland Plain, the overwhelming majority of these investigations have been limited to survey. However, a number of investigations involving test and/or salvage excavation programs have also been undertaken (e.g., AECOM 2012, 2013a, 2013b, 2015a; AMBS 2002; Austral Archaeology 2005; Biosis 2010; Dallas and Witter 1983; Eco Logical 2015c; GML 2013a, 2013b; Haglund and Associates 1983; Jo McDonald CHM 2006b; Oakley 1993). For contextual purposes, the results of a selection of these investigations are summarised in **Table 12**. Investigations undertaken within and/or adjacent to the current Project area, listed below, are likewise summarised in **Table 12**.

Taken together, the results of previous surface and subsurface investigations within the greater Marsden park area have painted a picture of past Aboriginal occupation and land use consistent with that of the northwestern portion of the Cumberland Plain as a whole, collectively attesting to an occupational emphasis on low gradient landform elements adjacent to higher order watercourses, as well as an emphasis on the procurement, transport, pre-processing (i.e., heat treatment) and reduction of locally sourced silcrete blanks. At the same time, they have highlighted the sub-regional significance of Plumpton Ridge and its associated deposits of St Marys Formation gravels as a source of silcrete and other lithic raw materials for flaked stone artefact manufacture, with local assemblage variability likely tied, at least in part, to increasing distance from this major raw material source (Jo McDonald CHM 2006b).

To date, archaeological investigation of land within the current Project area has been limited to survey, with the subject properties selectively surveyed as part of two previous Aboriginal heritage assessments (KNC 2010, 2012). In keeping with the greater Marsden Park area as a whole, investigations undertaken within 2 km of the Project area have, for the most part, been restricted to survey (e.g., AMBS 1996, 1997; Central West Archaeological and Heritage Services 2001; Comber 2008; Jo McDonald CHM 2010; Kelleher Nightingale 2009, 2010, 2012; Smith 1989). Nonetheless, two investigations incorporating subsurface testing (i.e., Eco Logical 2015c; GML 2013a, 2013b) have also recently been undertaken and are of particular relevance to the current investigation.

As indicated in **Section 2.2**, seven Aboriginal archaeological sites have been previously recorded within the Project area. Previously identified sites consist exclusively of open artefact sites and are typical of those found locally. All were identified in surface exposures associated with erosion and/or other modern disturbances and are best conceived of as disturbed surface representations of former subsurface deposits. In common with other previously recorded open artefact sites in the greater Marsden Park area, available site data attest to an emphasis on the procurement and reduction of locally available silcrete blanks, with other, less commonly exploited raw materials including silicified tuff, petrified wood, quartz and fine-grained volcanics. Reported artefact types are likewise typical of the local area and consist principally of flake and non-flake debitage items (e.g., complete and broken flakes, flaked pieces).

¹¹ I.e., the area encompassed by the suburbs of Marsden Park, Schofields, Colebee, Plumpton, Hassall Grove and Shanes Park.

Table 12 Previous Aboriginal archaeological investigations

Consultant	Year	Project	Investigation type	Location relative to the Project area	Summary of investigation & results	Reference
A.Bickford	1981	Archaeological and historical investigation of contact sites on Sydney's Cumberland Plain	Survey	c.3.4 km, southeast	Pedestrian survey of Blacktown Native Institution (BNI) site adjacent to Richmond Road. A contact site, consisting of a low-density scatter of stone artefacts, early-to-mid 19 th century earthenware pottery and pieces of convict brick, was identified on the northwestern side of Bells Creek, in the northern portion of the BNI site. Bickford (1981: 15) reports that the artefacts "were sparsely scattered on the surface over a wide area", with identified stone artefacts comprising "flakes and cores of stone types foreign to that locality" (Bickford 1981: 15). Drawing on available historical records, which indicate that Aboriginal adults, presumably parents and/or relatives of pupils, were camping in the vicinity of the schoolhouse, Bickford interpreted the site as a fringe camp. A scarred tree was also identified further along the creek, near the western boundary of the study area. Structural remains identified during survey were limited to sandstone brick footings belonging to "Lloydhurst", the country residence of post-BNI owner Sydney Burkedin.	Bickford 1981
Dallas and Witter	1983	Residential subdivision (Hanna Reserve)	Test excavation	c.3.7 km, southeast	Four 50 cm ² test pits excavated within partially disturbed surface artefact scatter adjacent to 1 st order tributary of Bells Creek. Test pits excavated to a maximum depth of 25 cm (range: 10-25 cm). No archaeological features intercepted. Total of 20 stone artefacts recovered, all of which were manufactured out of silcrete. Types included complete and broken flakes, 'block fragments', an 'edged flake tool' with steep retouch and a burin spall with wear.	Dallas and Witter 1983
Haglund & Associates	1983	Residential subdivision (Owen Street, Glendenning)	Test excavation	c.6 km, southeast	Four 50 cm ² test pits excavated within previously identified surface site: two on a low spur crest, one on a lower slope and one on a flat. Test pits excavated to a maximum depth of 30 cm (range: 18-30 cm). No archaeological features intercepted. Recovered lithic assemblage (n = 1570) dominated by 'block-fractured' silcrete fragments, which accounted for over 80% of recovered 'artefacts'. Majority (>90%) of lithic items recovered from two test pits on spur crest. Silcrete overwhelmingly dominant, with other, poorly represented raw materials limited to chert and an unidentified fine-grained rock (likely a siltstone or mudstone, according to the authors).	Haglund and Associates 1983
L.Smith	1988	Aboriginal site planning study, northern Cumberland Plain	Survey	Directly adjacent	Field survey of fifteen localities across the northern Cumberland plain, four of which were located - in whole or part - within 2 km of the current Project area (i.e., Smith's 'Berkshire Park', 'Jericho Farm', 'South Creek' and 'Marsden Park' survey areas). Survey in these areas, which ranged from 3.4 ha (South Creek) to c.230 ha (Jericho Farm) in size, was primarily undertaken on foot, with a limited number of vehicle transects also completed. Total coverage estimates for the relevant survey areas ranged from 5% (Jericho Farm) to 74% (South Creek). A total of 35 open artefact sites, consisting of 29 artefact scatters and six isolated artefacts, were identified across the four surveys areas in question, with the largest number (n = 14) occurring in Smith's Marsden Park survey area, being the former Llandilo International Transmitting Station site to the immediate south of the current Project area (including the Llandilo Natural Area).	Smith 1988

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					Sites within this survey area were identified on creek flats, slopes and ridge tops and included a large stone extraction or quarry site (MP48), which occurred in association with extensive surface deposits of Rickabys Creek Gravels along and adjacent to Little Creek in the southern portion of the survey area. From a sample of 200 artefacts at MP48, Smith (1988: 73) estimated a total of over 40,000 artefacts within the mapped boundaries of this site. Estimated or recorded artefact totals for remaining artefact scatter sites within the Marsden Park survey area ranged from 3 to '>2000' artefacts. More broadly, raw material data for recorded open artefact sites across the relevant survey areas revealed an emphasis on the procurement and reduction of silcrete, with silicified tuff the second most commonly exploited raw material (Smith 1988: 170-171, Table 7). Recorded stone artefact assemblages, meanwhile, consisted largely of flake and non-flake debitage items, with formed and otherwise utilised pieces comparatively poorly represented.	
Bobbie Oakley (stone artefact analysis by Neville Baker)	1993	Trunk drainage works, Plumpton Park	Test excavation	c.5 km, southeast	Seventeen backhoe trenches and two isolated shovels trenches excavated along unnamed 1 st order tributary of Bells Creek. Total of 341 artefacts recovered. Silcrete (n = 329, 90%) overwhelmingly dominant, with minor quantities of quartz, silicified tuff, petrified wood and unidentified volcanic also present. Formed objects limited to three cores and one retouched flake. Large quantity (n = 1088) of naturally-fractured silcrete also recovered.	Oakley1993
AMBS	1996	Clarification of Section 149 certificates issued by Blacktown City Council for Lots 37-42 on DP 262886, South Street, Marsden Park	Survey	c.0.7 km, south	Field survey of c.62 ha study area, comprising Lots 37 to 42 on DP262886. Survey undertaken on foot using transect sampling method. Four "archaeological landsystems" identified within study area: 1) alluvial creek banks and flats; 2) adjacent low, flat, alluvial areas; 3) low ridge slopes (slope <4°); and 4) low ridge crests. GSV along the banks of the ephemeral creek line that traversed the study area was, with the notable exception of a narrow band of high GSV (up to 90%) along the immediate creek bank, assessed as low (average 20%). GSV on adjoining alluvial flats was similarly low (average 10%) but significantly higher on adjacent low ridge slopes and crests (average 60%). Total of seven open artefact sites, comprising four artefact scatters and three isolated artefacts, identified during survey. Artefact totals for scatter sites ranged from 2 to 12. Recorded artefacts across the seven sites (n = 25), all but one of which was manufactured out of silcrete, predominantly (n = 15, 60%) consisted of flake debitage items (i.e., complete and broken flakes). Formed objects (n = 3) included a single core, single backed artefact and single scraper, all manufactured out of silcrete. In addition to artefacts, non-artefactual silcrete fragments were identified at most sites.	AMBS 1996
AMBS	1997	Clarification of	Survey	Directly adjacent	Field survey of 20.3 ha study area, comprising Lots 45 and 46 on DP262886. Survey undertaken	AMBS 1997

Consultant	Year	Project	Investigation type	Location relative to the Project area	Summary of investigation & results	Reference
		Section 149 certificates issued by Blacktown City Council for Lots 45 and 26 on DP 262886, Glengarrie Road, Marsden Park			on foot using transect sampling method. Three landform units identified within study area: 1) ephemeral drainage line with adjacent alluvial banks and marshy areas; 2) adjacent rising slopes of very low gradient (<4°); and 3) undulating low ridgeline. Greater occurrence of natural and man-made clearings encountered within Lot 46 (northern lot, bordering current Project area). GSV along the banks of the ephemeral drainage line that traversed the study area was similar to that encountered on adjacent ridge slopes, averaging 30%. GSV on crests, in contrast, was “considerably better”, ranging from the 30% to 80% and averaging 60% (AMBS 1997: 14). Fifteen open artefact sites, comprising 12 artefact scatters and three isolated artefacts, identified during survey. Recorded artefact totals for scatter sites ranged from two to 16, with two sites observed to contain additional, unrecorded artefacts. One of these sites (i.e., GR-OS-4), located on a very gently inclined slope overlooking the ephemeral drainage line, was estimated to contain 100 artefacts. Silcrete was the dominant raw material overall, accounting for 83.1% (n = 64) of all recorded artefacts (n = 77). Other raw materials represented included silicified tuff (n = 8), quartz (n = 3) and quartzite (n = 2). Most (n = 53) recorded artefacts comprised flake debitage items (i.e., complete and broken flakes and blades), with formed objects (n = 6) limited to five cores, one of which was classified as a ‘core tool’ owing to the presence of a utilised edge, and a single flaked piece with retouch and use-wear along one margin. A single unmodified utilised flake was also identified during survey.	
H.Brayshaw and L.Haglund	1997	Proposed landfill operation, west of Richmond Road	Survey	c.1.1 km, east	Pedestrian survey of c.61ha component of larger 91 ha study area situated on an “elevated landform with very gentle slopes and only one defined watercourse” (Brayshaw and Haglund 1997: 7). Four survey areas, ranging in size from 14 to 27 ha, subject to survey. Former quarry (30ha) excluded from survey. GSV within individual survey areas was, in general, assessed as ‘good’. Thirteen open artefact sites, comprising 10 artefact scatters and three isolated artefacts, identified during survey, with a total of 72 individual artefacts recorded, the majority of which (c.80%) had been damaged by tractors or bulldozers. Several ‘artefacts’ could not be confidently identified as such owing to post-discard damage. Identified artefacts included fourteen cores/core fragments, as well as “several pieces with retouch or usewear” (Brayshaw and Haglund 1997: 12). Silcrete was the dominant raw material, accounting for 90.3% of recorded artefacts. Other raw materials included quartz (n = 3), chert (n = 2) and quartzite (n = 1). Identified sites interpreted as ‘background scatter’ (Brayshaw and Haglund 1997: 12).	Brayshaw & Haglund 1997
Central West Archaeological and Heritage Services	2001	Proposed egg packing station & detention ponds,	Survey	c.0.4 km, northeast	Full coverage pedestrian / motor vehicle reconnaissance survey of c.23 ha section of “Clydesdale” property adjacent to Richmond Road. Three ‘micro landform units’ recognised: 1) alluvial floodplains; 2) ephemeral drainage lines; and 3) low hillslopes / crests. Total effective	Central West Archaeological and Heritage

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		"Clydesdale" property			coverage calculated at 38.6%, with average Ground Surface Visibility (GSV) ranging from 30% to 60%. Effective coverage highest in the 'alluvial floodplains' unit (29.6%), followed by the 'low hillslopes / crests' unit (6.6%) and 'ephemeral drainage lines' unit (2.4 %). Four Aboriginal archaeological sites, comprising three open artefact sites (two artefact scatters and one isolated artefact) and a possible scarred tree, identified during survey. Recorded stone artefacts (n = 6) included two 'indeterminate' cores, one of which was manufactured on a cream-grey coloured chert flake. Raw materials represented included silicified tuff (n = 4), chert (n = 1) and silcrete (n = 1). Possible scarred tree comprised a standing dead eucalyptus tree (likely <i>E.mollucana</i>) with a clearly defined, elongated scar on its outer cambium surface. Three out of four sites located within 'alluvial floodplains' landform unit. Survey results interpreted as a product of a "very limited, transient level of past Aboriginal occupation" (Kelton 2001: 46)	Services 2001
Australian Museum Business Services (AMBS)	2002	Western Sydney Orbital (WSO), Plumpton Ridge	Test excavation	c.4km, southeast	Test excavation program across eastern flanks of Plumpton Ridge, just north of the Dean Park residential area. Total of 192 artefacts recovered from 126 50 x 50 cm test pits excavated along ten transects. Majority of artefacts (91.3%, n = 115) recovered from single expanded 1 m ² pit. Approximately two-thirds of excavated pits contained no artefacts. Artefact types comprised cores (n = 8), complete flakes (n = 94), broken flakes (n = 40) and flake fragments (n = 50). Silcrete artefacts overwhelmingly dominant (n = 188, 97.7%). Substantial quantities of naturally fractured silcrete also recovered during excavation. No distinct evidence of stone quarrying identified as a result of test excavation program.	AMBS 2002
Jo McDonald CHM	2006	Colebee Release Area, Colebee	Salvage excavation	c.3.5 km, southeast	Archaeological salvage investigation of the Colebee Release Area (CRA) involving hand excavation of 687 m ² across seven sample areas (SA20-SA26) located within three distinct landscapes: 1) the riverine corridor of Eastern Creek (SA23 and SA24); 2) mid ridge slopes (SA20, SA21 and SA22); and 3) the margins of Plumpton Ridge itself at c.50 m AHD. More than 80,000 stone artefacts recovered from gridded test and open area excavations across the seven sample areas, with the highest concentration of artefacts occurring at Area A in SA23, a 60m ² open area excavation located at the end of spur extending Plumpton Ridge and Eastern Creek, approximately 4 m above the creek. Salvage excavation at SA23 Area A yielded in excess of 45,00 artefacts, with cores (n = 607) and backed artefacts (n = 1,100) strongly represented. Densities within SA23 Area A ranged between 333 and 1,850 artefacts / m ² , with silcrete the dominant raw material for artefact manufacture (>85%). More broadly, the results of the salvage program undertaken unequivocally identified Plumpton Ridge as a sub-regionally significant quarry site, with post-excavation analyses revealing trends suggestive of a process of 'distance-decay'. Primary quarrying activities (i.e., bulk extraction and early-stage processing) on Plumpton Ridge appear to have occurred on the upper slopes and crest of the ridge.	Jo McDonald CHM 2006b

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					No dating of organic materials was undertaken as part of the salvage program. However, with the exception of a possible Pre-Bondaian presence at SA23, a broad mid-to-late Holocene antiquity for Aboriginal occupation of the CRA was inferred on the basis of the technological and typological characteristics of recovered flaked stone artefact assemblages.	
J.Comber	2008	Substation Subdivision	Survey	c.1.3 km, east	Field survey of Lot 291 on DP1076555 (9.2 ha). Survey undertaken on foot using transect sampling method. Study area divided into three sample / landform units for survey: 1) knoll/small ridgeline; 2) gentle slopes; and 3) dam/wetland & drainage channel. Exposure was highest in the 'knoll/ridgeline' unit (50%), followed by the 'gentle slopes' unit (30%) and 'dam/wetland & drainage line' unit (20%). GSV within exposures was uniformly high (90-100%), providing effective coverage estimates between 20% and 50%. Eight open artefact sites, consisting of four artefact scatters and four isolated artefacts, were identified during survey, with the maximum number of artefacts recorded within identified scatters being three. All remaining scatters contained two artefacts each. All artefacts identified during survey (n = 13) were manufactured out of silcrete, with all but one classified as 'flaked pieces'. Of the eight sites identified, three were located within knoll/ridgeline unit, two in the dam/wetland unit and two in the gentle slopes unit. Identified sites deemed consistent with background scatter away from major creek confluences (Comber 2008: 20).	Comber 2008
Kelleher Nightingale Consulting (KNC)	2009	Marsden Park Industrial Precinct	Survey	c.0.3 km, southeast	Field survey of land within Marsden Park Industrial Precinct of Sydney's NWGC. All but six lots within 551 ha precinct were subject to pedestrian survey over a four day period. Forty-two previously unrecorded open artefact sites were identified during survey, with a further 21 sites identified through background research. Four areas of PAD were also recorded, though were not counted as sites. Most (n = 22) previously unrecorded open artefact sites were located on mid-slopes, followed by lower slopes (n = 10), upper slopes (n = 6) and crests (n = 4). Artefact counts for individual sites ranged from 1 to '30+', with combined raw material data for all sites (i.e., 114 individually recorded artefacts) suggesting a clear emphasis on the procurement and reduction of locally available silcrete (n = 104, 91.2%). Remaining raw materials included quartz (n = 2), chert (n = 3), S.tuff (n = 4) and silicified wood (n = 1). Type data for the combined survey assemblage (n = 114) indicate an assemblage dominated by complete/broken flakes and flaked pieces, with formed objects limited to cores (n = 11, all manufactured out of silcrete).	KNC 2009
Kelleher Nightingale Consulting (KNC)	2010	Indicative Layout Plan (ILP) options within Marsden Park Precinct	Survey	Project area falls wholly within area assessed	'Woorong Park' property selectively surveyed as part of due diligence assessment aimed at identifying Aboriginal sites and providing advice on future management. Six open artefacts sites, comprising five artefacts and one isolated artefact, identified during field inspection (WP1-WP6). Three sites - WP1, WP5 and WP6 - located within current study area (see Table 6). Largest sites	KNC 2010

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					(WP1 and WP5) located along Little Creek and unnamed, easternmost tributary. Both sites assessed as retaining moderate potential for subsurface deposit. Silcrete dominant raw material for flaked stone artefact manufacture at both sites. Single backed artefact identified within WP1 along Little Creek tributary.	
Biosis Research	2010	Western Sydney Recycled Water Initiative, Replacement Flows Project	Test excavation	c.3.3 km, southeast	Archaeological test excavations undertaken within the Blacktown Native Institution (BNI) site and an area of PAD (WSPAD3) to the east of Richmond Road, south-east of Bells Creek. Seventy-four shovel probes excavated within WSPAD3. Substantial quantities of naturally fractured silcrete encountered. 52 definite silcrete artefacts recovered consisting of nine complete flakes, seven broken flakes, one core fragment and 35 pieces of debitage. Low overall density of 5.4 artefacts per m ² . Thirty-five test pits excavated across BNI site. Single Aboriginal artefact recovered alongside 71 pieces of modern and historic material.	Biosis 2010
Kelleher Nightingale Consulting (KNC)	2012	Marsden Park Precinct	Survey	Project area falls wholly within Marsden Park Precinct	Field survey of land within Marsden Park Precinct of Sydney's NWGC (1,800 ha). A total of nine survey units, ranging from approximately 11 to 610 ha in size, were subject to pedestrian survey, with cited survey unit areas providing a total survey coverage of approximately 1,100 ha (61.1% of precinct). Effective coverage estimates for assessed landforms within these survey areas (i.e., open depression, flat, simple slope and crest) were uniformly low (<1%), with dense grass cover identified as the primary limiting factor to surface visibility across the precinct. KNC (2012: 21) report a total of 67 Aboriginal archaeological sites within the precinct, with the majority (n = 43, 64.2%) comprising previously recorded sites. Artefact scatters were the dominant site type (n = 55) across the precinct, with other, less common sites comprising 11 isolated artefacts and two scarred trees, one of which was spatially associated with an artefact scatter. Newly recorded sites (n = 24) were most commonly located on simple slopes (n = 11), followed by crests (n = 7) and an equal number on flats (n = 3) and within open depressions (n = 3). Raw material data provided by KNC (2012: 26-65) indicate an emphasis on silcrete (n = 126 out of 162 individual artefact entries, 77.8%), with other, comparatively poorly represented materials including silicified tuff (n = 19), quartz (n = 5), petrified wood (n = 1), chert (n = 10) and basalt (n = 1). Formed objects limited to a single core tool and two backed artefacts. Two hammerstones were also identified and recorded.	KNC 20012
AECOM Australia Pty Ltd (AECOM)	2013	'The Grange' residential development	Survey and test excavation	c.2.3 km, east-southeast	Two part archaeological investigation of c.26ha study area adjacent to Richmond Road (eastern side). Full coverage pedestrian survey followed by two-phase test excavation program. Survey failed to relocate any of the surface artefact loci recorded by KNC (2009) in association with open artefact sites MPIP5 and MPIP6. However, a total of four previously unrecorded surface artefact loci, consisting of two isolated artefacts and two artefact scatters, were identified and	AECOM 2013b

