



**BRINGELLY ROAD UPGRADE
CAMDEN VALLEY WAY TO THE NORTHERN ROAD
ABORIGINAL CULTURAL HERITAGE**

Cultural Heritage Assessment Report

Prepared for the
Roads and Traffic Authority of New South Wales (RTA)

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**Bringelly Road Upgrade, Camden Valley Way to The Northern Road:
Aboriginal Cultural Heritage: Cultural Heritage Assessment Report**

Portions of this document have been censored for reason of confidentiality to protect sensitive cultural information.

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1 Introduction

1.1 Project Description

The Roads and Traffic Authority of NSW (RTA) has commenced planning for the future upgrade of Bringelly Road between Camden Valley Way at Leppington and The Northern Road at Bringelly, a length of approximately 10km, in south west Sydney (Figure 1). The proposed upgrade works are designed to accommodate the anticipated increase in population and travel demand associated with the future development of the South West Growth Centre.

The proposed upgrade will widen Bringelly Road from a two lane road to a four lane divided road, between Camden Valley Way in the east and The Northern Road in the west. The upgraded Bringelly Road will form one of the arterial road transport corridors for the South West Growth Centre.

Features of the proposed road upgrade include:

- an upgrade from a two lane to a four lane divided road with central median;
- the wide central median will allow for future widening to six lanes, if required in the future;
- an intended posted vehicle speed limit of 80km/h;
- a 3 metre wide off-road shared pedestrian/cyclist path;
- two metre wide shoulders;
- adjustments to public utilities such as gas, electricity and telephone