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					interpreted as opportunistic surface representations of former subsurface deposits. Phase 1 of the test excavation program involved the excavation of 50 50 x 50 cm (0.25 m²) test pits across the study area, with Phase 2 involving the excavation of an additional twenty-four 50 x 50 cm test around/adjacent to two Phase 1 pits. Test pit locations for Phase 1 of the test excavation program were selected by way of a stratified random sampling design, with identified landform units forming the basis of stratification. Overarching pattern of subsurface artefact distribution revealed by Phase 1 testing across the study area characterised as “sparse and discontinuous”. Most (n = 33, 66%) Phase 1 test pits contained no artefacts. Artefact-bearing pits (n = 17), meanwhile, were widely but unevenly distributed across the study area, with a loose cluster discernible towards the centre of the site in association with a unnamed 1st order stream. Artefact densities in Phase 1 test pits were near-uniformly low (i.e., ≤5 artefacts per 0.25 m²), with only one ‘moderate’ density of ten artefacts per 0.25 m² identified. Flaked stone artefacts from Phase 1 pits (n = 41) consisted mainly of flake debitage items (n = 31, 75.6%), with flaked pieces (n = 8) and formed objects (i.e., cores and retouched implements, n = 2) making up the remaining 24.4%. Formed objects comprised two silcrete cores made on indeterminate banks. With the exception of a single FGS flake, all artefacts recovered from Phase 1 test pits were manufactured out of silcrete. Phase 2 of test excavation program involved the completion of two small-scale open plan expansion excavations around/adjacent to two Phase 1 pits. These comprised TP#14, located on a level-flat immediately south of the Southern Drainage Depression, and TP#37, located in a lower slope context to the east of the large farm dam on Lot 21. At TP#14, a 2 x 2 m (4 m²) expansion excavation, designated as Open Area #1, was completed to investigate the moderate density of artefacts identified within this pit (i.e., 10 artefacts per 0.25m², the highest density encountered during Phase 1 testing). Artefact densities within the four m² quadrants of Open Area #1, which intercepted a high density concentration of silcrete artefacts consistent with a knapping floor, ranged from two to 110 artefacts per m². In contrast to Open Area #1, observed artefact densities within Open Area #2, a 1.5 x 1.5 m (2.25 m²) expansion excavation completed around TP#37 at the request of RAPs, were deemed inconsistent with intensive stone reduction.	
Godden Mackay Logan (GML)	2013	Stockland's 'Elara' residential development	Survey and test excavation	Directly adjacent	Two-part archaeological investigation of c.189 ha study area adjacent to Richmond Road. Pedestrian survey employing transect sampling method followed by single phase test excavation program. Topography of study area typical of South Creek (sc) and Berkshire Park (bp) soil landscapes described by Bannerman and Hazelton (2011). Study area contained three unnamed creek systems, all of which were characterised as ephemeral. Total survey coverage of c.6ha,	GML 2013a, 2013b

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					representing around 3% of the study area, achieved. Effective coverage estimates for individual transects were, in general, very low ($\leq 1\%$), with only a few notable exceptions. Two artefact-bearing sites - one known (MPP-05) and one previously unrecorded (MPS1) - identified during survey, as well as four areas of PAD. One area of PAD - PAD#4 - spatially associated with MPP-05, which contained 11 spatially discrete surface artefact loci. Previously recorded open artefact site WP2 could not be relocated during survey. Non-artefact-bearing portion of MPP-04, meanwhile, reassessed as holding no archaeological potential. Study area divided into three zones of archaeological potential for the purposes of test excavation, with a total of 134 50 x 50 cm (0.25 m²) test pits excavated across ten transects positioned to intersect surface artefact loci and sample identified areas of PAD. Four transects, containing a total of 49 test pits, excavated across 'bp' soil landscape, with a further six, containing a total of 85 test pits, excavated across the floodplain (n = 37) and lower slope (n = 48) portions of the 'sc' soil landscape. GML (2013: 79) report a generally low level of soil disturbance across the excavated transects. Artefact-bearing pits were widely scattered across the study area, with all but two transects containing at least one such pit. Mean artefact densities for individual transects, meanwhile, were uniformly very low (i.e., $1 \leq \text{artefacts/m}^2$), with a mean overall density of 0.4 artefacts/m². Most (86.7%) artefacts were recovered from the top 10 cm of excavated deposits. Excavated stone artefacts (n = 15), predominantly manufactured out of silcrete (n = 11) but also silicified tuff (n = 4), included two backed artefacts and a distal flake fragment with possible use-wear. No definite cores were recovered. Test excavation and field survey results interpreted as a product of non-intensive or transitory Aboriginal land use.	
Eco Logical Australia (Eco Logical)	2015	Stockland's 'Elara' residential development	Survey and test excavation	Directly adjacent	Two-part archaeological investigation of c.55 ha study area bordering the current Project area to the east. Pedestrian survey employing transect sampling method followed by single phase test excavation program. Eco Logical (2015a: 22) report three discrete landform units within the study area, being crests, slopes and flats. Study area traversed by easternmost tributary of Little Creek, here a 3rd to 4th order stream, and bordered (in part) by Little Creek. Total survey coverage of c.20ha, representing around 36% of the study area, achieved. Effective coverage estimates for individual survey units (n = 6) ranged from 5% to 80%, with the highest effective coverage achieved along an unsealed east-west trending vehicle track in the southern portion of the study area. Six new and three previously recorded open artefact sites identified/relocated during survey. All new sites consisted of isolated artefacts, with formed objects limited to a single silcrete core.	Eco Logical 2015a, 2015b, 2015c

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					Artefacts identified in association with previously recorded sites within the study area included a silicified tuff core and possible hammerstone/grindstone (unidentified material). Total of 72 test pits excavated across seven transects. Three transects located on alluvial flats adjacent to unnamed tributary and Little Creek, three on the adjoining hillslope and one on crest. Excavated soil profiles generally consistent with those described by Bannerman and Hazelton (2011) for the Berkshire Park and South Creek soil landscapes. Eco Logical report (2015c: 54) variable soil integrity across the study area, with "general truncation" of soil profiles evidenced by presence/absence of A₂ horizons. Soils along Little Creek and unnamed tributary "showed evidence of waterlogging and disturbance from water movement". Six diagnostic stone artefacts recovered from a total of five test pits, providing an average overall density of 0.3 artefacts / m². Diagnostic artefacts included two complete silicified tuff flakes, one multidirectional silicified tuff core, one complete silcrete flake, one proximal silcrete flake and a broken backed artefact (silicified tuff). While surface deposits of Rickabys Creek gravels were present within the study area, no evidence for stone quarrying was observed during test excavation. In common with GML (2013b), test excavation and field survey results interpreted as a product of non-intensive or transitory Aboriginal land use.	
AECOM Australia Pty Ltd (AECOM)	2015	'The Grange', residential development, Richmond Road	Salvage excavation & surface collection	c.2.3 km, east-southeast	Area of 59.75 m², comprising 59 complete 1 x 1 m squares and one partial square, excavated around the larger of the two Phase 2 expansion excavations completed within the revised boundaries of open artefact site MPIP5 (45-5-3726) in April 2013 (i.e., Open Area #1 adjoining Phase 1 TP#14), resulting in a completed open plan salvage excavation of 64 m² (the 'MPIP5 open area'). In topographic terms, the salvage excavation sampled part of a level flat bordering the southern drainage depression, a 1st order drainage line, in the central portion of the MPIP5 site. No inset archaeological features, such as hearths or heat treatment pits, were intercepted by the salvage excavation. However, four high density artefact foci, three of which occurred on the boundaries of the excavation area, were deemed technologically and spatially consistent with 'knapping floors'. Outside of these concentrations, densities were typically low (i.e., ≤ 30 lithic items / m²). Average overall artefact density was 20.2 artefacts / m². A total of 2018 lithic items, 1289 of which satisfied technical criteria for identification as artefacts, were recovered from the MPIP5 open area (including previous test excavation units). The assemblage was dominated by flake (n = 816) and non-flake (n = 395) debitage items, which collectively accounted for 60.1% of the assemblage by count and 28.7% by weight. Recovered flake debitage items consisted principally of complete flakes, with 'broken' flakes (i.e., proximal flakes and split flakes) also strongly represented. Heat shatters were likewise well represented,	AECOM 2015a

Consultant	Year	Project	Investigation type	Location relative to the Project area	Summary of investigation & results	Reference
					making up 35.3% of the assemblage by count (n = 713) and 36.8% by weight (1588.4 g). Formed and unmodified utilised items included 47 cores, 26 backed artefacts, three non-backed retouched implements and one unmodified utilised flake. Sixteen non-diagnostic items and a single hammerstone were also recovered. Silcrete was the dominant raw material overall, accounting for 85% of the MPIP open area assemblage by count (n = 1715) and 93.5% by weight (4033.2 g). Silicified tuff was the second most common raw material, with a total of 253 silicified tuff items weighing 142.7 grams recovered, the overwhelming majority of which comprise heat shatters. Other minor lithologies present included quartz (n = 41, 110.3 g), FGS (n = 7, 13.4 g) and quartzite (n = 2, 12.8 g). MPIP5 open area assemblage interpreted as a palimpsest of multiple, short term, low intensity occupation episodes involving, among other activities, on-site core reduction and backed artefact manufacture. Alongside those recovered from the MPIP5 open area, a total of 136 lithic items were surface collected from four of the six surface artefact loci previously recorded within the boundaries of the MPIP5 site. Lithic-bearing loci included MPIP5C, MPIP5D, MPIP5E and MPIP5F, with salvaged lithic totals ranging from one to 132 items. Silcrete only raw material represented.	

4.3 Key Archaeological Observations

Key observations to be drawn from a review of the regional and local archaeological context of the Project area are as follows:

- Available radiometric dates indicate that Aboriginal people have occupied the Cumberland Plain for at least 36,000 years;
- Compared with that available for the Late Pleistocene/early Holocene, evidence for mid-to-late Holocene Aboriginal occupation of the Cumberland Plain abounds, with the majority of previously recorded sites/deposits likely dating to these periods;
- Aboriginal site distribution on the Cumberland Plain has been linked to a variety of environmental factors, with stream order and landform identified as key determinants;
- Existing archaeological data for the Cumberland Plain indicate that assemblage size and complexity tend to vary significantly in relation to stream order and landform, with larger, more complex assemblages concentrated on elevated, low gradient landform elements adjacent to higher order watercourses. Outside of these contexts, surface and subsurface artefact distributions have typically been found to be sparse and discontinuous and are often referred to as 'background scatter';
- Existing AHIMS data for the greater Marsden Park area indicate that open artefact sites (i.e., artefact scatters and isolated finds) are the dominant site type for this area;
- Local flaked stone artefact assemblages attest to an emphasis on the procurement and reduction of locally available silcrete blanks, with the Tertiary Rickabys Creek Gravel and St Marys formations identified as a major source formations;
- To date, archaeological investigation of land within the current Project area has been limited to survey, with the subject properties selectively surveyed as part of two previous Aboriginal heritage assessments (KNC 2010, 2012);
- Previous test excavation programs to the west of current Project area, within areas that have or will be subject to ground surface activities as a result of Stockland's residential development 'Elara' (i.e., Eco Logical 2015c; GML 2013b) yielded very few stone artefacts, with test excavation results from these programs interpreted as a product of transitory or non-intensive Aboriginal land use.
- No evidence of Aboriginal stone quarrying has been identified within the current Project area, with the nearest 'stone extraction' or quarry site (MP48, AHIMS ID #45-5-0686) occurring approximately 1.5 km to the south within the former Llandilo International Transmitting Station site.
- Previously recorded Aboriginal sites within the Project area include seven open artefact sites. These sites are best conceived of as disturbed surface expressions of former subsurface deposits.

4.4 Ethnographic Context

4.4.1 The Darug Language and People

Available sources indicate that Project area falls wholly within the traditional country of the Darug people, who spoke the Darug (also spelt Dhaŕ-rook, Dharrook, Dhaŕook, Dharruk and Dharug) language (**Figure 18**). Darug is believed to have been spoken from the Hawkesbury River in the north, to Appin in the south, and from the coast west across the Cumberland Plain into the Blue Mountains. Historical reference materials indicate that two distinct dialects of Darug were spoken at the time of European contact, a coastal dialect, spoken on the Sydney peninsula and the country to the north of Port Jackson, and a hinterland dialect, spoken on the Cumberland Plain from Appin in the south to the Hawkesbury River in the north (Attenbrow 2010: 34). This linguistic division is thought to correspond to a broader economic division between 'coastal' and 'hinterland' Darug-speaking peoples, with several early sources drawing a distinction between the diets, subsistence patterns and material culture repertoires of coastal and hinterland peoples (e.g., Collins 1798; Tench 1793; Phillip 1788 in Attenbrow 2010: 63). The accounts of early observers such as Collins (1798) and Tench (1793), for example, suggest that the diets of those living along the coast were heavily biased towards marine resources while those of hinterland groups were based chiefly on the exploitation of land mammals and plant foods. Notably, early sources (e.g., Collins 1798, 1802; Tench 1793) suggest little contact between coastal and hinterland groups.

Some idea of population size for the coastal Darug at contact is provided by Attenbrow (2010), who suggests that the area around Port Jackson likely supported a minimum population density of 0.75 persons/ 1 sq. km (i.e., 1 person/1.3 sq. km). Attenbrow's estimate is based Governor Phillip's own estimate of the Aboriginal population of this area, made in 1788. Phillip, reporting to Lord Sydney on 15 May 1788, estimated a total population of not "less than one thousand five hundred" (Phillip 1788 in Attenbrow 2010: 17). Population densities for the hinterland Darug were perceived by early colonial observers to have been lower than along the coast. More recently, Kohen (1995) has estimated a minimum overall density of around 0.5 persons per sq. km for the hinterland zone.

In common with other regions of New South Wales (e.g., Attenbrow 2010) and Australia more broadly (Peterson, 1976), available historical records suggest that the primary units of social organisation amongst the Darug were the clan and band. Kohen (1993:15) equates the term 'clan' with 'band', defining both as "groups of people who lived together and hunted together". However, Attenbrow (2010) draws a distinction between the two, with clans comprising local descent groups and bands, land-using groups who, though not necessarily all of the same clan¹², camped together and cooperated daily in hunting, fishing and gathering activities. Individual bands will have habitually occupied and exploited the resources of particular tracts of land within the overall territory of their clan. However, the territorial boundaries of each band will have been permeable or elastic in the sense of complex kinship ties facilitating inter-band territorial movements and the reciprocal use and/or exchange of resources.

The size of the individual bands occupying the Cumberland Plain at contact was no doubt activity and season dependent. However, an upper limit of around 50 individuals, consisting of several nuclear families, has been suggested (Kohen 1988: 239). Individual band sizes notwithstanding, much larger groups of Aboriginal people, numbering in the hundreds, are known to have come together for events such as corroborees, ritual combats and feasts. Unlike many Australian Aboriginal groups, social organisation amongst the Darug did not comprise a class system based on moieties or sections but rather was based on clan membership attained through patrilineal descent (Attenbrow 2010: 57; Kohen 1993: 35). Totemic affiliations were inherited from a person's father and, along with clan membership, were the basis upon which marriages were arranged and initiations carried out.

Available historical records indicate that a wide range of marine and freshwater fauna were exploited by Darug-speaking peoples for food and other resources (for a detailed discussion see Attenbrow 2010: 62-84). Along the coast, an emphasis on the exploitation of marine resources, principally fish and shellfish, is attested in the writings of several early observers (e.g., Collins 1798: 461-2; Phillip 1788 in Attenbrow 2010: 63; Tench 1793). Further inland, historical records suggest an emphasis on the hunting of land mammals, with kangaroos, wallabies, possums, gliders, fruit bats (i.e., flying foxes), dingos, koalas and wombats variously reported as having been either hunted and/or eaten. Possums, in particular, appear to have been major food source in the hinterland, with a number of early accounts remarking on the tree climbing skills of the 'woods people' (Barrallier 1802; Collins 1798; Hunter 1793; Tench 1793) and detailing procurement techniques. Freshwater fish, shellfish and eels are also known to have been exploited by hinterland groups (Attenbrow 2010: 70).

Compared with their faunal counterparts, the plant food resources of coastal and hinterland Darug-speaking peoples are poorly represented in the writings of early colonial observers. Nonetheless, available descriptions do suggest that plants formed a regular part of the diets of groups in both areas (see Attenbrow 2010: 77-8). Away from the coast, a "vegetable catalogue" consisting of "a few berries, the yam and fern root, the flowers of the different Banksia, and at times some honey" has been reported (Collins (1798 [1975]: 461-2). Kohen (1988: 239), citing Hunter (1793), has suggested that "plant foods were particularly important along the Nepean and Hawkesbury Rivers, where 'yams' provided the staple diet, at least seasonally".

A wide range of hunting and gathering 'gear' was employed by Darug speaking peoples, with distinctive repertoires for men and women (McDonald 2008: 24). Men's gear included several different forms of spears (variously barbed), spear throwers, clubs, 'swords', boomerangs, shields and hafted stone hatchets known as *mogo*. Women's toolkits, in contrast, included fishing hooks, lines and sinkers, digging sticks and various containers (shell and wood). Net bags made from plaited wood fibre appear to have been used both men and women (see Attenbrow 2010: 91). Bark canoes were also widely used (Attenbrow 2010: 87).

Two major forms of shelter appear to have been utilised by Darug speaking peoples at the time of European contact: rockshelters and small huts built from sheets of bark, branches and bushes (Barrington 1802; Collins 1798, 1802; Tench 1793). In keeping with the linguistic division of the Darug language into coastal and hinterland dialects, differences in the nature of huts built along the coast and in the hinterland are attested in early colonial writings, with the former reportedly larger and "formed of pieces of bark from several trees put together in the form of an oven with an entrance...large enough to hold six to eight people" (e.g., Collins 1798 [1975]: 460). Unlike

¹² Some individuals may have been related through marriage.

those living along the coast, Darug-speaking peoples occupying the Cumberland Plain appear to have relied heavily on bark huts. Regarding settlement duration, as Attenbrow (2010:54) has observed, “there is little direct historical evidence for the length of time people stayed at any one campsite (be it a rockshelter or bark hut), how often they moved, or what motivated them to move to another campsite”. Kohen and Lampert (1987), for their part, have argued that “some bands probably lived at one campsite for months of each year and regularly returned to it”. However, this argument is not universally accepted (e.g., Attenbrow 2010: 55; McDonald 2008).

Evidence for ceremonial or ritual behaviour amongst Darug-speaking peoples can be found in the writings of a number early observers (e.g., Collins 1798; Phillip 1788 in Hunter 1793 [1968]: 500; Tench 1793), with documented ‘ceremonial’ activities including corroborees, male initiation ceremonies, ritual combats and various burial, body adornment and personal decoration practices. Although very little information on the subject exists, spiritual authority amongst Aboriginal language groups in the Sydney region, including the Darug, appears to have been vested in a number of supernatural beings, chief amongst which was Baiame (see Attenbrow 2010: 127).

In common with other parts of NSW and Australia more generally, the post-contact history of the Darug-speaking peoples of the Sydney Region is primarily one of dispossession and loss, with traditional hunting and camping grounds rapidly claimed and settled by Europeans and populations decimated by introduced diseases such as tuberculosis and small pox (Attenbrow 2010: 14-15, 21-22). However, active resistance and friendly relations are also attested in available records.

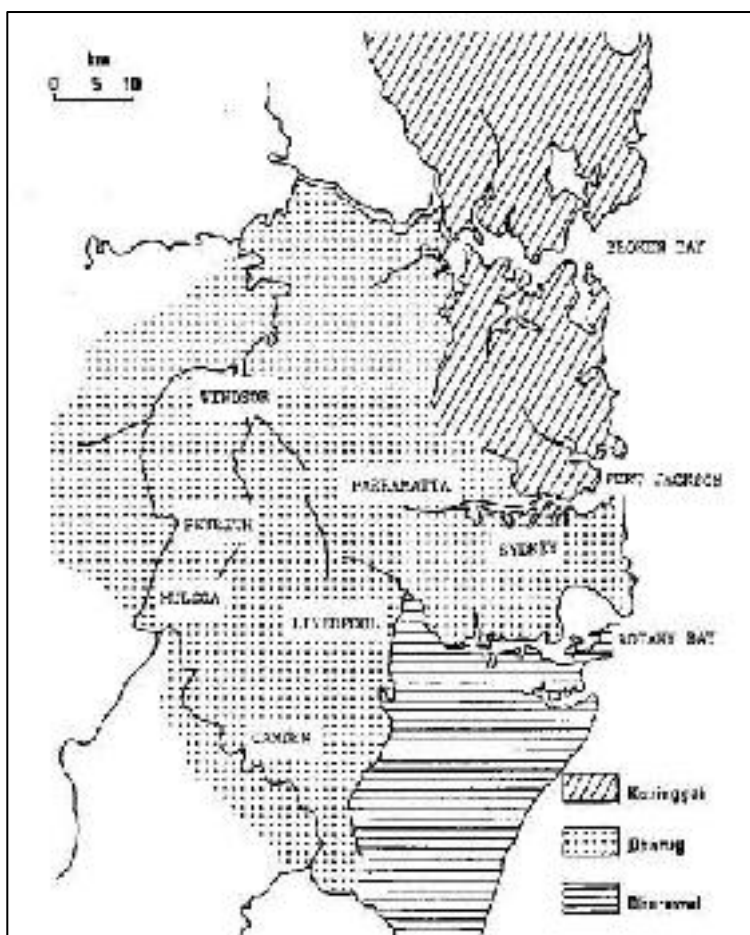


Figure 18 Aboriginal language group boundaries in the Sydney Region (from Kohen 1993: 241, Fig. 1)

4.4.2 The Blacktown Native Institution

The Blacktown Native Institution (BNI), the former site of which is located approximately 3 km southeast of the Project area, was a colonial initiative aimed at assimilating Sydney's Aboriginal population into an ostensibly British way of life. The subject of numerous investigations since the early 1980s, both archaeological and historical in nature (e.g., Austral Archaeology 2005; Bickford 1981; Bosis 2010; Brook & Kohen 1991; Godden Mackay Logan 2010; Lydon 2005; Jo McDonald CHM 2010; Navin Officer 2007), the BNI was a successor to The

Native Institution established by Governor Macquarie at Parramatta in 1814-15 in the context of increasingly violent conflict between settlers and Aboriginal people across the Sydney region. Established on a parcel of land adjoining what was then known as the 'Black Town', a community of Aboriginal people living on and around Governor Macquarie's 30 acre land grant to Darug men Colebee and Nurragingy, the BNI was in operation from 1823 to 1829 under the direction of the Church Missionary Society (CMS).

As with its predecessor, the BNI functioned as both a school and agricultural farm, with enrolled pupils instructed on Christianity, reading, writing, arithmetic and, dependent on sex, agriculture (boys only) and needlework (girls only). Today, the Institution site comprises a more-or-less vacant block of land. However, at the height of its operation, the Institution featured a schoolhouse, which doubled as a residence, a kitchen, a coach house, stables, gardens and a stockyard (**Figure 19**). Drinking water was obtained on-site from Bells Creek, then known as Gidley Chain of Ponds. Subsequent to its closure in 1829 as a result of rising costs and difficulties surrounding both the acquisition and retention of students, the Institution reserve and its associated buildings were bought and sold several times, with prominent colonial figure Sydney Burdekin a notable owner between 1877 and his death in 1899. Changes in ownership notwithstanding, land in the vicinity of the Institution is known to have remained a focal area for Aboriginal activity/occupation throughout the 19th century.

Formal archaeological investigations within the BNI site include those undertaken by Bickford (1981), Austral Archaeology (2005) and Biosis (2010). Bickford's (1981) early investigation, carried out as part of a larger study of contact period sites on the Cumberland Plain, involved a combination of documentary research and archaeological survey. A notable archaeological outcome of Bickford's investigation was the identification of a contact period artefact scatter on the north-western side of Bells Creek. This comprised a low-density scatter of stone artefacts, early-to-mid 19th century pottery and pieces of convict brick spread "over a wide area" (Bickford 1981: 15). Bickford (1981) argued that the contents and location of this site were consistent with available historical records for the Institute, which indicate that Aboriginal adults, presumably parents and/or relatives of pupils, were living in the vicinity of the schoolhouse. A scarred tree was also identified further along Bells Creek, northwest of the contact site. Structural evidence in the area of the schoolhouse was limited to sandstone footings belonging to 'Lloydhurst', the country residence of post-BNI owner Sydney Burdekin.

More recent archaeological investigations within the BNI site have included sub-surface testing. In 2005, Austral Archaeology undertook a cultural monitoring and salvage excavation program in southernmost portion of the BNI site in response to the widening of an existing drain under Rooty Hill Road North for the Westlink M7 project (Austral Archaeology 2005). As part of this program, six trenches covering a total area of 30 m² were opened. Extant soil profiles were found to be highly disturbed, with modern rubbish encountered in lower spits. No Aboriginal stone artefacts were recovered during excavation. However, large quantities of non-artefactual silcrete were retrieved. In common with Austral Archaeology's findings, Biosis' (2010) program of test excavation in the northern end of the BNI site, which included 35 shovel test pits (5.6 m² in total), found extant soil profiles to be disturbed. Excavated finds consisted of one Aboriginal artefact and 71 pieces of modern and historic material, with historic artefacts consisting predominantly of bottle fragments of late 19th to early 20th century date.

The Blacktown Native Institution has been recognised as being of State heritage significance because of its combination of historic, social and archaeological values, described as follows in its SHR listing:

The Blacktown Native Institution played a key role in the history of colonial assimilation policies and race relations. The site is notable for the range of associations it possesses with prominent colonial figures including: Governor Macquarie, Governor Brisbane, Samuel Marsden, William Walker and Sydney Burdekin. The Blacktown Native Institution site is valued by the contemporary Aboriginal community and the wider Australian community as a landmark in the history of cross-cultural engagement in Australia. For Aboriginal people in particular, it represents a key historical site symbolising dispossession and child removal. The site is also important to the Sydney Maori community as an early tangible link with colonial history of trans-Tasman cultural relations and with the history of children removed by missionaries. The Blacktown Native Institution is a rare site reflecting early 19th century missionary activity. The site has the potential to reveal evidence that may not be available from other sources about the lives of the children who lived at the school and the customs and management of the earliest Aboriginal school in the colony. The site also has the potential to contain archaeological evidence relating to later phases of land use, including the period the property was owned by Sydney Burdekin. In addition, the site may contain evidence of Aboriginal camps which may provide information about how Aboriginal people, accustomed to a traditional way of life, responded to the changes prompted by colonisation (NSW SHR 2013).

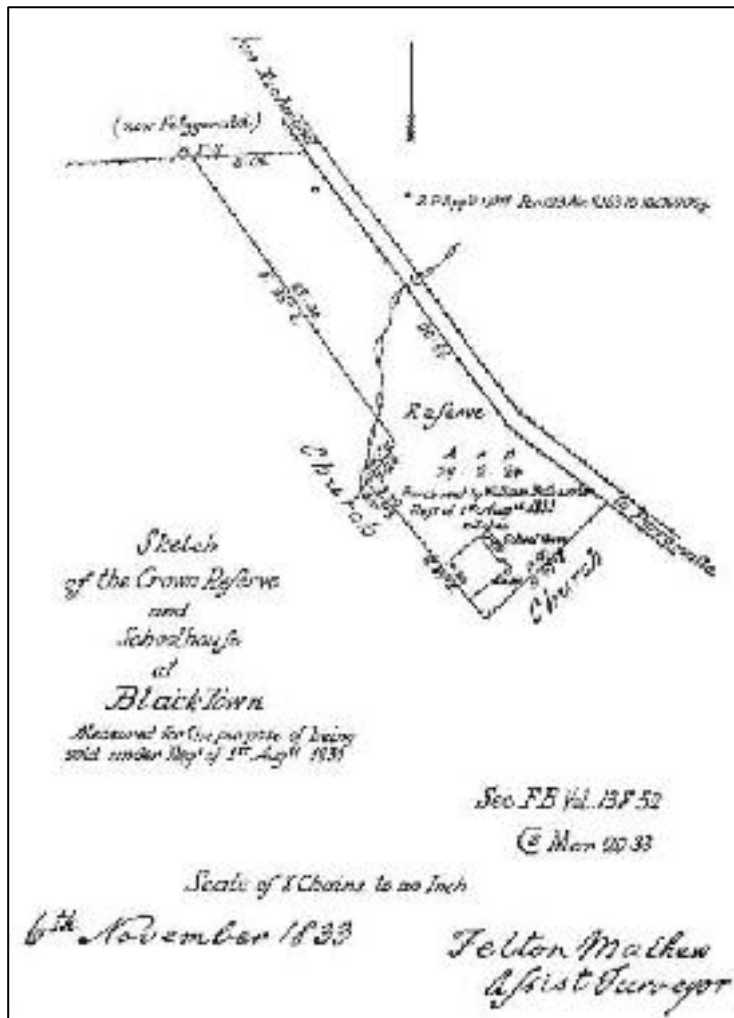


Figure 19 1833 sketch plan of the Blacktown Native Institution Reserve (from Jo McDonald CHM 2010: 19, Figure 5)

4.4.3 Colebee and Nurragingy Land Grant

The Colebee and Nurragingy Land Grant, located directly northeast of the BNI site on the eastern side of Richmond Road, was a 30 acre (12 ha) parcel of land jointly granted to Darug men Colebee and Nurragingy (Creek Jemmy) by Governor Macquarie in 1816. Colebee and Nurragingy were awarded the grant by Governor Macquarie in recognition of their involvement as guides in a series of punitive military expeditions to capture or kill Aboriginal people involved in disputes with white settlers around Appin, Cowpastures, Windsor, Parramatta and along the banks of the Hawkesbury-Nepean River. These expeditions were Governor Macquarie's response to increasing violence between settlers and Aboriginal people over limited resources. Governor Macquarie also presented Nurragingy with a "brass gorget" or breast plate inscribed with his name and the title 'Chief of the South Creek Tribe' (Lachlan 1818). Although the land grant was verbally granted to both men, as attested in Macquarie's own journal (Lachlan 1818), the grant was registered in Colebee's name only (Brook & Kohen 1991:38-39). Colebee is reported to have stayed only briefly on the grant whereas Nurragingy and his wife Mary appear to have lived there more-or-less permanently until around 1827 (Brook & Kohen 1991: 40). Cited reasons for the selection of the grant by Colebee and Nurragingy include the site's proximity to Plumpton Ridge, a major Aboriginal quarry site, the presence of a semi-reliable supply of drinking water in the form of Bells Creek, and the fact that the area formed part of the traditional land of Nurragingy's clan (Brook & Kohen 1991: 45; GML 2010).

During Nurragingy and Colebee's tenure, land within the grant was utilised for growing crops and rearing livestock. A bark and log hut with a chimney, built by ex-convict Sylvanus Williams in 1819 under Governor Macquarie's commission, served as Nurragingy and his wife's residence. A subsequent improvement to the property comprised it's fencing, at government expense, in 1823 (Brook & Kohen 1991: 41). Following the death of Nurragingy and Colebee, the property is known to have passed to Colebee's younger sister, Maria Locke (1843). Maria was a student at the Parramatta Native Institution from 1815 and her marriage to ex-convict Robert

Locke in 1824 was the first such officially sanctioned union. The Locke family continued to live on the land until approximately 1917 (Parry 2005). Today the land is owned by the NSW Roads & Maritime Services (RMS) authority and consists predominantly of undeveloped rural land (GML 2010).

To date, no archaeological excavations have been undertaken within the boundaries of the Colebee and Nurragingy Land Grant site, with previous field assessments limited to surface survey. Excavations undertaken in the vicinity include those carried out by Austral Archaeology (2005) and Biosis (2010) within the BNI site and Biosis' (2010) program of test excavation within the boundaries of a previously identified area of PAD (WSPAD3) to the south of the grant site. Excavations within WSPAD3 resulted in the recovery of 32 silcrete artefacts from a total of 74 shovel probes, with large quantities of naturally-occurring silcrete also recovered.

As with the BNI site, the Colebee and Nurragingy Land Grant has been recognised as being of State heritage significance, described as follows in its SHR listing:

The Colebee/Nurragingy Land Grant is a site of state heritage significance because of its combination of historical, social and cultural values. The site was the first land grant ever given to Aboriginal people in Australia. The land grant is associated with two significant Aboriginal figures from the early colonial period-Nurragingy and Colebee-to whom the land was jointly granted in 1816. The location of the land grant is significant because it was an Aboriginal choice, being on land belonging to Nurragingy's clan. The land grant is valued by the contemporary Aboriginal community and the wider Australian community as a landmark in the history of cross-cultural engagement in Australia. For Aboriginal people, in particular, it represents a key historical site symbolising Aboriginal resilience and enduring links to the land (NSW SHR 2013).

5.0 Cultural Heritage Values & Statement of Significance

5.1 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 13**). 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.

Table 13 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).

5.2 Scientific Value

Scientific value refers to the importance of a place in terms of its rarity, representativeness and the extent to which it may contribute further information (i.e., its research potential) (OEH 2011: 9).

5.2.1 Identification Process

Information on the scientific values of the Project area with respect to Aboriginal cultural heritage has been obtained through a review of existing environmental, ethnohistoric and archaeological data for the subject properties, as detailed in **Sections 2.3** and **4.0**, and a comprehensive archaeological field investigation involving both survey and test excavation (**Appendix B**).

Archaeological survey of the Project area was undertaken over a four day period (20-23 July 2015) by a combined field team of three AECOM archaeologists and three rostered RAP field representatives. The primary aim of the

survey was to identify and record any existing surface evidence of past Aboriginal occupation within the Project area, with specific, nested objectives including the relocation of previously recorded Aboriginal sites, the ground-truthing of land disturbances visible in examined historical aerial photographs and an assessment of the subsurface archaeological potential of extant landform elements. All survey was conducted on foot, with a total of 36 transects completed over the course of the survey.

Recorded transect data indicate that a total survey coverage of approximately 363 ha, representing around 87% of the total Project area, was achieved. Ground Surface Visibility (GSV) across the Project area was typically very poor (0-10%) due to dense native and exotic grass cover. For the most part, areas of enhanced GSV comprised erosion exposures along and adjacent to mapped watercourses, with significant, ongoing creek bank erosion observed along large sections of Little Creek and its two major tributaries. GSV in these exposures was typically excellent (90-100%). Other notable areas of enhanced GSV encountered during survey included dam banks, ant nests, sheetwash erosion exposures on slopes, vehicle tracks and cattle rest/feed areas. Calculation of the total effective coverage achieved for the current survey indicates that around 7% (c.30 ha) of the Project area could be effectively surveyed for surface Aboriginal archaeological materials.

In recognition of generally poor GSV conditions across the Project area and the potential for all non-grossly disturbed portions of the Project area to contain intact subsurface archaeological deposit, albeit of highly variable character, a 21 day program of archaeological test excavation was completed following survey. In accordance with Requirement 3.1 of the Code Practice, the overarching objective of the test excavation program was to collect information about the nature and extent of subsurface Aboriginal objects across the Project area. Archaeological test excavation was undertaken in two phases, with Phase 2 testing involving two separate but interrelated components (as detailed below).

Phase 1 of the test excavation program involved the excavation of two hundred 50 x 50 cm (0.25 m²) test pits across the Project area, with test pit locations selected by way of a stratified random sampling design employing identified landform units as the basis of stratification. Phase 2, in contrast, involved small, open plan expansion excavations (2 x 2 m) around three Phase 1 test pits (TP11, TP129 and TP183), as well as subsurface testing of a series of magnetic anomalies (n = 6) identified in the vicinity of TPs129 and 183 as a result of gradiometer surveys at these locations. A gradiometer survey in the vicinity of TP11 failed to identify any anomalies suitable for subsurface testing. Open plan extensions at TPs11, 129 and 183 were undertaken to better characterise what, on a Project area scale, comprised 'high' density concentrations of artefacts (16, 5 and 4 artefacts respectively, representing the three highest artefact totals from Phase 1 test pits).

5.2.2 Identified Scientific Values

The scientific values of the Project area rest with the Aboriginal archaeological sites that have been recorded within it. Taking into account the results of the survey and test excavation programs detailed above, a total of 13 Aboriginal sites are recognised within the Project area (**Table 14**). With the exception of previously recorded Aboriginal sites WP1 (45-5-4161), WP6 (45-5-4164) and MPP-01 (45-5-4158), all remaining AHIMS registered Aboriginal sites within the Project area (n = 4) have been subsumed within new sites, as detailed in **Table 14**. Site boundaries for the majority (n = 8, 61.5%) of identified sites have been defined on the basis of excavation extent, with remaining boundaries either previously defined by KNC (2010, 2012) or defined on landscape grounds. Where employed, landscape-based boundaries reflect either the natural extent of associated alluvial or residual landform elements or most archaeologically sensitive parts thereof.

An assessment of the scientific significance of the 13 Aboriginal sites identified within the Project area is presented in **Table 15** below. Significance ratings are offered on the basis of the assessed research potential, rarity and representativeness of each site on a local and regional scale. Ratings for previously recorded open artefact sites MPP-01 (45-5-4158) and WP6 (45-5-4164), neither of which was relocated during the survey component of the archaeological field investigation, are based on site information provided in associated site cards and reports (KNC 2010, 2012).

Table 14 Aboriginal archaeological sites within the Project area

Site Name	Centroid Coordinates		New or existing site?	AHIMS Id(s)	Type	AHIMS Site Feature(s)	Mapped landform unit(s)	Size (Area m ²)
	GDAE	GDAN						
South Creek Alluvial Landscape	295585	6270087	New	45-5-4704 45-5-4170	Open artefact site	AFT; PAD	Flat & Terrace	855,948

Site Name	Centroid Coordinates		New or existing site?	AHIMS Id(s)	Type	AHIMS Site Feature(s)	Mapped landform unit(s)	Size (Area m ²)
	GDAE	GDAN						
Little Creek Alluvial Landscape	296093	6269183	New	45-5-4705 45-5-4159 45-5-4160 45-5-4166	Open artefact site	AFT; PAD	Flat	657,579
Woorong Park Residual Rise 1	295378	6269826	New	45-5-4703	Open artefact site	AFT; PAD	Residual rise	19,924
Woorong Park Residual Rise 2	295089	6269401	New	45-5-4706	Open artefact site	AFT; PAD	Residual rise	88,436
Woorong Park Isolated Artefact 1	297480	6268343	New	45-5-4702	Open artefact site	AFT	Simple slope	0.25
Woorong Park Isolated Artefact 2	296801	6269038	New	45-5-4701	Open artefact site	AFT	Flat	0.25
Woorong Park Isolated Artefact 3	295582	6269232	New	45-5-4694	Open artefact site	AFT	Crest	0.25
Woorong Park Isolated Artefact 4	295025	6268856	New	45-5-4695	Open artefact site	AFT	Simple slope	0.25
Woorong Park Isolated Artefact 5	295721	6269738	New	45-5-4696	Open artefact site	AFT	Simple slope	0.25
Woorong Park Isolated Artefact 6	295840	6269665	New	45-5-4697	Open artefact site	AFT	Crest	0.25
Woorong Park Artefact Scatter 1	295678	6269140	New	45-5-4698	Open artefact site	AFT	Simple slope	0.25
Woorong Park Artefact Scatter 2	296109	6270013	New	45-5-4699	Open artefact site	AFT	Simple slope	0.25
WP1	297189	6268648	Existing	45-5-4161	Open artefact site	AFT	Simple slope, Depression & Flat	81,944
WP6	295938	6269646	Existing	45-5-4164	Open artefact site	AFT	Simple slope	5,500
MPP-01	296099	6268407	Existing	45-5-4158	Open artefact site	AFT	Crest	0.25

Table 15 Scientific significance assessment for identified Aboriginal sites

Site	Scientific significance ranking	Justification
South Creek Alluvial Landscape	Moderate	Complexity - Site incorporates alluvial landform elements which have been shown, on both a local and regional scale, to be of high archaeological sensitivity. - While no buried soils were encountered within this site during Phase 1 or 2 testing, field observations and relevant geomorphological/geoarchaeological reference materials (e.g., Barham 2007; Bannerman & Hazelton 2011) suggest that land within the mapped boundary of this site retains good potential for their presence at depth. - Taken at face value, the uniformly low subsurface artefact densities revealed by Phase 1 and 2 testing within the mapped boundaries of this site suggest non-intensive use by Aboriginal people. However, consideration of the landscape context of this site (i.e., within an active floodplain landscape) suggests that any such behavioural interpretation need not be valid, with observed densities likely linked to the geomorphologically dynamic alluvial landscape in which they occur.

Site	Scientific significance ranking	Justification
		Integrity - Field observations and historical aerial photographs suggest that the overwhelming majority of land within the boundary of this site retains a moderate degree of integrity, having been cleared and/or cropped historically but not subject to gross disturbance. - Aboriginal archaeological deposits within the boundaries of this site are expected to have variably affected by prehistoric and historic flood events. Potential for deposit - Field observations and available geomorphological/geoarchaeological reference materials suggest that alluvial landform elements within the mapped boundary of this site retain good potential for the presence, at depth, of buried soil horizons which may contain archaeological deposit(s) of high research potential (i.e., deposits of Late Pleistocene / Early Holocene antiquity) . Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - The South Creek Alluvial Landscape is a good example of its type. However, open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
Little Creek Alluvial Landscape	Moderate	Complexity - Site incorporates multiple surface and subsurface deposits of Aboriginal archaeological materials, as well as alluvial landform elements which have been shown, on both a local and regional scale, to be of high archaeological sensitivity. - While no buried soils were encountered within this site during Phase 1 or 2 testing, field observations and relevant geomorphological/geoarchaeological reference materials (e.g., Barham 2004; Bannerman and Hazelton 2011) suggest that portions of the Little Creek valley retain good potential for their presence at depth. - Presence of high subsurface artefact densities demonstrated through Phase 2 testing around Phase 1 test pit TP183. Integrity - Field observations and historical aerial photographs suggest that the overwhelming majority of land within the boundary of this site retains a moderate degree of integrity, having been cleared and grazed historically but not subject to gross disturbance. - Aboriginal archaeological deposits within the boundaries of this site are expected to have variably affected by prehistoric and historic flood events. Potential for deposit - Field observations and available geomorphological/geoarchaeological reference materials suggest that parts of the Little Creek valley proper retain good potential for the presence, at depth, of buried soil horizons which may contain archaeological deposit(s) of high research potential (i.e., deposits of Late Pleistocene / Early Holocene antiquity) . Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - The Little Creek Alluvial Landscape is a good example of its type. However, open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
Woorong Park Residual Rise 1	Moderate	Complexity - Presence of high subsurface artefact densities demonstrated through Phase 2 testing around Phase 1 test pit TP11. - Results of TP11 expansion excavation suggests that additional excavation

Site	Scientific significance ranking	Justification
		across this rise would likely yield a large and complex cultural lithic assemblage. Dateable hearths and other features (e.g., heat treatment pits) may also be present. Excavated evidence could be used to address a range of research questions concerning past Aboriginal settlement and subsistence strategies on a local and sub-regional scale. Integrity - While parts of this site have been disturbed through the construction/decommissioning of at least two farm sheds (and ancillary structures), as well as fenceline installation, field observations suggest that the majority of land within the boundaries of this site retains a moderate degree of integrity, having been largely cleared and grazed historically but apparently not subject to gross disturbance. Potential for deposit - The results of Phase 1 and 2 testing have demonstrated that untested land within the mapped boundary of this site retains high subsurface archaeological potential. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - Woorong Park Residual Rise 1 is an excellent example of its type. However, open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
Woorong Park Residual Rise 2	Low	Complexity - Presence of moderate or high subsurface artefact densities not demonstrated through Phase 1 and 2 testing. - Single silcrete flake recovered from three test pits excavated across northern portion of rise Integrity - In contrast to Woorong Park Residual Rise 1, field observations and historical aerial photographs indicate that a significant proportion of land within the mapped boundary of the site has been grossly disturbed as a result of the development of the main Woorong Park homestead complex. Potential for deposit - The results of Phase 1 testing suggest that untested land within the boundary of this site retains low subsurface archaeological potential. - Consideration of the results of Phase 1 and 2 testing across Woorong Park Residual Rise 1 suggests that the most archaeologically sensitive portion of this rise¹³ - being its low gradient crest - has been significantly disturbed as a result of the development of the main Woorong Park homestead complex. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - Woorong Park Residual Rise 2 is a poor example of its type. Open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
Woorong Park Isolated Artefact 1	Low	Complexity - Isolated artefact in subsurface context - Locally and regionally common artefact type (i.e., Proximal flake) - Locally and regionally common raw material (i.e., Silcrete) Integrity - Historical native vegetation clearance notwithstanding, no significant additional impacts to the integrity of the ground surface at this test pit location were

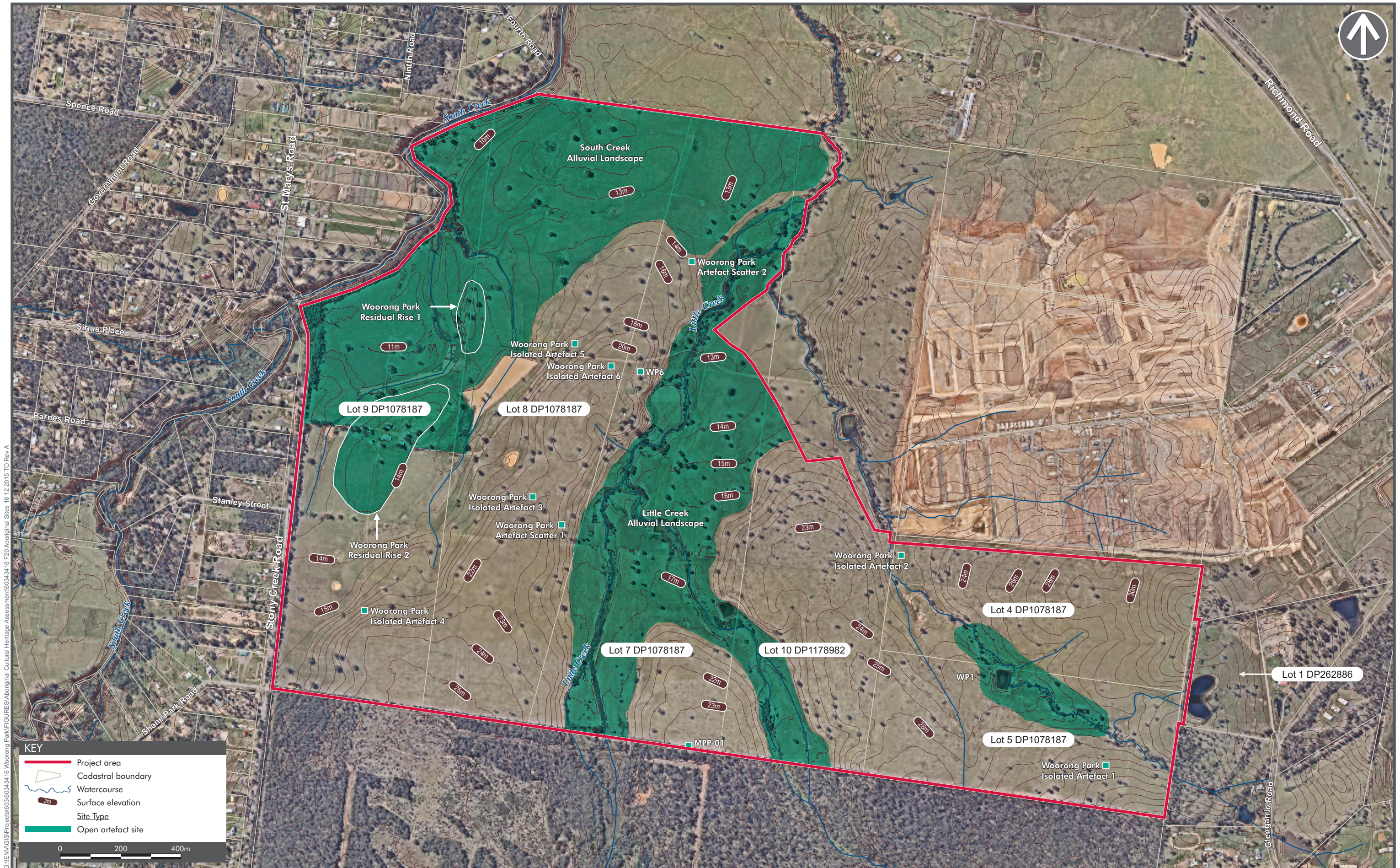
¹³ i.e., in terms of subsurface archaeological potential

Site	Scientific significance ranking	Justification
		identified during Phase 1 testing. Potential for deposit - Not applicable. Site boundary defined as 0.25 m² test pit. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - Woorong Park Isolated Artefact 1 is a poor example of its type. Open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
Woorong Park Isolated Artefact 2	Low	Complexity - Isolated artefact in subsurface context - Locally and regionally common artefact type (i.e., Complete flake) - Locally and regionally common raw material (i.e., Silcrete) Integrity - Historical native vegetation clearance notwithstanding, no significant additional impacts to the integrity of the ground surface at this test pit location were identified during Phase 1 testing. Potential for deposit - Not applicable. Site boundary defined as 0.25 m² test pit. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - Woorong Park Isolated Artefact 2 is a poor example of its type. Open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
Woorong Park Isolated Artefact 3	Low	Complexity - Isolated artefact in subsurface context - Locally and regionally common artefact type (i.e., Proximal flake) - Locally and regionally common raw material (i.e., Silcrete) Integrity - Historical native vegetation clearance notwithstanding, no significant additional impacts to the integrity of the ground surface at this test pit location were identified during Phase 1 testing. Potential for deposit - Not applicable. Site boundary defined as 0.25 m² test pit. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - Woorong Park Isolated Artefact 3 is a poor example of its type. Open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
Woorong Park Isolated Artefact 4	Low	Complexity - Isolated artefact in subsurface context - Locally and regionally common artefact type (i.e., Complete flake) - Locally and regionally common raw material (i.e., Silicified tuff) Integrity - Historical native vegetation clearance notwithstanding, no significant additional impacts to the integrity of the ground surface at this test pit location were identified during Phase 1 testing. Potential for deposit - Not applicable. Site boundary defined as 0.25 m² test pit. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - Woorong Park Isolated Artefact 4 is a poor example of its type. Open artefact

Site	Scientific significance ranking	Justification
		sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
Woorong Park Isolated Artefact 5	Low	Complexity - Isolated artefact in subsurface context - Locally and regionally common artefact type (i.e., Complete flake) - Locally and regionally common raw material (i.e., Silcrete) Integrity - Historical native vegetation clearance notwithstanding, no significant additional impacts to the integrity of the ground surface at this test pit location were identified during Phase 1 testing. Potential for deposit - Not applicable. Site boundary defined as 0.25 m2 test pit. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - Woorong Park Isolated Artefact 5 is a poor example of its type. Open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
Woorong Park Isolated Artefact 6	Low	Complexity - Isolated artefact in subsurface context - Locally and regionally common artefact type (i.e., Core fragment) - Locally and regionally common raw material (i.e., Silcrete) Integrity - Historical native vegetation clearance notwithstanding, no significant additional impacts to the integrity of the ground surface at this test pit location were identified during Phase 1 testing. Potential for deposit - Not applicable. Site boundary defined as 0.25 m2 test pit. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - Woorong Park Isolated Artefact 6 is a poor example of its type. Open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
Woorong Park Artefact Scatter 1	Low	Complexity - Two artefacts in subsurface context, both of which comprise unmodified complete flakes - Two lithic raw materials - silcrete and FGS - represented. Both locally available. Integrity - Historical native vegetation clearance notwithstanding, no significant additional impacts to the integrity of the ground surface at this test pit location were identified during Phase 1 testing. Potential for deposit - Not applicable. Site boundary defined as 0.25 m2 test pit. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - Woorong Park Artefact Scatter 1 is a poor example of its type. Open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
Woorong Park Artefact Scatter 2	Low	Complexity - Two artefacts in subsurface context - Locally and regionally common artefact types (i.e., complete flake and split flake)

Site	Scientific significance ranking	Justification
		- Two lithic raw materials - silcrete and quartz - represented. Both locally available. Integrity - Historical native vegetation clearance and ploughing notwithstanding, no significant additional impacts to the integrity of the ground surface at this test pit location were identified during Phase 1 testing. Potential for deposit - Not applicable. Site boundary defined as 0.25 m2 test pit. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - Woorong Park Artefact Scatter 2 is a poor example of its type. Open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
WP1	Low	Complexity - Maximum number of surface artefacts recorded between 2010 and 2015 (n = 10) is a locally and regionally low value - Surface assemblage dominated by locally and regionally common artefact types - Formed objects limited to single quartz backed artefact. Initially identified This artefact was not relocated during the current survey. - Limited range (n = 3) of locally available raw materials (i.e., silcrete, silicified tuff and quartz) Integrity - Field observations indicate that a significant proportion of land within the mapped boundary of this site has been grossly disturbed through severe creek bank erosion and/or dam construction. Nonetheless, parts of the site retain moderate integrity. Potential for deposit - The results of Phase 1 testing suggest that land within the mapped boundary of this site retains low subsurface archaeological potential. None of the five Phase 1 test pits excavated within site boundary yielded artefacts. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - WP1 is a poor example of its type. Open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.
WP6	Low	Complexity - KNC (2012) report a total of five artefacts in a disturbed surface context - Identified artefacts include a core and possible hammerstone - Site previously assessed as demonstrating low scientific significance due to disturbance including introduced fill, a vehicle track and vegetation clearance (KNC 2012). Integrity - Condition of WP6 previously assessed as 'poor' due to disturbance including introduced fill, a vehicle track and vegetation clearance Potential for deposit - The results of Phase 1 testing suggest low subsurface archaeological potential in the vicinity of this surface site. Consistent with KNC's (2012) observations, Phase 1 test pit TP67, located within the mapped boundary of this site, exhibited a highly disturbed subsurface profile. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - WP6 is a poor example of its type. Open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.

Site	Scientific significance ranking	Justification
MPP-01	Low	Complexity - KNC (2012) report a single artefact in a disturbed surface context - Locally and regionally common artefact type (i.e., proximal flake) - Locally and regionally common raw material (i.e., silcrete) Integrity - Artefact located margin of unsealed vehicle track running parallel to the southern boundary of the Woorong Park property Potential for deposit - The results of Phase 1 testing suggest low subsurface archaeological potential in the vicinity of this surface site. Five test pits in the same crest landform yielded no artefacts. Rarity and representativeness - Open artefact sites are a locally and regionally common site type. - MPP-01 is a poor example of its type. Open artefact sites with comparable or higher artefacts counts, densities, integrity and assemblage richness values are known on a local and regional scale and offer comparable/higher research potential.



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5.3 Social Value

Social or cultural value refers to the spiritual, traditional, historic and contemporary associations and attachments a place or area has for Aboriginal people and can only be identified through consultation with Aboriginal people (OEH 2011: 8).

Verbal and written advice received from the RAPs involved in this assessment has identified the following social or cultural values for the Project area:

- The Project area forms part of a larger and highly significant cultural landscape for contemporary Darug people, with recent excavations at the PT12 site adjacent to the Hawkesbury River at Windsor, northwest of the Project area, for example, demonstrating Aboriginal occupation from the Late Pleistocene;
- Aboriginal people will have moved across, utilised and cared for all parts of the Project area;
- Prior to European settlement, South Creek would have been an important resource feature for Aboriginal people occupying the Project area;
- The quantity of artefacts recovered from the TP11 expansion excavation indicates that the smaller of the Project area's two residual rises was a favoured camping spot;
- The lithic assemblage recovered during test excavation is typical of those found locally in terms of being dominated by artefacts manufactured out of silcrete; and
- Stones used for flaked stone artefact manufacture in the Project area were likely quarried from locally occurring gravel deposits.

5.4 Historic Value

Historic value refers to the associations that a place has with a historically important person, event, phase or activity in an Aboriginal community (OEH 2011: 9). Historic values can but will not necessarily be represented by physical evidence.

Although situated within a broader landscape of high historical significance for contemporary Darug people, the Project area itself is assessed as having low historical significance. No evidence of post-contact Aboriginal occupation has been identified within the Project area. In addition, no historical records or oral histories specific to the use of the site by Aboriginal people have been identified as part of this assessment.

5.5 Aesthetic Value

Aesthetic value refers to the sensory, scenic, architectural and creative aspects of a place and is manifested through a range of physical and non-physical attributes (OEH 2011: 9).

The Project area is assessed as having low aesthetic significance as the natural landscape of the subject properties has been extensively altered by historical and contemporary land use practises.

5.6 Statement of Significance

This assessment finds that the Aboriginal heritage values of the Project area rest principally with the Aboriginal archaeological sites that have been identified within it. These sites attest to past Aboriginal occupation and use of the Project area and collectively constitute a landscape of low to moderate scientific significance.

RAPs for this assessment have identified the Project area as forming part of a much larger and highly significant cultural landscape for Darug people and have indicated that Aboriginal people will have moved across, utilised and cared for all parts of the subject properties. RAPs have also identified South Creek and the smaller of Project area's two residual rises, in particular, as culturally important landscape features in terms of past Aboriginal occupation and resource exploitation.

Although situated within a broader landscape of high historical significance for contemporary Darug people, including the state heritage registered Blacktown Native Institution and Colebee and Nurragingy Land Grant sites, the Project area itself is assessed as having low historical significance. No evidence of post-contact Aboriginal occupation has been identified within the Project area. In addition, no historical records or oral histories specific to the use of the site by Aboriginal people have been identified as part of this assessment. The Project area is

likewise considered to have low aesthetic significance on the grounds that the natural environment of the subject properties has been extensively modified by historical land use practises.

6.0 The Proposed Activity

6.1 Summary of Proposed Impacts

As indicated in **Section 1.2**, Woorong Park propose to develop the Project area for residential purposes and have lodged a Development Approval (DA) application with Blacktown City Council for bulk earthworks across the entire Project area (DA-15-2273). Further DAs relating to the proposed residential development will be submitted in due course. Major impacts from the proposed development will include:

- Bulk cut and fill earthworks;
- Targeted native vegetation removal;
- Building and road construction;
- Installation of utilities through trenching; and
- Environmental rehabilitation and flood mitigation works.

Regarding physical impacts to ground surfaces within environmental conservation areas (**Figure 21**), discussions between AECOM and project engineers have indicated that these will include:

- Bulk earthworks;
- Road construction;
- Stormwater treatment including water quality and stormwater drainage structures;
- Flood mitigation earthworks; and
- Weeding and rehabilitation planting works.

6.2 Impacts to Identified Aboriginal Sites

Proposed development activities within the Project area are anticipated to directly impact all thirteen Aboriginal archaeological sites identified within it (**Table 16, Figure 21**). Consideration of the location of impacted sites in relation to proposed bulk earthworks and Woorong Park's development plan indicates a total loss of value for all sites.

Table 16 Impact Assessment for Aboriginal Sites

Site name	AHIMS ID(s)	Type of harm	Degree of harm	Consequence of harm	Site area (m ²)	Area of impact (m ²)	Total%
South Creek Alluvial Landscape	45-5-4704 45-5-4170	Direct	Partial	Partial loss of value	855,948	855,948	100
Little Creek Alluvial Landscape	45-5-4705 45-5-4159 45-5-4160 45-5-4166	Direct	Partial	Partial loss of value	657,579	657,579	100
Woorong Park Residual Rise 1	45-5-4703	Direct	Whole	Total loss of value	19,924	19,924	100
Woorong Park Residual Rise 2	45-5-4706	Direct	Partial	Partial loss of value	88,436	88,436	100
Woorong Park Isolated Artefact 1	45-5-4702	Direct	Whole	Total loss of value	0.25	0.25	100
Woorong Park Isolated Artefact 2	45-5-4701	Direct	Whole	Total loss of value	0.25	0.25	100
Woorong Park Isolated Artefact 3	45-5-4694	Direct	Whole	Total loss of value	0.25	0.25	100
Woorong Park Isolated Artefact 4	45-5-4695	Direct	Whole	Total loss of value	0.25	0.25	100

Woorong Park Isolated Artefact 5	45-5-4696	Direct	Whole	Total loss of value	0.25	0.25	100
Woorong Park Isolated Artefact 6	45-5-4697	Direct	Whole	Total loss of value	0.25	0.25	100
Woorong Park Artefact Scatter 1	45-5-4698	Direct	Whole	Total loss of value	0.25	0.25	100
Woorong Park Artefact Scatter 2	45-5-4699	Direct	Whole	Total loss of value	0.25	0.25	100
WP1	45-5-4161	Direct	Whole	Total loss of value	81,944	81,944	100
WP6	45-5-4164	Direct	Whole	Total loss of value	5,500	5,500	100
MPP-01	45-5-4158	Direct	Whole	Total loss of value	0.25	0.25	100

6.3 Cumulative Impact Assessment

6.3.1 Assessment of Ecologically Sustainable Development (ESD)

In NSW, the NPW Act provides the legislative framework for the protection of Aboriginal objects and places. Section 2A(2) of the NPW Act stipulates that such protection is to be achieved by applying the principles of Ecologically Sustainable Development (ESD). ESD requires the integration of economic and environmental considerations (including cultural heritage) in decision-making processes and, in the context of Aboriginal cultural heritage, can be achieved through the implementation of two key principles: intergenerational equity and the precautionary principle.

Intergenerational equity is the principle whereby the present generation should ensure the health, diversity and productivity of the environment for the benefit of future generations. With regards to Aboriginal heritage, intergenerational equity can be assessed in terms of cumulative impacts to Aboriginal objects and places in a region. Central to any assessment of intergenerational equity is the proposition that regions with fewer Aboriginal objects and places necessarily retain fewer opportunities for future generations of Aboriginal people to enjoy their cultural heritage. Accordingly, information regarding the known and potential Aboriginal heritage resource of a given region is critical to any assessment of intergenerational equity.

The precautionary principle holds that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation. In NSW, the precautionary principle is relevant to OEH's consideration of potential impacts to Aboriginal cultural heritage in situations where:

- the proposed development involves a risk of serious or irreversible damage to Aboriginal objects or places or to the value of those objects or places; and
- there is uncertainty about the Aboriginal cultural heritage values or scientific or archaeological values, including in relation to the integrity, rarity or representativeness of the Aboriginal objects or places proposed to be impacted.

In these instances, OEH has indicated that a precautionary approach should be taken and all cost-effective measures implemented to prevent or reduce damage to Aboriginal objects and/or places. In addition to these measures, a cumulative impact assessment should be undertaken to gain an understanding and appreciation of the impacts development will have on NSW's Aboriginal cultural heritage resource.

It should be noted that the results of cumulative impact assessments undertaken for cultural heritage sites and places, Aboriginal or otherwise, must be interpreted with caution, not least because they are based (in part) on heritage datasets that are inevitably incomplete and contain various inconsistencies and errors. Godwin (2011), in particular, has questioned the value of cumulative impact assessments to cultural heritage management in Australia, arguing that the 'fundamentals' necessary for undertaking such assessments simply do not exist. The 'fundamentals' Godwin is referring are robust regional and national data sets for measuring proposed impacts and the determination of acceptable scientific and cultural impact thresholds. While recognising the validity of the issues raised by Godwin (2011), current OEH guidelines necessitate that a cumulative impact assessment be undertaken as part of any Aboriginal cultural heritage assessment in NSW.

6.3.2 Intergenerational Equity - Cumulative Impact Assessment

Two avenues for assessing the cumulative impact of the Project on Aboriginal heritage can be pursued:

- 1) A comparison, using the results of AHIMS searches, of the identified Aboriginal archaeological resource of the Project area with that of the surrounding region, defined here as an arbitrary 15 x 15 km (225 km²) area centred on the Project area; and
- 2) The use of existing environmental data sources (e.g., digital land use data and topographic maps) to identify the potential open artefact resource of the study region as a whole.

6.3.3 Known Resource

Alongside those identified within the Project area, existing open artefact sites in the study region offer opportunities for future research, conservation and education. Accordingly, it is necessary to quantify the impacts of the proposed development on this joint resource.

As indicated in **Section 6.2**, a total of thirteen open artefact sites have been identified within the Project area, all of which will be destroyed by the proposed development. AHIMS data indicate that these sites represent 2% of the extant open artefact resource of the study region, with searches of the AHIMS database on 19 November 2015 returning 635 'Valid' open artefact site entries, 13 'Partially Destroyed' entries and 36 'Destroyed' entries for this area¹⁴. While acknowledging the limitations of the AHIMS database with respect to the validity of listed site statuses, on the basis of these data, it seems reasonable to conclude that the loss of these sites would not constitute a significant adverse impact to the known open artefact resource of the region. Consideration of the character of these sites, the majority of which have been assessed as being of low scientific significance, provides further support this suggestion as does the observation that, while a large number of Aboriginal archaeological investigations incorporating survey and/or excavation have been undertaken within the study region, the majority of land within this region has not been physically inspected for Aboriginal sites.

6.3.4 Potential Resource

Based as they are on the results of archaeological investigations covering only a fraction of the total study region, the AHIMS-derived figures cited above provide an insufficient picture of the cumulative impact of the proposed development on the open artefact site resource of the study region. Accordingly, an assessment of the potential open artefact resource of this area is also required. For the present analysis, digital land use data and relevant topographic maps have been used to prepare a provisional assessment of this resource.

As a starting point, it is necessary to quantify the amount of land within the study region that has the *potential* to retain to open artefact sites similar to those identified within the Project area. A basic assumption here is that grossly disturbed terrain is unlikely to retain such sites whereas non-grossly disturbed terrain is, both in surface and subsurface contexts. Analysis of available digital land use data for the study region (**Table 17**) indicates that grossly modified or disturbed terrain (e.g., roads and railways, urban areas, mined/quarried land and power generation facilities) accounts for 54.9% of land within the region. Outside of grossly disturbed areas, fully to semi-cleared grazing land is particularly well represented, accounting for 30.1% of land within the region. Cropped agricultural land is comparatively poorly represented at 1.8%. Areas specifically reserved for conservation, meanwhile, account for 4% of land within the region, with a further 7.9% comprising intact or regenerating native forest. Natural landscape features (i.e., rivers, creeks and wetlands) make up the remaining 1.3%.

Viewed from an Aboriginal archaeological perspective, the results of the land use analysis presented in **Table 17** suggest that approximately 45% of the study region (c.10,125 ha) can reasonably be considered to be a *potential open artefact resource*. As indicated, land upon which open artefact deposits are unlikely to survive accounts for around 55% of land within the region. This figure increases to 87% if agricultural and grazing land is included. However, as indicated by the results of numerous Aboriginal archaeological investigations, both within and outside of the study region, cropped and grazed areas can and frequently do retain significant surface and subsurface stone artefact records. It can, therefore, be concluded that around 45% of land within the study region has the potential to retain open artefact deposits in surface and subsurface contexts. While acknowledging the fact that the nature and distribution of such deposits will vary markedly in relation to environmental variables such as landform and the availability of potable water, analysis of available land use data does help to quantify the extent of the region's potential Aboriginal open artefact resource. Moreover, it provides a basis from which assess the cumulative impact of the proposed development on this resource.

¹⁴Note that previously recorded sites subsumed within new, larger sites as part of current investigation (n = 4) have not been counted twice for this calculation.

In order to quantify the impact of the proposed development on the potential open artefact resource of the study region it is necessary to first quantify the amount of land within the Project area that has the potential to be significantly disturbed by proposed development activities. To this end, it is assumed that all land within the Project area will be significantly disturbed as a result of the proposed residential development. Assuming a complete loss of open artefact potential for land within the Project area, it can be stated that the proposed development will result in a c.4% decline in the region's potential open artefact resource. On this basis, it is concluded that the impact of the proposed development on the potential Aboriginal archaeological resource of the region will be low.

With regards to the existence, outside of the Project area, of environmental contexts that have the potential to contain sites comparable to those identified within it, an examination of relevant topographic maps for the study region indicates that many such contexts exist. As demonstrated by the results of the current survey and previous archaeological investigations within and adjacent to the study region, although open artefact sites/deposits can occur in *any landform context*, they tend to be concentrated on landform elements directly associated with watercourses (e.g., creek/river banks and terraces, proximal flood/drainage plains, bordering lower slopes). At the same time, stream order appears to have played a critical role in influencing the intensity of occupation in their vicinity, with more permanent water sources yielding larger and more complex sites/deposits. For the study region under investigation here, non-grossly-disturbed landform elements adjacent to higher order watercourses such as South Creek, Bells Creek, Little Creek and Eastern Creek are expected to contain a significant, as yet unidentified, open artefact site resource.

Table 17 Land use analysis

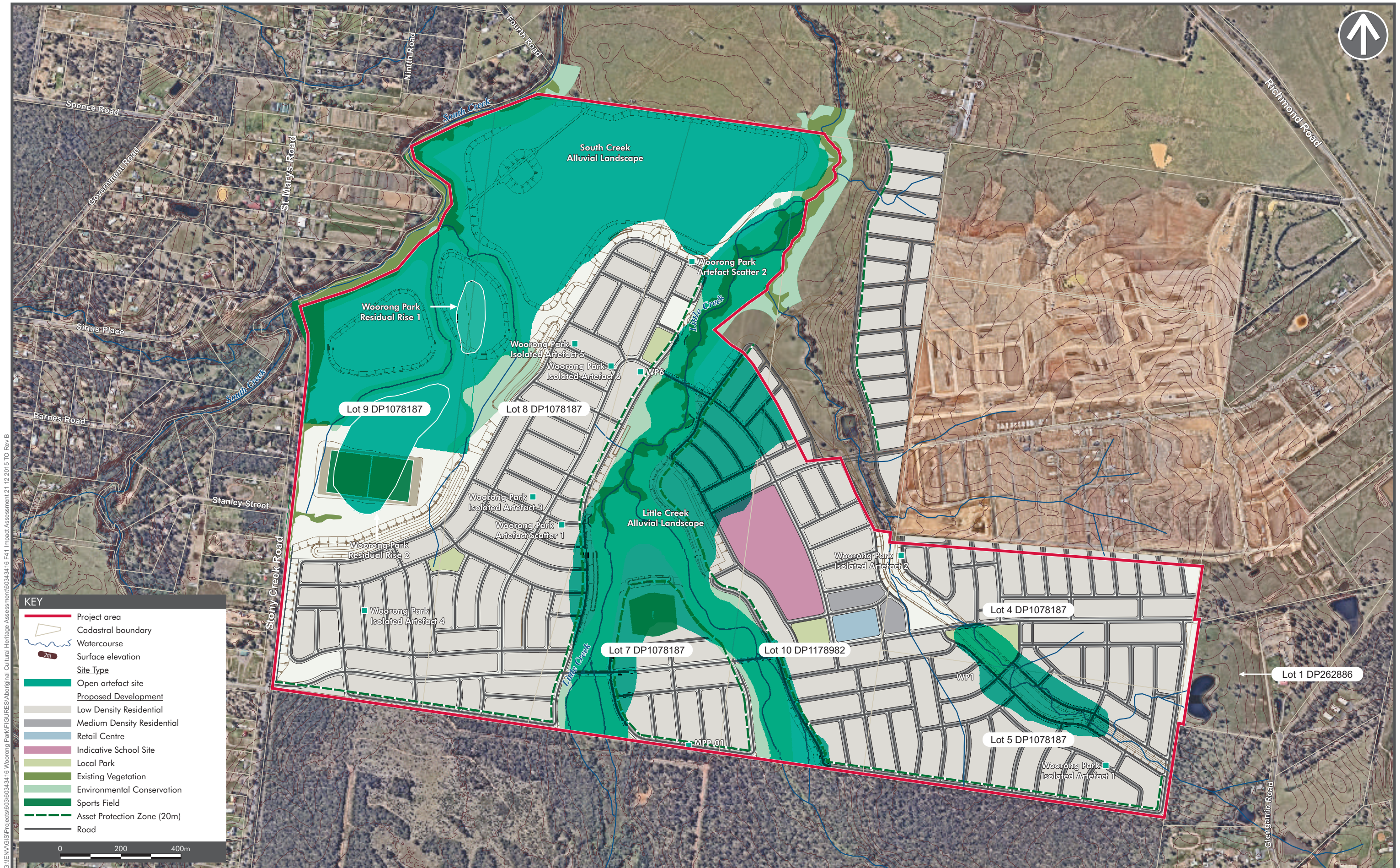
Existing Land Use	Ha	%
Conservation area	896	4
Defence facility	1558	6.9
Farm infrastructure	1015	4.5
Grazing	6782	30.1
Horticulture	397	1.8
Intensive animal production	421	1.9
Mining & quarrying	55	0.2
Power generation	47	0.2
River / drainage system	271	1.2
Transport & other corridors	1407	6.3
Tree / Shrub Cover	1776	7.9
Urban	7859	34.9
Wetland	16	0.1
Total	22,500	100

Source: OEH Spatial Data Online, Land use data for Sydney region, 2013

6.3.5 The Precautionary Principle

As indicated in **Section 6.3.1**, the precautionary principle holds that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

In the context of the current investigation, it can be stated that AECOM has adopted a precautionary approach in our assessment of the impacts of the proposed development on the Aboriginal archaeological resource of the Project area and that this approach is reflected in our proposed management strategy.



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7.0 Avoiding and Minimising Harm

This assessment finds that the Aboriginal heritage values of the Project area rest principally with the Aboriginal archaeological sites that have been identified within it. Archaeological survey and subsurface testing across the Project area has identified a total of 13 Aboriginal archaeological sites. Identified sites, shown on **Figure 20**, consist exclusively of open artefact sites. All have been registered on OEH's AHIMS database.

As indicated in **Section 6.1**, proposed development activities within the Project area are anticipated to directly impact all 13 Aboriginal sites identified within it. Consideration of the location of impacted sites in relation to proposed bulk earthworks and Woorong Park's development plan indicates a total loss of value for all sites. Impacted sites include sites of moderate scientific significance and 10 sites of low scientific significance. Avoidance of impacts to previously and newly identified Aboriginal sites within the Project area is unfeasible given the respective locations of these sites in relation to the proposed development.

During the assessment process, attempts were made to identify archaeological conservation areas within the Project area that could be set-aside from development impacts and managed in perpetuity as Aboriginal heritage conservation areas. Initially, it was determined that portions of the South Creek and Little Creek valleys earmarked for environmental conservation (or parts thereof) might prove suitable for long-term conservation. However, through discussions with Project engineers, it was determined that the nature and extent of environmental rehabilitation and flood mitigation works in these areas was of a scale sufficient to compromise their suitability as conservation zones.

In view of the above, management strategies to minimise harm to the identified heritage values of the Project area are required. These strategies, which include a recommendation for a comprehensive archaeological salvage program for identified sites of moderate scientific significance, are detailed in **Section 8.0**.

8.0 Recommendations

The following recommendations are made regarding the identified Aboriginal heritage values of the Project area:

- 1) Woorong Park Pty Ltd should apply to the Director General of OEH for an “all of area” Aboriginal Heritage Impact Permit (AHIP) for the Project area (the ‘AHIP area’, shown on **Figure 22** in this report). Subject to Woorong Park Pty Ltd’s adherence to any associated conditions, issue of this AHIP would allow impacts to all newly and previously identified Aboriginal sites within the Project area.
- 2) Aboriginal sites Woorong Park Residual Rise 1 (45-5-4703), South Creek Alluvial Landscape (45-5-4704) and Little Creek Alluvial Landscape (45-5-4705) have been assessed as being of moderate scientific significance. In order to mitigate the impact of the proposed development on these sites, an archaeological salvage program incorporating manual open area excavation and mechanical soil sampling is recommended for these sites. Salvage activities can only occur after an AHIP has been obtained from OEH and should be completed in accordance with research design and methodology provided in **Appendix D** of AECOM’s AAR for this assessment (**Appendix B**).
- 3) Newly and previously identified Aboriginal sites Woorong Park Isolated Artefact 1 (45-5-4702), Woorong Park Isolated Artefact 2 (45-5-4701), Woorong Park Isolated Artefact 3 (45-5-4694), Woorong Park Isolated Artefact 4 (45-5-4695), Woorong Park Isolated Artefact 5 (45-5-4696), Woorong Park Isolated Artefact 6 (45-5-4697), Woorong Park Artefact Scatter 1 (45-5-4698), Woorong Park Artefact Scatter 2 (45-5-4699), WP1 (45-5-4161), WP6 (45-5-4164) and MPP-01 (45-5-4158) have been assessed as being of low scientific significance. No further management or mitigations actions are recommended for these sites.
- 4) In the event that construction activity reveals potential human skeletal material (remains) with the Project area, the Management of Potential Human Remains procedure outlined in **Section 8.1** of this report should be followed.
- 5) In accordance with Requirement 16B of the Code of Practice, all stone artefacts recovered from the Project area as part of the test excavation program detailed in AECOM’s AAR (**Appendix B**) should be stored temporarily at AECOM’s head office (Level 8, 420 George Street, Sydney) while options for their long term management are being investigated, as determined through consultation with RAPs. Requirement 26 of the Code of Practice provides standard procedures for the deposition of stone artefacts dealt with under AHIPs and the Code of Practice. These procedures should be strictly adhered to.
- 6) Aboriginal Site Impact Recording (ASIR) forms for all AHIMS registered open artefact sites within the Project area should be completed and submitted to the AHIMS registrar as soon as practicable following completion of AHIP-approved archaeological salvage activities.

8.1 Management of Potential Human Remains

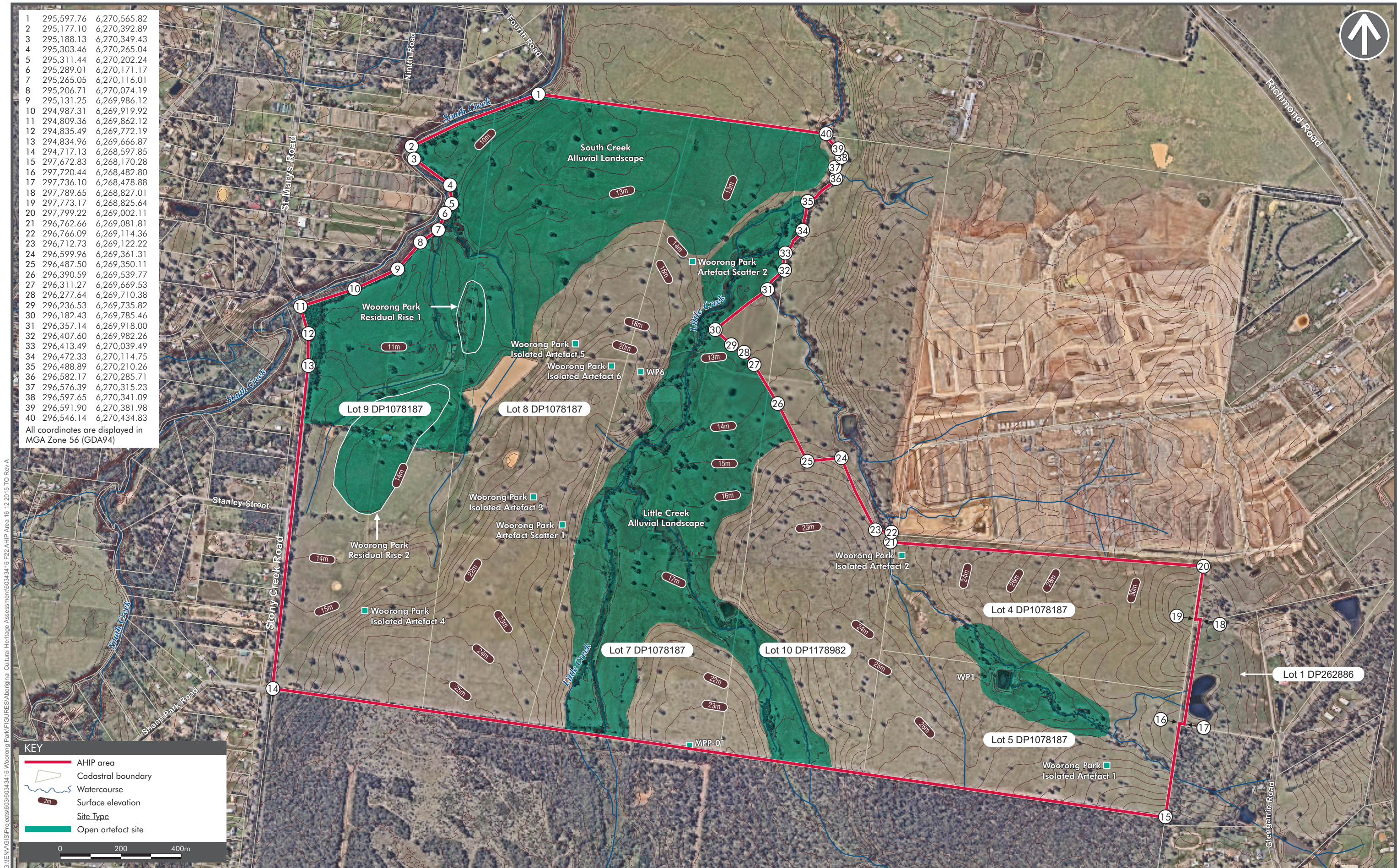
This section outlines the procedure that should be followed in the case that potential human remains are discovered during construction. The procedure takes into account the following documents:

- Manual for the Identification of Aboriginal Remains (NSW Department of Environment & Conservation 2006);
- Skeletal Remains - Guidelines for the management of human skeletal remains under the Heritage Act 1977 (NSW Heritage Office 1998); and
- The Aboriginal Cultural Heritage Standards and Guidelines Kit (NSW NPWS 1997).

In the event that potential human skeletal remains are identified within the Project area at any point during construction, the following standard procedure should be followed.

1. All work in the vicinity of the remains should cease immediately;
2. The location should be cordoned off - construction work can continue outside of this area as long as there is no risk of interference to the remains or the assessment of the remains;
3. Where uncertainty over the origin (i.e., human or non-human) of the remains exists, a physical or forensic anthropologist should be commissioned to inspect the exposed remains *in situ* and make a determination of origin, ancestry (Aboriginal or non-Aboriginal) and antiquity (pre-contact, historic or modern):

- If the remains are identified as modern and human, the area will become a crime scene under the jurisdiction of the NSW Police;
- If the remains are identified as pre-contact or historic Aboriginal, the site should be secured and the relevant OEH office notified;
- If the remains are identified as historic non-Aboriginal, the site should be secured and the NSW Heritage Branch notified; and
- If the remains are identified as non-human, work can recommence immediately.



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Appendix A

Consultation Log

Date	To/From AECOM	Organisation	Contact person(s)	Method of contact	AECOM representative	Summary
13.05.15	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.
13.05.15	From AECOM	Deerubbin LALC	-	Letter	A.McLaren	As above
13.05.15	From AECOM	Office of the Registrar	-	Letter	A.McLaren	As above
13.05.15	From AECOM	NTSCORP Limited	-	Letter	A.McLaren	As above
13.05.15	From AECOM	Blacktown City Council	-	Letter	A.McLaren	As above
13.05.15	From AECOM	Sydney Catchment Authority	-	Letter	A.McLaren	As above
13.05.15	From AECOM	National Native Title Tribunal	-	Email with letter attachment	A.McLaren	As above
13.05.15	To AECOM	Deerubbin LALC	Steve Randall	Email	A.McLaren	Deerubbin LALC would like to register for the project.
14.05.15	To AECOM	National Native Title Tribunal	Sylvia Jagtman	Email with letter attachment	A.McLaren	Response to AECOM's information request
15.05.15	To AECOM	Blacktown City Council	Sue Galt	Email with letter attachment	A.McLaren	Response to AECOM's information request
15.05.15	To AECOM	NTSCORP Limited	George Tonna	Letter	A.McLaren	Response to AECOM's information request
20.05.15	To AECOM	OEH	Susan Harrison	Email with letter attachment	A.McLaren	Response to AECOM's information request
21.05.15	To AECOM	Deerubbin LALC	Steve Randall	Phone	A.McLaren	Confirming registration
22.05.15	To AECOM	Darug Aboriginal Cultural Heritage Assessments	Celestine Everingham	Phone	A.McLaren	DACHA has been notified about the project from NTSCORP and would like to register for the project.
29.05.16	To AECOM	Tocomwall Pty Ltd	Danny Franks	Phone	A.McLaren	Registration of interest for project
02.06.15	From AECOM	Various Aboriginal organisations & individuals	Various	Letters & Emails	A.McLaren	Expression of Interest (EOI) letter for Project

02.06.15	To AECOM	Warragil Cultural Services	Aaron Slater	Email	A.McLaren	Registration of interest for project
03.06.15	To AECOM	Corroboree Aboriginal Corporation	Steve Johnson	Email	A.McLaren	Registration of interest for project
03.06.15	To AECOM	Murrumbal	Levi McKenzie-Kirkbright	Email	A.McLaren	Registration of interest for project
03.06.15	To AECOM	Wingikara	David Bell	Email	A.McLaren	Registration of interest for project
03.06.15	To AECOM	Bilinga	Christopher Payne	Email	A.McLaren	Registration of interest for project
03.06.15	To AECOM	Munyunga	Peter Foster	Email	A.McLaren	Registration of interest for project
03.06.15	To AECOM	Darug Land Observations	Gordon Workman	Email	A.McLaren	Registration of interest for project
04.06.15	To AECOM	Walbunja	Hika TeKowhai	Email	A.McLaren	Registration of interest for project
04.06.15	To AECOM	Nundagurri	Aaron Broad	Email	A.McLaren	Registration of interest for project
04.06.15	To AECOM	Ngunawal	Edward Stewart	Email	A.McLaren	Registration of interest for project
04.06.15	To AECOM	Badu	Karia Bond	Email	A.McLaren	Registration of interest for project
04.06.15	To AECOM	Tharawal	Violet Carriage	Email	A.McLaren	Registration of interest for project
04.06.15	To AECOM	Eora	Kahu Brennan	Email	A.McLaren	Registration of interest for project
04.06.15	To AECOM	Wandandian	William Bond	Email	A.McLaren	Registration of interest for project
04.06.15	To AECOM	Ngarigo	Newton Bond	Email	A.McLaren	Registration of interest for project
04.06.15	To AECOM	Yerramurra	Nicholas Glover	Email	A.McLaren	Registration of interest for project
04.06.15	To AECOM	Gangangarra	Kim Carriage	Email	A.McLaren	Registration of interest for project
04.06.15	To AECOM	Elouera	Lenard Nye	Email	A.McLaren	Registration of interest for project

04.06.15	To AECOM	Walbunja	Hika TeKowhai	Phone	A.McLaren	Hika has indicated that the Murrin stakeholder community (which includes multiple registered groups) discuss and provide unified responses to Aboriginal cultural heritage matters within their country. Hika has indicated, however, that AECOM should send correspondence to individual clan emails and that email is most appropriate form of contact.
04.06.15	To AECOM	Gunyu	Darlene Hoskins-McKenzie	Email	A.McLaren	Registration of interest for project
05.06.15	To AECOM	Kamilaroi-Yankuntjatjara Working Group	Phil Khan	Email	A.McLaren	Registration of interest for project
05.06.15	To AECOM	Gunjeewong Cultural Heritage Aboriginal Corporation	Cherie Carroll Turrise	Letter	A.McLaren	Registration of interest for project
10.06.15	To AECOM	Merrigan Indigenous Corporation	Shaun Carroll	Email	A.McLaren	Registration of interest for project
10.06.15	To AECOM	Murri Bidgee Mullangari Aboriginal Corporation	Darleen Johnson	Email	A.McLaren	Registration of interest for project
10.06.15	To AECOM	Amanda Hickey Cultural Services	Amanda Hickey	Email	A.McLaren	Registration of interest for project
10.06.15	To AECOM	Darug Aboriginal Land Care Inc	Des Dyer	Email	A.McLaren	Registration of interest for project
14.06.15	To AECOM	Goobah	Basil Smith	Email	A.McLaren	Registration of interest for project
14.06.15	To AECOM	Roxanne Smith	Roxanne Smith	Email	A.McLaren	Registration of interest for project
14.06.15	To AECOM	Cullendulla	Janaya Smith	Email	A.McLaren	Registration of interest for project
14.06.15	To AECOM	Wendy Smith	Wendy Smith	Email	A.McLaren	Registration of interest for project
14.06.15	To AECOM	Seli Storer	Seli Storer	Email	A.McLaren	Registration of interest for project
16.06.15	To AECOM	Darug Custodian Aboriginal Corporation	Justine Coplin	Phone	A.McLaren	Registration of interest for project

16.06.15	To AECOM	Darug Tribal Aboriginal Corporation	John Reilly	Phone	A.McLaren	Registration of interest for project
16.06.15	To AECOM	Aboriginal Archaeology Service	Tony Williams	Phone	A.McLaren	Registration of interest for project
16.06.15	To AECOM	Andrew Williams	Andrew Williams	Phone	A.McLaren	Registration of interest for project
16.06.15	To AECOM	Wurrumay Consultant	Kerrie Slater	Email	A.McLaren	Registration of interest for project
16.06.15	From AECOM	All RAPs (excluding Wullung)	Various	Emails with letter attachments & letters	A.McLaren	Draft assessment methodology for RAP review
16.06.15	To AECOM	Warragil Cultural Services	Aaron Slater	Email	A.McLaren	Response to draft methodology. See Appendix F .
16.06.15	To AECOM	Aboriginal Archaeology Service	Tony Williams	Email	A.McLaren	Response to draft methodology. See Appendix F .
17.06.15	To AECOM	Wullung	Leeroy Boota	Email	A.McLaren	Registration of interest for project
17.06.15	From AECOM	Wullung	Leeroy Boota	Email	A.McLaren	Draft assessment methodology for review
17.06.16	To AECOM	Walbunja	Hika Te Kowhai	Phone	A.McLaren	Request for list of Murrin stakeholder groups
18.06.15	From AECOM	Walbunja	Hika Te Kowhai	Email	A.McLaren	Provision of list of Murrin stakeholder groups
19.06.15	To AECOM	Kamilaroi-Yankuntjatjara Working Group	Phil Khan	Letter	A.McLaren	Response to draft methodology. See Appendix F .
22.06.15	To AECOM	Darug Aboriginal Cultural Heritage Assessments	Celestine Everingham	Phone	A.McLaren	Verbal response to draft methodology. DACHA is happy with the methodology. Celestine advises that the Project area is located within a highly significant cultural landscape for Darug people, noting, in particular, the antiquity of the PT12 site at Windsor, northwest of the Project area.
25.06.15	To AECOM	Gunjeewong Cultural Heritage Aboriginal Corporation	Cherie Carroll Turrise	Letter	A.McLaren	Response to draft methodology. See Appendix F .
03.07.15	To AECOM	Merrigan Indigenous Corporation	Shaun Carroll	Email	A.McLaren	Response to draft methodology. See Appendix F .

03.07.15	To AECOM	Murri Bidgee Mullangari Aboriginal Corporation	Darleen Johnson	Email	A.McLaren	Response to draft methodology. See Appendix F .
06.07.15	From AECOM	All RAPs (excluding DACHA)	Various	Email with letter attachment	A.McLaren	Fieldwork notification letter
06.07.15	From AECOM	Darug Aboriginal Cultural Heritage Assessments	Celestine Everingham	Fax	A.McLaren	Fieldwork notification letter
06.07.15	To AECOM	Gunyuu	Darlene Hoskins-McKenzie	Phone	A.McLaren	Enquiry as to meaning of "Marsden Park area" on fieldwork notification letter
06.07.15	To AECOM	Aboriginal Archaeology Service	Tony Williams	Email	A.McLaren	Response to fieldwork notification letter
06.07.15	To AECOM	Munyunga	Peter Foster	Email	A.McLaren	Acknowledgement of receipt of fieldwork notification. Peter has indicated he will respond in the next couple of days.
07.07.15	To AECOM	Murri Bidgee Mullangari Aboriginal Corporation	Darleen Johnson	Email	A.McLaren	Response to fieldwork notification letter
08.07.15	To AECOM	Darug Custodian Aboriginal Corporation	Justine Coplin	Email	A.McLaren	Response to fieldwork notification letter
10.07.15	To AECOM	Merrigan Indigenous Corporation	Shaun Carroll	Email	A.McLaren	Response to fieldwork notification letter
12.07.15	To AECOM	Goobah	Basil Smith	Email	A.McLaren	Response to fieldwork notification letter
13.07.15	To AECOM	Corroboree Aboriginal Corporation	Steve Johnson	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Kawul Cultural Services	Vicky Slater	Email	A.McLaren	Response to draft methodology. See Appendix F .
15.07.15	To AECOM	Wurrumay Consultant	Kerrie Slater	Email	A.McLaren	Response to draft methodology. See Appendix F .
15.07.15	To AECOM	Yerramurra	Robert Parsons	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Nundagurri	Newton Carriage	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Walbunja	Hika Te Kowhai	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Ngunawal	Edward Stewart	Email	A.McLaren	Response to fieldwork notification letter

15.07.15	To AECOM	Badu	Karia Bond	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Ganagangarra	Kim Carriage	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Eora	Kahu Brennan	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Wurrumay Consultant	Kerrie Slater	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Wandandian	William Bond	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Murramarang	Roxanne Smith	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Darug Tribal Aboriginal Corporation	Denise Newham	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Tharawal	Violet Carriage	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Biamanga	Seli Storer	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Elouera	Lenard Nye	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Ngarigo	Newton Bond	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Goobah	Basil Smith	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Murrumbul	Levi McKenzie-Kirkbright	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Munyunga	Peter Foster	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Wingikara	David Bell	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Bilinga	Christopher Payne	Email	A.McLaren	Response to fieldwork notification letter
15.07.15	To AECOM	Gunyyu	Darlene Hoskins-McKenzie	Email	A.McLaren	Response to fieldwork notification letter
16.07.15	To AECOM	Darug Aboriginal Land Care Inc	Des Dyer	Email	A.McLaren	Response to draft methodology. See Appendix F .
16.07.15	To AECOM	Warragil Cultural Services	Aaron Slater	Email	A.McLaren	Response to fieldwork notification letter
17.07.15	To AECOM	Deerubbin LALC	Steve Randall	Email	A.McLaren	Response to fieldwork notification letter
17.07.15	To AECOM	Tharawal	Violet Carriage	Email	A.McLaren	Provision of Workers Compensation COC

17.07.15	To AECOM	Walbunja	Hika Te Kowhai	Email	A.McLaren	Confirming availability of field representatives
17.07.15	To AECOM	Ngarigo	Newton Bond	Email	A.McLaren	Confirming availability of field representatives
17.07.15	To AECOM	Badu	Karia Bond	Email	A.McLaren	Confirming availability of field representatives. Also, Karia advises that Hika and Darleen do not administer, manage or represent Badu.
17.07.15	From AECOM	Badu	Karia Bond	Email	A.McLaren	Acknowledgement of Badu's independent status for all correspondence moving forward
17.07.15	To AECOM	Murramarang	Roxanne Smith	Email	A.McLaren	Enquiry as to why fieldwork notification letter was addressed to Hika Te Kowhai. Roxanne advises that she is an independent stakeholder, has no ties with Hika or the Murrin group and is a separate business in her own right.
17.07.15	From AECOM	Murramarang	Karia Bond	Email	A.McLaren	Acknowledgement of Murramarang's independent status for all correspondence moving forward
17.07.15	To AECOM	Biamanga	Seli Storer	Email	A.McLaren	Enquiry as to why fieldwork notification letter was addressed to Hika Te Kowhai. Seli advises that, while she is aware of Hika and Darleen, who represent the Murrin group, Biamanga is a separate group and have no connection with the larger Murrin group.
17.07.15	From AECOM	Biamanga	Karia Bond	Email	A.McLaren	Acknowledgement of Biamanga's independent status for all correspondence moving forward
19.07.15	To AECOM	Gunyuu	Darlene Hoskins-McKenzie	Email	A.McLaren	Confirming availability of field representatives for Gunyuu, Bilinga, Munyunga, Murrumbal and Wingikara.
21.07.15	To AECOM	Gunyuu	Darlene Hoskins-McKenzie	Email	A.McLaren	Confirming names of field representatives for Gunyuu, Bilinga, Munyunga, Murrumbal and Wingikara.
22.07.15	To AECOM	Darug Aboriginal Land Care Inc	Des Dyer	Email	A.McLaren	Response to fieldwork notification letter
24.12.15	To AECOM	Gunjeewong Cultural Heritage Aboriginal Corporation	Cherie Carroll Turrise	Text message	A.McLaren	Response to draft report. See Table 7 in Section 3.4.

13.01.16	To AECOM	Kamilaroi-Yankuntjatjara Working Group	Phil Khan	Letter	A.McLaren	Response to draft report. See Table 7 in Section 3.4 for summary of response.
19.01.16	To AECOM	Murri Bidgee Mullangari Aboriginal Corporation	Ryan Johnson	Email	A.McLaren	Response to draft report. See Table 7 in Section 3.4 for summary of response.
20.01.16	To AECOM	Darug Aboriginal Landcare	Des Dyer	Email	A.McLaren	Response to draft report. See Table 7 in Section 3.4 for summary of response.
21.01.16	From AECOM	Corroboree Aboriginal Corporation	Steve Johnson	Phone	A.McLaren	Call to request comment on draft report. No answer. Message left on voicemail.
21.01.16	From AECOM	Darug Land Observations	Gordon Workman	Phone	A.McLaren	Call to request comment on draft report. See Table 7 in Section 3.4 for summary of response.
21.01.16	From AECOM	Darug Aboriginal Cultural Heritage Assessments	Celestine Everingham	Phone	A.McLaren	Call to request comment on draft report. No answer. Message left on voicemail.
21.01.16	From AECOM	Darug Custodian Aboriginal Corporation	Justine Coplin	Phone	A.McLaren	Call to request comment on draft report. Justine has indicated that she has yet to receive report from Leanne but should be able to look at it late Friday or over weekend and provide comment on Monday. AECOM to provide link to download reports in interim.
21.01.16	From AECOM	Darug Custodian Aboriginal Corporation	Justine Coplin	Email	A.McLaren	Link to download draft ACHAR and AAR
21.01.16	From AECOM	Tocomwall	Danny Franks	Phone	A.McLaren	Call to request comment on draft report. Danny has indicated that the report is likely at other office and has requested link to download reports.
21.01.16	From AECOM	Tocomwall	Danny Franks	Email	A.McLaren	Link to download draft ACHAR and AAR
21.01.16	From AECOM	Aboriginal Archaeology Service	Tony Williams	Phone	A.McLaren	Call to request comment on draft report. No answer. Message left on voicemail.
21.01.16	To AECOM	Aboriginal Archaeology Service	Tony Williams	Phone	A.McLaren	Returning missed call. Tony has indicated that he replied earlier in the month. Will check records and let us know.
21.01.16	To AECOM	Aboriginal Archaeology Service	Andrew Williams	Email	A.McLaren	Forwarded response to draft report. See Table 7 in Section 3.4 for summary of response.

21.01.16	From AECOM	Deerubbin Local Aboriginal Land Council	Steve Randall	Phone	A.McLaren	Response to draft report. See Table 7 in Section 3.4 for summary of response.
21.01.16	From AECOM	Warragil Cultural Services	Aaron Slater	Phone	A.McLaren	Call to request comment on draft report. Aaron has indicated that he hasn't had a chance to look at it yet but should be able to have a look over the weekend and provide comment on Monday. AECOM to re-send link to download report and call back on Monday.
21.01.16	From AECOM	Warragil Cultural Services	Aaron Slater	Email	A.McLaren	Link to download draft ACHAR and AAR
21.01.16	From AECOM	Merrigan Indigenous Corporation	Shaun Carroll	Phone	A.McLaren	Call to request comment on draft report. No answer. Message left on voicemail.
21.01.16	From AECOM	Amanda Hickey Cultural Services	Amanda Hickey	Phone	A.McLaren	Call to request comment on draft report. No answer. Message left on voicemail.
21.01.16	From AECOM	Darug Tribal Aboriginal Corporation	John Reilly	Phone	A.McLaren	Call to request comment on draft report. No answer. Message left on voicemail.
21.01.16	To AECOM	Darug Tribal Aboriginal Corporation	John Reilly	Phone	A.McLaren	Returning earlier missed call re comment on draft report. See Table 7 in Section 3.4 for summary of response.
21.01.16	From AECOM	Wurrumay Consultant	Kerry Slater	Phone	A.McLaren	Call to request comment on draft report. No answer. No voicemail.
21.01.16	From AECOM	Kawul Cultural Services	Vicky Slater	Phone	A.McLaren	Call to request comment on draft report. No answer. No voicemail.
21.01.16	To AECOM	Darug Aboriginal Cultural Heritage Assessments	Celestine Everingham	Phone	A.McLaren	Returning earlier missed call re comment on draft report. See Table 7 in Section 3.4 for summary of response.
21.01.16	From AECOM	All RAPs (excluding respondees)	Various	Email	A.McLaren	Follow-up email regarding draft reports. Response date extended to Wednesday 27 January.
25.01.16	To AECOM	Darug Custodial Aboriginal Corporation	Justine Coplin	Email	A.McLaren	Response to draft report. See Table 7 in Section 3.4 for summary of response.
27.01.16	To AECOM	Corroboree Aboriginal Corporation	Steve Johnson	Email	A.McLaren	Response to draft report. See Table 7 in Section 3.4 for summary of response.

Appendix B

Aboriginal Archaeological Report

Appendix C

Agency Responses



Office of Environment & Heritage

Our reference: 5F13/1617

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

Dear Andrew,

Thank you for your letter dated 13 May 2015 to the Office of Environment and Heritage (OEH) regarding obtaining a list of the Aboriginal stakeholders that may have an interest in proposed residential development across Lots 4, 5, 7, 8 and 9 DP1078187 and Lot 10 DP1178982, Marsden Park west of Richmond Road (Blacktown LGA).

Before making an application for the issue of an Aboriginal Heritage Impact Permit, the applicant must carry out an Aboriginal community consultation process in accordance with the National Parks and Wildlife Regulation 2009 completed to the stage described in subclause 80C.

Please find attached the list of Aboriginal stakeholders known to OEH that may have an interest in the project. OEH's list of regional stakeholders is a list of groups, organisations or individuals who may hold cultural knowledge relevant to a proposal in a region. Contact details are correct as at the time of registration. Consultation with Aboriginal people should not be confused with employment. Inclusion on the OEH's list is not an automatic right to employment. It is the decision of a proponent on who they choose to engage to deliver services based on a range of considerations including skills, relevant experience, and WHS considerations. To be clear, the proponent is under no obligation to employ Aboriginal people registered for consultation.

Further, receipt of this information does not remove the requirement of a proponent/consultant to advertise in local print media and contact other bodies seeking interested Aboriginal parties. Consultation with Aboriginal stakeholders must be in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* which can be found on the Office of Environment and Heritage (OEH) public website by accessing the following link:

<http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf>

If you wish to discuss any of the above matters further please contact Felicity Barry, Archaeologist, on (02) 9995 6914.

Yours sincerely,

Susan Harrison
Senior Team Leader Planning
Greater Sydney Region
Regional Operations

LIST OF ABORIGINAL STAKEHOLDERS FOR THE WESTERN SYDNEY LGA'S HELD BY OEH FOR THE PURPOSES OF THE ABORIGINAL CULTURAL HERITAGE CONSULTATION REQUIREMENTS FOR PROPONENTS 2010

These lists are provided to proponents in accordance with section 4.1.2 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (the "Consultation Requirements") which commenced on 12 April 2010.

The consultation process involves getting the views of, and information from, Aboriginal people and reporting on these. It is not to be confused with other field assessment processes involved in preparing a proposal and an application. Consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring. Aboriginal people may provide services to proponents through a contractual arrangement; however, this is separate from consultation. The proponent is not obliged to employ those Aboriginal people registered for consultation. Consultation as per these requirements will continue irrespective of potential or actual employment opportunities for Aboriginal people.

A copy of the Consultation Requirements can be found on the OEH website at:

<http://www.environment.nsw.gov.au/resources/culture/heritage/consultation/09761ACHconsultreq.pdf>

Under the Consultation Requirements, a proponent is required to provide Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places as relevant to the proposed project area, with an opportunity to be involved in consultation. Section 3.3.1 of the Consultation Requirements states that Aboriginal people who can provide this information are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project.

The Consultation Requirements also state that:

Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:

- *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
- *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
- *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Please note: the placement of an organisation's name on any OEH Aboriginal stakeholder list for the Consultation Requirements does not override a proponent's requirement to also advertise in the local newspaper and to seek from other sources the names of any other Aboriginal people who may hold cultural knowledge as required under clause 3.3.1C of the National Parks and Wildlife Regulation 2009.

#	Organisation	Contact Name	Phone Number	Contact Address
1	Deerubbin Local Aboriginal Land Council	Kevin Cavanagh	(02) 4724 5600	2/9 Tindale St, Penrith NSW 2750
2	Darug Custodian Aboriginal Corporation	Leeanne Watson	02 4577 5101 / 0415 770 163	PO Box 81, Windsor NSW 2756
3	Darug Tribal Aboriginal Corporation		02 9622 4081	PO Box 441, Blacktown NSW 2148
4	Darug Aboriginal Cultural Heritage Assessments	Gordon Morton	02 9410 3685 or 0422 885 831	901 Hermitage Rd, Kurrajong Hills NSW 2750
5	Darug Land Observations	Gordon Workman	0415 063 763/ fax 02 9831 8888	PO Box 571, Plumpton, NSW 2761
6	Des Dyer		0408 360 814	18a Perigee Close, Doonside 2767
7	Gunjeewong Cultural Heritage Aboriginal Corporation	Cherie Carroll Turrise	(02) 6355 4110	1 Bellvue Place, Portland NSW, 2847 *Cherie is Ngunnawal Elder however lived in the Western Sydney area during her childhood. She recognises she is not from the area but has associations.
8	Merriam Indigenous Corporation	Shaun Carroll	0435040042	GPO Box 158, Canberra City, ACT, 2601 *Shaun is Ngunnawal and is Cherie's brother.
9	Corroboree Aboriginal Corporation	Steve Johnson	0406 991 221	PO Box 3340, Rouse Hill, NSW 2155 *Ngunnawal and lives in Western Sydney
10	Muri Bidgee Mullangan Aboriginal Corporation	Darleen Johnson	0490 051 102	PO Box 246, Seven Hills, NSW, 2147 *Ngunnawal and lives in Western Sydney

11	Bidjarrong Aboriginal Corporation	James Carroll	0433 224 324	PO Box 124, Round Corner, NSW 2158
12		Phil Kahn	0434 545 982	78 Forbes Street, Emu Plains, NSW 2750
13	Wurrumay Consultancy	Kerne Slater	0423 935 556	89 Pyramid street, Emu Plains NSW
14	Warragil Cultural Services	Aaron Slater	0481 200 067	22 Tiffany Close, Rooty Hill NSW
15	Kawul Cultural Services	Kelly Slater	0431 720 887	89 Pyramid Street, Emu Plains NSW 2750
16	Tocomwall	Scott Franks	0404 171 544	PO Box 76, Caringbah NSW 1495
17	Amanda Hickey Cultural Services	Amanda Hickey	0434 480 508	41 Dempsey Street, Emu Heights, NSW 2750 *Amanda is Wonnarua
18	HSD Consultants	Patricia Hampton	0424142216	82 Ropes Crossing Boulevard, Ropes Crossing 2760
19	Rane Consulting	Tony Williams	02 88246991	1 Pyrenees Way Beaumont Hills NSW 2155
20		Anthony Williams	0456 399 687	Unit 2 / 21 Goodwin Street Narrabeen NSW 2101
21	Dhinawan-Dhigataa Culture & Heritage Pty Ltd	Ricky Fields	0402 942 572	19 Moomi Street, Lalor Park, NSW, 2147
22		Athol Smith	0449 665 715	16 Yantara Place, Woodcroft, NSW, 2767
23	Gunyyuu	Darlene Hoskins- McKenzie	0413078011	dahoskinsmckenzie@gmail.com *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
24	Walbunja	Hika Tekowhai	0402 730 612	Walbunja@gmail.com *This

25	Badu	Karia Lea Bond	0476381207	group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
26	Goobah Developments	Basil Smith	0405 995 725	11 Jeffery Place, Moruya, NSW 2537 *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
27	Wullung	Lee-Roy James Boota	0403703942	68 Grantham Road, Halehaven NSW, 2536 *This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
28	Yerramurra	Nicholas Wade Glover	0401753202	54 Blackwood Street, Gerringong, NSW, 2534 *This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
29	Nundagurri	Aaron Broad	0402526888	1 Waratah Avenue, Albion Park Rail, NSW, 2547 *This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
				8a Isabella Place Kiama, NSW 2533 *This group states that their

30	Bilinga	Christopher Payne	Not provided	boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River bilingachits@gmail.com *This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
31	Munyungachits	Peter Foster	Not provided	munyungachits@gmail.com *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
32	Wingikara	David Bell	Not provided	wingikarachs@gmail.com *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
33	Murrumbul	Levi McKenzie-Kirkbright	Not provided	murrumbul@gmail.com *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River
34	Jerringong	Joanne Anne Stewart	0422000184	jerringong@gmail.com *This group's states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the snowy River

35	Pemulwuy CHTS	Pemulwuy Johnson	0425 066 100	pemulwuyd@gmail.com 14 Top Place, Mt Annan *This group's states that their boundaries (Murrumbidgee Peoples) extend from the Hawkesbury River to the snowy River
----	---------------	------------------	--------------	---



14 May 2015

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

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 Ref: 0658 -15/SJ
Your Ref: Marsden Park AHIP

Dear Mr McLaren

Native Title Search Request – Blacktown City Council Local Government Area

Thank you for your search request received on 13 May 2015 in relation to the above area.

As your request is related to an area of land which is freehold it should be noted that under the *Native Title Act 1993* (Cth), 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.

For more information on native title and freehold tenure, you may also wish to visit our website at <http://www.nntt.gov.au/nativetitleclaims/Pages/Native-title-claims-and-freehold-land.aspx>

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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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.

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/assistance/Pages/Searches-and-providing-Register-information.aspx>

Email to: NSWEnquiries@nntt.gov.au

Post to: GPO Box 9973 Sydney NSW 2001

For additional enquiries: 02 9227 4000

15 May 2015 ref: OE&H : 15-5-2015/3

AECOM
PO BOX Q410
QVB Post Office NSW 1230

Dear Sir or Madam

Aboriginal Cultural Heritage Assessment

Proposed residential development at Marsdens Park.

I refer to your letter of 13 May 2015 regarding the above matter.

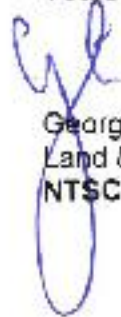
We acknowledge that section 4.1.2 of the Office of Environment & Heritage's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* require you to contact us in order to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places.

However, we advise that NTSCORP's privacy guidelines restrict us from providing proponents with contact details of traditional owners who may have such an interest or hold such knowledge.

Please be advised that, in response to your notification, we will forward your correspondence to any individuals, groups and organisations whom NTSCORP is aware assert traditional interests within or hold cultural knowledge about the relevant area. Recipients of our correspondence will be invited to register their interest in the project directly with you by the 27 May 2015.

Please be aware that NTSCORP cannot make a guarantee or undertaking that the recipients of our correspondence represent the entirety of traditional owners for the relevant area.

Yours faithfully,



George Tonna
Land & Notifications Officer
NTSCORP Limited

Western Sydney Aboriginal Stakeholder Groups

Deerubbin Local Aboriginal Land Council
Level 2-9 Tindale Street
Penrith NSW 2750
Contact: Kevin Cavanagh
Phone: 747-245600

Email: staff@deerubbin.org.au
Website: www.deerubbin.org.au

Ms Leanne Wright
Chairperson
Darug Custodian Aboriginal Corporation
PO Box 81
WINDSOR NSW 2756

Phone: (02) 4577 5181
Mobile: 0415 770 163
Fax: (02) 4577 5098

Sandra Lee
Burbaga Aboriginal Corporation
PO Box 174
DOONSDALE NSW 2767

Phone: (02) 9622 4056
Mobile: 0415 439 326

Gordon Workman
Darug Tribal Aboriginal Corporation
PO Box 441
BLACKTOWN NSW 2148

Mobile: 0415 663 763

Mr Gordon Morton
Chairperson
Darug Aboriginal Cultural Heritage Assessments
90 Hermitage Road
KURRAJONG HILLS NSW 2758

Contact 1: Gordon Morton
Phone: (02) 9625 0005
Fax: (02) 4567 7421

Contact 2: Celestine Everingham
Phone/Fax: (02) 4567 7421
Mobile: 0432 528 896

Mr Scott Franks
Yarrawalk/Tocomwall
PO Box 76
CARINGBAH NSW 2229

Email: yarrawalk@tpg.com.au

Mr Gordon Workman
Darug Land Observations
PO Box 571
PLUMPTON NSW 2761

Mr Des Dyer
Darug Aboriginal Land Care
18A Perigee Close
DOONSIDE NSW 2767

Mobile: 0408 360 814

Ms Cherie Carroll Turrise
Gunjeewong Cultural Heritage Aboriginal Corporation
1 Bellevue Place
PORTLAND NSW 2847

Appendix D

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Appendix E

Draft Assessment Methodology

Lots 4, 5, 7, 8 and 9 on DP1078187, Lot 10 on DP1178982 and Lot 1 on DP262886 (part), Marsden Park

Aboriginal Heritage Assessment - Draft Assessment Methodology



DRAFT

Lots 4, 5, 7, 8 and 9 on DP1078187, Lot 10 on DP1178982 and Lot 1 on DP262886 (part), Marsden Park

Aboriginal Heritage Assessment - Draft Assessment Methodology

Client: Woorong Park Pty Ltd

ABN: 51 094 493 428

Prepared by

AECOM Australia Pty Ltd

Level 21, 420 George Street, Sydney NSW 2000, PO Box Q410, QVB Post Office NSW 1230, Australia

T +61 2 8934 0000 F +61 2 8934 0001 www.aecom.com

ABN 20 093 846 925

16-Jun-2015

Job No.: 60343416

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DRAFT

Quality Information

Document Lots 4, 5, 7, 8 and 9 on DP1078187, Lot 10 on DP1178982 and Lot 1 on DP262886 (part), Marsden Park
60343416

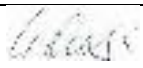
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x

Date 16-Jun-2015

Prepared by Andrew McLaren

Reviewed by Georgie Oakes

Revision History

Revision	Revision Date	Details	Authorised	
			Name/Position	Signature
A	15-06-15	Tech Review	G.Oakes	

DRAFT

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DRAFT

1.0 Introduction

1.1 Background

AECOM Australia Pty Ltd (AECOM) has been engaged by Woorong Park Pty Ltd (Woorong Park) to undertake an Aboriginal Cultural Heritage Assessment to support an application for an 'all of area' Section 90 Aboriginal Heritage Impact Permit (AHIP) for a proposed residential development across Lots 4, 5, 7, 8 and 9 on DP1078187, Lot 10 on DP1178982 and Lot 1 on DP262886 (part), west of Richmond Road at Marsden Park, Sydney, NSW (the 'Project area').

This draft assessment methodology details AECOM's proposed approach to the Aboriginal Cultural Heritage Assessment and is being provided to all Registered Aboriginal Parties (RAPs) in accordance with Sections 4.3.1 and 4.3.2 of the NSW Office of Environment and Heritage's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010a). A brief review of existing environmental and archaeological data for the Project area is also provided to give context to AECOM's proposed assessment methodology.

1.2 Assessment Objectives

The overarching objectives of the Aboriginal Cultural Heritage Assessment are as follows:

- to identify the Aboriginal cultural heritage values of the Project area by way of background research, archaeological survey, test excavation and consultation with RAPs;
- to assess the potential impact of the proposed development on the identified Aboriginal cultural heritage values of the Project area;
- to provide an appropriate management strategy to avoid or minimise potential harm to Aboriginal cultural values identified within the Project area; and
- to compile an Aboriginal Cultural Heritage Assessment Report that will assist the Director-General of OEH in his/her assessment of an 'all of area' Section 90 AHIP application for the Project area.

1.3 The Development

Woorong Park propose to develop the Project area, which has multiple zonings under the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*, for residential purposes. Woorong Park is currently preparing two Development Approval (DA) applications for submission to Blacktown City Council for the proposed development: one for bulk earthworks across the entire Project area and one for an indicative road layout. Further DAs relating to the proposed residential development will be submitted in due course.

1.4 Environmental Context

The Project area for this assessment, shown on **Figure 1**, comprises an irregularly-shaped c.420 hectare parcel of undeveloped land to the west of Richmond Rd in Marsden Park. Registered as Lots 4, 5, 7, 8 and 9 on DP1078187, Lot 10 on DP1178982 and Lot 1 on DP262886 (part), the Project area is bounded by Stoney Creek Road and South Creek in the west, the Llandilo International Transmitting Station and uncleared bushland in the south, undeveloped rural land in the north and both undeveloped rural land and Stockland's residential development 'Elara' in the east. The Project area falls wholly within the Marsden Park Precinct of Sydney's North West Growth Centre and is located within the Local Government Area of Blacktown City Council (Parish of Gidley, County of Cumberland).

The topography of the Project area is typical of Cumberland Lowlands physiographic region described by Bannerman and Hazelton (2011) and can be broadly described as flat to undulating, with level to very gently inclined flats in the central, northern and westernmost portions of the Project area giving way to dissected, gently undulating terrain typical of the Berkshire Park soil landscape (Bannerman and Hazelton 2011: 26). Three low but locally prominent ridgelines dominate the topography of the site, with the largest northeasterly trending ridgeline comprising the watershed between South Creek in the west and Halmahera Creek in the east. Elevations within the Project area range from 4 to 37 m AHD providing a total local relief of up to 33 m. Elevations are highest in the easternmost portion of the Project area and lowest along South Creek in the westernmost part of the site. Slopes are predominantly very gently to gently (1-10%) inclined.

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Halmahera Creek flows northward through the central portion of the Project area and is the primary watercourse within the site. Unnamed tributaries of this creek within the Project area, which enters the site as a 2nd order stream and exits it as a 3rd order stream, include two northwesterly-trending 2nd order streams, both of which are fed by a number of ephemeral 1st order drainage depressions. South Creek, a regionally significant watercourse, flows in part along the western boundary of the Project area. In the westernmost portion of the Project area, two unnamed 1st order streams likely represent former channel alignments of South Creek.

Reference to the Penrith 1:100 000 Geological Map Sheet (9030) indicates that the surface geology of the Project area has been mapped as consisting variously of rocks and sediments associated the Tertiary Londonderry Clay (Tl) and Rickabys Creek Gravel (Tr) formations, as well as Quaternary Alluvium (Qa). Deposits of Rickabys Creek Gravels within the Project area, which are known to contain a variety of rocks suitable for flaked stone artefact manufacture, occur in association with South Creek. Although unmapped, gravel deposits associated with the Tertiary St Marys formation, which comprises the lowest of three stratigraphic units within the Berkshire Park soil landscape, may also be present within the Project area, occurring on elevated ridgelines and associated spurs. Alluvial in origin, the St Marys formation consists of channel remnants cut into underlying strata, and contains abundant quantities of silcrete, as well as silicified wood, quartzite and quartz, all of which are suitable for flaked stone artefact manufacture.

Soils within the Project area have been mapped by Bannerman and Hazelton (2011) as belonging to the South Creek and Berkshire Park soil landscapes. Soils of the South Creek soil landscape comprise alluvium over residual clays or bedrock. Deep layered profiles are a common feature of this fluvial landscape. Where pedogenesis has occurred, structured plastic clays or loams occur within and immediately adjacent to drainage lines. Red and yellow podzolic soils, meanwhile, are typical for associated terraces. Dominant 'A' horizon soils comprise sandy/clay loams with pH levels ranging from neutral (pH 7.0) to strongly acidic (pH 4.5). Soils of the Berkshire Park Soil Landscape are the result of three depositional phases of Tertiary alluvial/colluvial origin and have been characterised by Bannerman and Hazelton (2011) as weakly pedal orange heavy clays and clayey sands. Dominant 'A' horizon soils comprise sandy loams and sandy clay loams with pH levels ranging from neutral (pH 7.0) to moderately acidic (pH 5.5) (Bannerman and Hazelton 2011: 27).

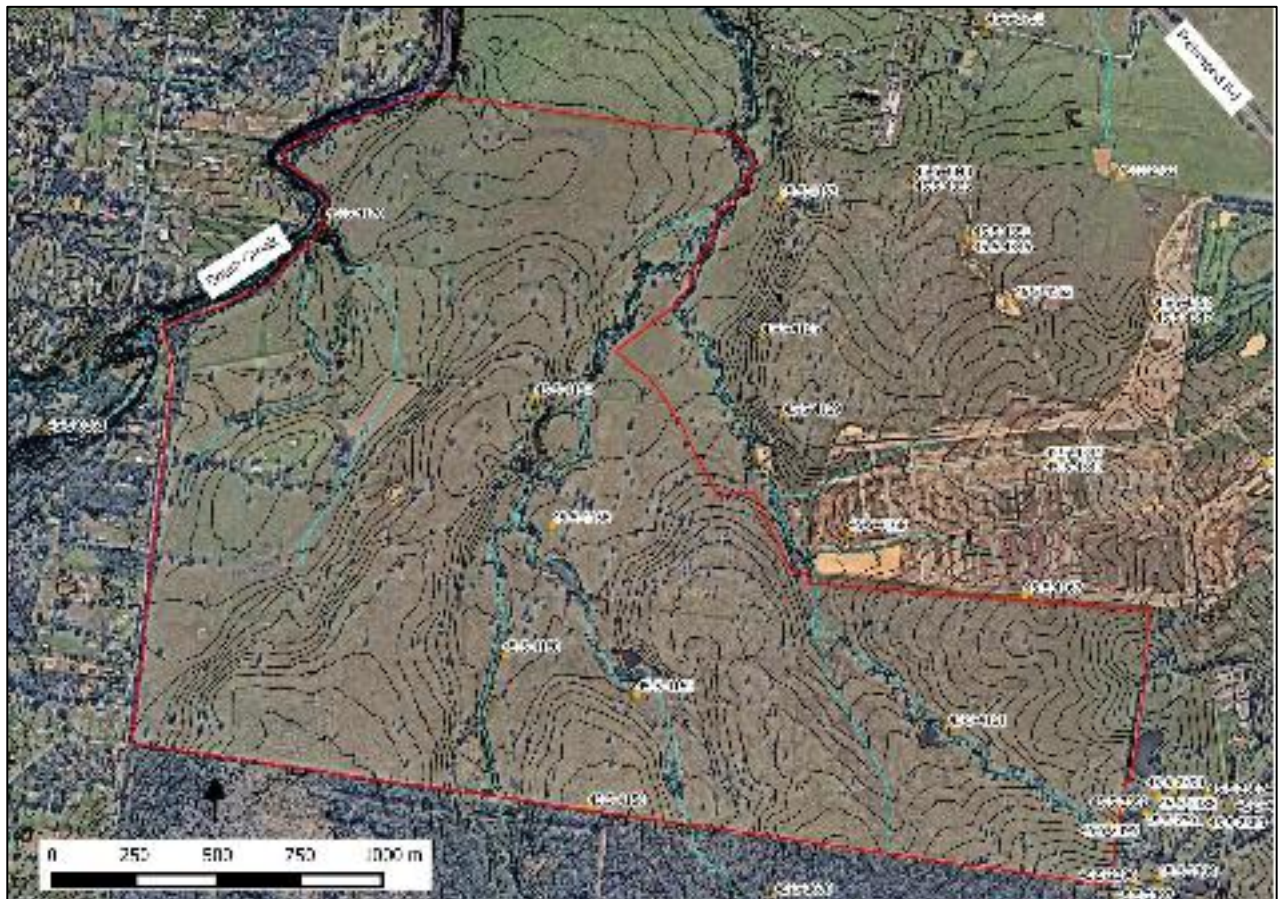


Figure 1 Project area with AHIMS registered Aboriginal sites

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1.5 Archaeological Context

1.5.1 AHIMS Database

The AHIMS database, administered by OEH, contains records of all Aboriginal objects reported to the Director General of the Department of Premier and Cabinet in accordance with Section 89A of the *National Parks and Wildlife Act 1974*. It also contains information about Aboriginal places, which have been declared by the Minister to have special significance with respect to Aboriginal culture. Previously recorded Aboriginal objects and declared Aboriginal places are known as 'Aboriginal sites'.

A search of the AHIMS database on 23 March 2015 for a 5 x 5 km area centred on the Project area (AHIMS search area) returned 77 site entries, comprising 73 open artefact sites (i.e., artefact scatters and isolated artefacts), two scarred trees, one stone quarry and one area of Potential Archaeological Deposit (PAD). Of the 77 sites identified within the search area, nine are located within the Project area, all of which comprise open artefact sites. Site details are provided in **Table 1** and their locations shown on **Figure 1**.

Table 1 AHIMS sites registered within the study area

Site ID	Site name	Easting GDA94 (56)	Northing GDA94 (56)	Site type	Recorder
45-5-2392	GROS6	297705	6268399	Artefact scatter	Australian Museum Business Services (1997)
45-5-2395	GROS9	297675	6268359	Artefact scatter	Australian Museum Business Services (1997)
45-5-4158	MPP-01	296099	6268407	Isolated artefact	Kelleher Nightingale Consulting Pty Ltd (2012)
45-5-4159	MPP-02	296245	6268750	Artefact scatter	Kelleher Nightingale Consulting Pty Ltd (2012)
45-5-4160	MPP-03	295841	6268870	Artefact scatter	Kelleher Nightingale Consulting Pty Ltd (2012)
45-5-4170	MPP-07	295309	6270180	Isolated artefact	Kelleher Nightingale Consulting Pty Ltd (2012)
45-5-4161	WP 1	297189	6268648	Artefact scatter	Kelleher Nightingale Consulting Pty Ltd (2012)
45-5-4164	WP 6	295938	6269646	Artefact scatter	Kelleher Nightingale Consulting Pty Ltd (2012)
45-5-4166	WP 5	295992	6269259	Artefact scatter	Kelleher Nightingale Consulting Pty Ltd (2012)

1.6 Proposed Assessment Approach

The approach that AECOM intends to adopt for undertaking the Aboriginal Cultural Heritage Assessment includes the following:

- background research,
- archaeological survey;
- two-phase test excavation program;
- consultation with RAPs; and
- Preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR).

The proposed methodology for each of these tasks is set as follows:

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1.6.1 Background Research

The following tasks will be undertaken for the desktop component of the assessment:

- A search of OEH's AHIMS database;
- Review of associated site cards and reports to clarify site contents, extents and statuses;
- A review of the landscape context of the Project Area, with a particular emphasis on its implications for the nature and distribution of Aboriginal archaeological materials;
- A review of relevant archaeological and ethnohistoric information for the Project Area and environs; and
- Preparation of a predictive model for the Aboriginal archaeological record of the Project Area.

1.6.2 Archaeological Survey

A five day 'full coverage' pedestrian survey of the Project area is proposed. Survey will be undertaken by a combined field of two AECOM archaeologists and an appropriate number of RAP field representatives, as determined by Woorong Park and AECOM prior to fieldwork.

All surface Aboriginal archaeological sites identified during survey will be recorded to the standard required by OEH's *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010b). All site and artefact locations will be captured by differential GPS. Associated site data (e.g., location, type and contents) will also be entered directly into GPS units for data consistency. Photographic records of each site will also be taken. The documentation process will also involve a preliminary assessment of the significance of each site using standard significance criteria for Aboriginal archaeological sites in NSW (i.e., rarity, representativeness and research potential).

1.6.3 Two Phase Archaeological Test Excavation Program

A 7.5 week program of archaeological test excavation will be completed following survey. Test excavation will be undertaken by a combined field of three AECOM archaeologists and an appropriate number of RAP field representatives, as determined by Woorong Park and AECOM prior to fieldwork. In accordance with Requirement 3.1 of the Code of Practice, the purpose of this test excavation program is to collect information about the nature and extent of subsurface Aboriginal objects across the entire Project area.

Archaeological test excavation within the Project area will be undertaken in two phases. Phase 1 will involve dispersed testing across the entire site as well as a targeted gradiometer survey program aimed at identifying potential hearths in the vicinity of selected Phase 1 test pits (i.e., those with demonstrably high artefact densities and/or other features of interest). Test pit locations for Phase 1 of the test excavation program will be selected by way of a stratified random sampling design, with identified landform units forming the basis of stratification. In accordance with Requirement 16(a) of the Code of Practice, Phase 1 test pits will be randomly selected from regularly-spaced grids of sampling points (10 m interval) within individual landform units.

Phase 2 will involve targeted extensions around Phase 1 pits with high artefact densities and/or other features of interest (e.g., potential hearths), as well as subsurface investigation of selected magnetic anomalies.

In accordance with the Code of Practice, all test pits will be hand excavated as 50 x 50 cm units (0.25 m²), with 5 cm spits employed during the excavation of the first test pit and 10 cm spits thereafter. All test pits will be excavated to the base of extant artefact-bearing biomantles. Excavated sediment will be dry-sieved through 5mm wire-mesh sieves. All stone artefacts and non-diagnostic lithic items recovered during sieving will be bagged by square and spit. Representative profiles in each excavation unit will be drawn and photographed. Test pit stratigraphy will be recorded on pro forma test pit recording sheets using standard sedimentological terms and criteria (after McDonald & Isbell, 2009). All pits will be backfilled after excavation.

1.6.4 Social/Cultural Values Assessment

Aboriginal community consultation for the assessment will be undertaken in accordance with OEH's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010a). RAP representatives are in the best position to provide information on the Aboriginal social/cultural heritage values of the Project Area. During the assessment process, AECOM will consult with RAPs regarding the cultural heritage values of the Project Area. This will include as a minimum:

- A request for any initial comments regarding the Aboriginal cultural heritage values of the Project Area in the letter accompanying this draft methodology;

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- Discussion of cultural heritage values during fieldwork; and
- provision of a draft ACHAR to all RAPs for their review and comment. The draft ACHAR will assess the importance of Aboriginal cultural heritage values within the Project Area. In addition, the Draft Report will assess the potential impact of the proposed development on identified Aboriginal cultural heritage values and identify appropriate mitigation and management strategies to avoid or minimise potential harm to such values. AECOM will incorporate any comments made within the submission period prior to finalisation of the report.

1.6.5 Aboriginal Cultural Heritage Assessment Report

An Aboriginal Cultural Heritage Assessment Report will be prepared for submission with Woorong Park's AHIP application for the Project area. The ACHAR will be prepared in accordance with the following statutory guidelines:

- OEH's *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment & Heritage, 2011);
- OEH's *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b); and
- OEH's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010a).

1.7 References Cited

Australian Museum Business Services. (1997). *Archaeological Survey for Aboriginal Sites on Lots 45 and 46, D.P. 262886, Glengarrie Road, Marsden Park*. Unpublished report for Hollinsworth Pty Ltd.

Bannerman, S. M., & Hazelton, P. A. (2011). *Soil Landscapes of the Penrith 1:100 000 Sheet*. Soil Conservation Service of NSW.

Kelleher Nightingale Consulting Pty Ltd. (2012). *Marsden Park Precinct North West Growth Centre: Aboriginal Heritage Assessment*. Unpublished report to Winten Property Group and NSW Department of Planning.

McDonald, R. C., & Isbell, R. F. (2009). Soil Profile. In *Australian Soil and Land Survey Field Handbook* (Third Edit., pp. 147-200). Collingwood: CSIRO Publishing.

NSW Department of Environment Climate Change & Water. (2010a). *Aboriginal Cultural Heritage Consultation Requirements for Proponents. National Parks*. Department of Environment, Climate Change and Water.

NSW Department of Environment Climate Change & Water. (2010b). *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. Department of Environment, Climate Change and Water.

NSW Office of Environment & Heritage. (2011). *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*. Office of Environment and Heritage.

Appendix F

RAP Responses to Draft Methodology

McLaren, Andrew

From: Tony Williams <aas.info@bigpond.com>
Sent: Tuesday, 16 June 2015 3:49 PM
To: McLaren, Andrew
Subject: RE: Aboriginal Heritage Assessment - Marsden Park - Draft Assessment Methodology

Hi Andrew "

AAS agrees with the methodology. AECOM has always presented sound methodology and are very respectful of Aboriginal culture. I would like to see all artifacts collected to be displayed in the council library or buried on site at the entry of the property with a information plaque .

From: Andrew.McLaren@aecom.com
To: aas.info@bigpond.com
Subject: Aboriginal Heritage Assessment - Marsden Park - Draft Assessment Methodology
Date: Tue, 16 Jun 2015 04:34:02 +0000

Hi Tony,

Please find attached, for your review and comment, a draft assessment methodology for the Marsden Park Aboriginal Cultural Heritage Assessment. A cover letter is also attached.

Please note that the closing date for comments is Wednesday 15 July 2015. Comments can be provided by mail, fax, e-mail or phone using the contact details below.

Cheers,

Andrew

Dr Andrew McLaren
Archaeologist
D +61 2 8934 0547
Andrew.McLaren@aecom.com

AECOM
Level 21, 420 George Street, Sydney, NSW 2000
PO Box Q410, QVB PO, Sydney, NSW, 1230
T +61 2 8934 0000 F +61 2 8934 0001
www.aecom.com

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McLaren, Andrew

From: Janaya Smith <cullendullachts@gmail.com>
Sent: Tuesday, 23 June 2015 5:43 PM
To: McLaren, Andrew
Subject: Re: Aboriginal Heritage Assessment - Marsden Park - Draft Assessment Methodology

This is confirmation of support to the proposed methodology and any further interest with for project and participation.

On Mon, Jun 15, 2015 at 9:38 PM, McLaren, Andrew <Andrew.McLaren@aecom.com> wrote:

Hi Janaya,

Please find attached, for your review and comment, a draft assessment methodology for the Marsden Park Aboriginal Cultural Heritage Assessment. A cover letter is also attached.

Please note that the closing date for comments is Wednesday 15 July 2015. Comments can be provided by mail, fax, e-mail or phone using the contact details below.

Cheers,

Andrew

Dr Andrew McLaren
Archaeologist
D [+61 2 8934 0547](tel:+61289340547)
Andrew.McLaren@aecom.com

AECOM
Level 21, 420 George Street, Sydney, NSW 2000
PO Box Q410, QVB PO, Sydney, NSW, 1230
T [+61 2 8934 0000](tel:+61289340000) F [+61 2 8934 0001](tel:+61289340001)
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--

Kind Regards

Janaya Smith
Junior Cultural Heritage Officer
Cullendulla
Murrin Stakeholder

Pollowan Phillip Khan
78 Forbes Street
Emu Plains NSW 2750
19.06.15,
mobile: 0434545982

Accom Australia Pty Ltd
Level 21, 420 George Street
Sydney NSW 2000

Dear, Andrew P McLaren

Thank you for the Cultural Heritage Assessment Methodology Report RE: Lots 4,5,7,8 and 9 on DP 1078187, lot 10 on DP1178982 and 1 on DP262886 (part) Marsden Park and Excavation Methodology. As you know the Old Koori people walked all over this country and looked after it and protected it as they moved around using it in Spiritual ways to Survive. So all this land is Highly significant to the Koori people

I have read your report and am happy with it, and happy to be working with you and your group with the proposed Assessment and Excavation, United in helping protect and save our Cultural Heritage. Regards Phillip Khan

As Senior Aboriginal person who has for the past forty of so years (40) actively participated in the Protection Aboriginal Cultural Heritage throughout the Sydney Basin, and particularly throughout Western Sydney, I, on behalf of the Kamilaroi- Yankuntjatjara Working Group, wish to provide to you my organisations' registration of Interest

Information in my registration of Interest:

1. I am a Senior Aboriginal and Principal of the Kamilaroi- Yankuntjatjara Working Group, and all Aboriginal entity (ABN33979702507).
2. I prefer communicating by, Mail, Telephone, and; and I am, the Principal, person to contact, and;
My contact details are:
Phillip Khan
78 Forbes Street, Emu Plains NSW 2750
Mobile 043 4545 982
3. I wish to be involved and participate in all levels of consultation/project involvement. I wish to attend all meetings, and, participate in available field work; and would receive a copy of the report.
4. I attach to this letter a copy of Kamilaroi- Yankuntjatjara Working Group's; GIO Public Liability Insurance; GIO Workers Compensation Certificate.

Should you wish me to provide further information, please do not hesitate to contact me on 0434545982.

Yours Sincerely,

Pollowan Phillip Khan

**KAMILAROI-YANKUNTJATJARA
WORKING GROUP**

- Lawn Mowing
- Outlier Cleaning
- Yard Clean-up
- Rubbish Removal
- Fencing



Phil Khan PH: 0434 545 982
philipkhan.ach@live.com.au 78 Forbes St Emu Plains 2750

McLaren, Andrew

From: kerrie slater <wurrumay@hotmail.com>
Sent: Wednesday, 15 July 2015 4:29 PM
To: McLaren, Andrew
Subject: RE: Aboriginal Heritage Assessment - Draft Assessment Methodology Woorang Park NSW

Dear Andrew

Wurrumay has read and agrees with the Draft Methodology for the Woorang Park , project

Regards

Kerrie Slater - Manager

McLaren, Andrew

From: Vicki Slater <vicki.slater@hotmail.com>
Sent: Wednesday, 15 July 2015 4:56 PM
To: McLaren, Andrew
Subject: RE: EOI- Fieldwork
Attachments: Kawul Cultural Services letter head - , Marsden Park letter of fieldwork.docx; C of C - Kawul Public Lia Insurance.pdf; Vicky -Workers Comp - GIO -attachment (1).pdf

Hi Andrew

Attached Insurances and ABN as Requested for Fieldwork.

In regards to the Draft- Aboriginal Cultural Heritage Assessment - Marsden Park NSW

Kawul Cultural Services agrees with the Draft Assessment for this Project.

Cheers

Vicky Slater - Manager

McLaren, Andrew

From: Shaun Carroll <merrigarn@yahoo.com.au>
Sent: Friday, 3 July 2015 9:32 AM
To: McLaren, Andrew
Subject: Lots 4,5,7,8 and 9 on DP1078187, lot 10 on DP1178982 and Lot 1 on DP262886
(part) Marsden Park, Sydney NSW

Dear Andrew,
Merrigarn Indigenous Corporation agrees with the methodology as set out by Aecom Australia for the above project. Please feel free to contact me if you require further information.
Regards
Shaun Carroll

McLaren, Andrew

From: Wendy Smith <gulagachts@gmail.com>
Sent: Wednesday, 1 July 2015 5:41 PM
To: McLaren, Andrew
Subject: Re: Aboriginal Heritage Assessment - Marsden Park - Draft Assessment Methodology

This is confirmation of support to the proposed methodology and further interest with the project and participation. Thankyou

On Tue, Jun 16, 2015 at 2:27 PM, McLaren, Andrew <Andrew.McLaren@aecom.com> wrote:

Hi Wendy,

Please find attached, for your review and comment, a draft assessment methodology for the Marsden Park Aboriginal Cultural Heritage Assessment. A cover letter is also attached.

Please note that the closing date for comments is Wednesday 15 July 2015. Comments can be provided by mail, fax, e-mail or phone using the contact details below.

Cheers,

Andrew

Dr Andrew McLaren
Archaeologist
D [+61 2 8934 0547](tel:+61289340547)
Andrew.McLaren@aecom.com

AECOM
Level 21, 420 George Street, Sydney, NSW 2000
PO Box Q410, QVB PO, Sydney, NSW, 1230
T [+61 2 8934 0000](tel:+61289340000) F [+61 2 8934 0001](tel:+61289340001)
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McLaren, Andrew

From: Aaron Slater <warragil_c.s@hotmail.com>
Sent: Tuesday, 16 June 2015 2:35 PM
To: McLaren, Andrew
Subject: RE: Aboriginal Heritage Assessment - Marsden Park - Draft Assessment Methodology

I apologise for the late reply. I accept and agree on the methodology for this project.

Aaron Slater
Warragil Cultural Services

From: Andrew.McLaren@aecom.com
To: warragil_c.s@hotmail.com
Subject: Aboriginal Heritage Assessment - Marsden Park - Draft Assessment Methodology
Date: Tue, 16 Jun 2015 04:22:51 +0000

Hi Aaron,

Please find attached, for your review and comment, a draft assessment methodology for the Marsden Park Aboriginal Cultural Heritage Assessment. A cover letter is also attached.

Please note that the closing date for comments is Wednesday 15 July 2015. Comments can be provided by mail, fax, e-mail or phone using the contact details below.

Cheers,

Andrew

Dr Andrew McLaren
Archaeologist
D +61 2 8934 0547
Andrew.McLaren@aecom.com

AECOM
Level 21, 420 George Street, Sydney, NSW 2000
PO Box Q410, QVB PO, Sydney, NSW, 1230
T +61 2 8934 0000 F +61 2 8934 0001
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McLaren, Andrew

From: Seli Storer <biamangachts@gmail.com>
Sent: Tuesday, 23 June 2015 12:36 PM
To: McLaren, Andrew
Subject: Re: Aboriginal Heritage Assessment - Marsden Park - Draft Assessment Methodology

This is confirmation that my elders support the methodology for the proposal and wish to be kept informed of any further developments.

On Tue, Jun 16, 2015 at 2:29 PM, McLaren, Andrew <Andrew.McLaren@aecom.com> wrote:

Hi Seli,

Please find attached, for your review and comment, a draft assessment methodology for the Marsden Park Aboriginal Cultural Heritage Assessment. A cover letter is also attached.

Please note that the closing date for comments is Wednesday 15 July 2015. Comments can be provided by mail, fax, e-mail or phone using the contact details below.

Cheers,

Andrew

Dr Andrew McLaren
Archaeologist
D [+61 2 8934 0547](tel:+61289340547)
Andrew.McLaren@aecom.com

AECOM
Level 21, 420 George Street, Sydney, NSW 2000
PO Box Q410, QVB PO, Sydney, NSW, 1230
T [+61 2 8934 0000](tel:+61289340000) F [+61 2 8934 0001](tel:+61289340001)
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McLaren, Andrew

From: desmond dyer <desmond4552@hotmail.com>
Sent: Thursday, 16 July 2015 11:05 AM
To: McLaren, Andrew
Subject: RE: Aboriginal Heritage Assessment - Marsden Park - Draft Assessment Methodology

Hi Andrew,
The Darug Aboriginal Land care agree with the Methodology
Des

From: Andrew.McLaren@aecom.com
To: desmond4552@hotmail.com
Subject: Aboriginal Heritage Assessment - Marsden Park - Draft Assessment Methodology
Date: Tue, 16 Jun 2015 04:38:27 +0000

Hi Des,

Please find attached, for your review and comment, a draft assessment methodology for the Marsden Park Aboriginal Cultural Heritage Assessment. A cover letter is also attached.

Please note that the closing date for comments is Wednesday 15 July 2015. Comments can be provided by mail, fax, e-mail or phone using the contact details below.

Cheers,

Andrew

Dr Andrew McLaren
Archaeologist
D +61 2 8934 0547
Andrew.McLaren@aecom.com

AECOM
Level 21, 420 George Street, Sydney, NSW 2000
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DEAR ANDREW, I would like to make just
a couple of comments on MARSDEN PARK
As I'm sure you already know my family have
lived in the area's most of our lives my Dad use
to tell me lots of stories of our ancestors he
~~to~~ use to tell me and show me where the
ancestors use to camp and tell stories that's
why I think it's so important we find and mark
where our ancestors Roamed over the lands their lands
which are disappearing at an alarming rate I go back
to my old homesites and their gone for me it's very
sad to see because it can never come back like
me I always intended to move back to my old
area but when I return it's no longer my place
I agree with any decisions and believe you have
our ancestors Aboriginal interests in safe keeping
please contact me on my mobile 0893414845 I know
as time goes by our lands will be gone I would like
to have well places I loved and enjoyed.

0154491539

Sincerely Shun Linn Linn
Cunjeewong Cultural Heritage Aboriginal Community

1 Bellvue Ave Port Louis NSW 2817



McLaren, Andrew

From: Roxanne Smith <murramarangchts@gmail.com>
Sent: Wednesday, 1 July 2015 8:01 PM
To: McLaren, Andrew
Subject: Re: Aboriginal Heritage Assessment - Marsden Park - Draft Assessment Methodology

Andrew,

This is confirmation that my elders support the methodology for the proposal and wish to be kept informed of any further developments. Thank you

On Tue, Jun 16, 2015 at 2:31 PM, McLaren, Andrew <Andrew.McLaren@aecom.com> wrote:

Hi Roxanne,

Please find attached, for your review and comment, a draft assessment methodology for the Marsden Park Aboriginal Cultural Heritage Assessment. A cover letter is also attached.

Please note that the closing date for comments is Wednesday 15 July 2015. Comments can be provided by mail, fax, e-mail or phone using the contact details below.

Cheers,

Andrew

Dr Andrew McLaren
Archaeologist
D [+61 2 8934 0547](tel:+61289340547)
Andrew.McLaren@aecom.com

AECOM
Level 21, 420 George Street, Sydney, NSW 2000
PO Box Q410, QVB PO, Sydney, NSW, 1230
T [+61 2 8934 0000](tel:+61289340000) F [+61 2 8934 0001](tel:+61289340001)
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Appendix G

Fieldwork Notification

06 July 2015

Dear Registered Aboriginal Party,

Re: Expression of interest for fieldwork - Aboriginal Cultural Heritage Assessment, Marsden Park, Sydney, NSW

As a Registered Aboriginal Party (RAP) for the Aboriginal Cultural Heritage Assessment being undertaken across Lots 4, 5, 7, 8 and 9 on DP1078187, Lot 10 on DP1178982 and Lot 1 on DP262886 (part), in Marsden Park, NSW, we are writing to you to request an expression of interest for involvement in the fieldwork component of this assessment.

AECOM in consultation with the proponent, Woorong Park Pty Ltd, intend to engage RAPs for this project on the basis of O&HS considerations, specifically provision of current workers compensation and public liability insurances, and relevant field skills and project experience in the Marsden Park area.

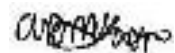
In view of the above, should you wish to be considered for involvement in the field component of the assessment, the following information is requested:

1. Copies valid workers compensation and public liability insurances;
2. Australian Business Number (ABN) and/or Australian Company Number (ACN); and
3. Written summary of relevant field skills and project experience in the Marsden Park area.

To be considered for inclusion in the field program, the above listed information is required by close of business Wednesday 15 July 2015.

As indicated in the draft methodology for the assessment dated 16 June 2015, consultation for this assessment will be undertaken according to the NSW Office of Environment and Heritage's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010). All RAPs, irrespective of involvement in field program, will continue to be consulted with over the life of the assessment.

Yours faithfully,



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

Direct Dial: +61 2 8934 0547
Direct Fax: +61 2 8934 0001

Appendix H

RAP Submissions on Draft Report

Aboriginal Archaeology Service
INC: 1400988
P O Box 6283 Rouse Hill NSW 2155
Mobile: 0490 126 040
Email: aas.info@bigpond.com



6th January 2016

Woorong Park

Lots 4, 5, 7, 8 and 9 on DP1078187, Lot 10 on DP1178982 and Lot 1 on DP262886

Firstly AAS would like to commend your company on the way that it has engaged with the stakeholders. Not only does your company give a clear assessment of the work to be carried out (on the Job) but gives the stakeholders an opportunity to meet with the proponent and to openly raise concerns. Additional work that may have to be carried out by the stakeholders can be discussed at this meeting.

Cultural Heritage assessment report for Lot 18, 19, and 20 Richmond Road Marsden Park. Your company has taken a professional approach in the consultation process when dealing with the Aboriginal stake holders. The methodology with which AECOM uses is complete in all aspects of the survey. AAS recommends that AECOM be one of the preferred Archaeology Consultants to deal Aboriginal culture, as the Norwest sector area is very significant, and it has been agreed by most of the Elders AECOM is very sensitive all site and other area to be explore.

AAS would like it recommendations noted as it is important the issues at hand, and are causing concern not only with the Aboriginal community but with all parties involved.

All correspondence should be emailed to AAS.info@bigpond.com and andle81@bigpond.com or to the above postal address. The area is an important part of our culture and valued by our family.

Yours truly

A handwritten signature in dark ink, appearing to read 'Andrew Williams', is located below the 'Yours truly' text.

Andrew Williams

Darug Aboriginal Land care

Uncle Des Dyer



18 a Perigee Close
Doonside
NSW 2767
ABN 71 301 006 0

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

Re: Woorong Park Marsden Park :

Dear Andrew,

The Darug Aboriginal Landcare/ Uncle Des Dyer have no objections to the proposed area of development.

We agree with the all your **recommendation and methodology**, in your report.
The area is very important to the Darug people.

We would like to see a plan of management be put in place to reburied of artefacts in a site close to where they were found and won't be impacted on once the development in completed.

. All land holds specific social, spiritual and cultural values to our organisation.
We would like to thank you and look forward to working with you again

Respectfully yours,
Des Dyer
Site Officer
Darug Aboriginal Land Care
Fax (02) 88 14 95 47
Mobile 0408 360 814



Andrew
26Januar2016
Aecom Australia LTD
Level 21 420 George St Sydney NSW2000

McLaren

ABORIGINAL ARCHAEOLOGICAL REPORT WOORONG PARK-MARSDEN PARK

Dear Andrew

We appreciated the opportunity to be involved with this project and provide our comments. We are very proud of our heritage as instilled in us by our past Elders so we are therefore pleased with being a part of this research and provide our input. Evidence of Aboriginal occupation that provides cultural links to our past ancestors is of great value and significance. In July 2015 our corporation was invited to participate in a two day field survey being part of a five week program. For one Aboriginal site officer .to attend. Our representative was not involved in any test excavation, as such we can only refer to report as detailed. Our members have requested to be involved in any future excavation works outlined for this project as we find it difficult to provide accurate comments regarding any excavation works when we are not on country and have had no participation in.... After an extensive review of the report from all our members, no objections were noted and the proposed methodology for salvage works is consistent with all views with no additional recommendations sought.

Our Corporations view in general is that Local Aboriginal Stakeholders who live in and around project areas should be involved in a larger capacity.as we are the knowledge holders with cultural connection and history it is our place our home.
We look forward to further consultation.

Yours sincerely

Marilyn Carroll
Director



DARUG CUSTODIAN
ABORIGINAL
CORPORATION

PO BOX 81 WINDSOR 2756
PHONE: 0245775181 FAX: 0245775098
MOBILE: 0415770163 Leanne
0414962766 Justine
EMAIL: mulgokiwi@bigpond.com / Justinecoplin@optusnet.com.au

Attention: AECOM

Subject: Woorong Park

Dear Andrew

We have received the Woorong Park Report, We would like to add that our sites are a complex and not all separate sites and recommend that the connections are interpreted throughout the project. Information gathered during these projects is of high significance, once our sites are gone there is no other evidence of the sites or connections. This area has shown in recent excavations and surveys that this is a Darug landscape and there are still numerous parts of our histories to be recorded. Marsden Park is an area that Darug families have had a connection to for thousands of years as shown in all previous studies, Darug people stayed in this area to present times, the oral histories of this area support the families staying here for thousands of years.

Within this document the amount of groups for consultation is high with many groups not from this area, we do not support personal profit groups and also do not support any input that they have into the recommendations.

The *Aboriginal cultural heritage consultation requirements for proponents* Section 4.1.8 refers to "Aboriginal organisations representing Aboriginal people who hold cultural knowledge". Recent consultation meetings have revealed that many of these Aboriginal organisations and individuals do not hold cultural knowledge of the Western Sydney area. The increasing involvement of such parties in cultural heritage management means that genuine local Aboriginal organisations are unable to properly care for our cultural heritage.

Many Aboriginal organisations listed in the OEH response letter do not contribute to the Aboriginal community of Western Sydney. Individuals listed in the OEH response letter do not represent the community and while they may be consulted with, should not be employed for their own personal financial benefit. **As they were in the testing,**

We recommend that any further field work should be given to Darug traditional owners.

Apart from the amount of people consulted we support the summery report.

Our group would like to attend any future field work and consultations. Please contact us with all further enquiries on the above contacts.

Regards

A handwritten signature in dark ink, appearing to read 'Justine Coplin', is written over a light blue rectangular background.

Justine Coplin

Text Message
Mon 22 Jun 12:11 pm

Hi darren sorry to both of you
can you tell me when we get
paid for marsden park job please
cherie

Tue 21 Jul 11:24 am

Hi andrew meet you at hane park
august cherie gchac

Thu 24 Dec 3:54 pm

Hi andrew read both draft
reports i agree with the drafts
i know blackfellas lived in
marsden park because we
lived there have a happy xmas
cherie carroll turris gunjee
wong cultural heritage
aboriginal corporation



Text Message

Send

Pollwan Phillip Khan
78 Forbes Street
Emu Plains NSW 2750
13/01/2016
mobile: 0434545982 philipkhan.acn@live.com.au

Accom Australia Pty Ltd
Level 21, 420 George Street
Sydney NSW 2000

Dear Andrew

Thank you for your Cultural Heritage Assessment Report of Woorong Park at Marsden Park Sydney NSW Lots 18,19,20 on DP 1190560 adjacent to Richmond Rd at Marsden Park, I have read your Report and happy with it, but was a little disappointed about the attempts were made to identify and save as Aboriginal heritage conservation area along South Creek and little Ck within the project area of alluvial flood plains which is an area of potential for burial sites. When these machines are working they will not see a thing because the driver is looking wrong way and at a speed. As I have said that I am happy with your recommendation of salvage excavation, and Kamilaroi-Yankuntjatjara team are looking forward to be working with you and your team on this project.

Regards Phillip Khan

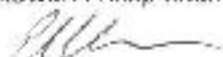
Information in my registration of Interest:

1. I am a Senior Aboriginal and Principal of the Kamilaroi Yankuntjatjara Working Group, and all Aboriginal entity (ABN33979702507).
2. I prefer communicating by, Mail, Telephone, and; and I am, the Principal, person to contact, and;
My contact details are:
Phillip Khan
78 Forbes Street, Emu Plains NSW 2750
Mobile 043 4545 982 email philipkhan.acn@live.com.au
3. I wish to be involved and participate in all levels of consultation/project involvement. I wish to attend all meetings, and, participate in available field work; and would receive a copy of the report.
4. I attach to this letter a copy of Kamilaroi- Yankuntjatjara Working Group's; GIO Public Liability Insurance; GIO Workers Compensation Certificate.

Should you wish me to provide further information, please do not hesitate to contact me on 0434545982.

Yours Sincerely,

Pollwan Phillip Khan



**KAMILAROI-YANKUNTJATJARA
WORKING GROUP**

- Lawn Mowing
- Gutter Cleaning
- Yard Clean-up
- Rubbish Removal
- Fencing



Phil Khan PH: 0434 545 982
philipkhan.acn@live.com.au 78 Forbes St Emu Plains 2750

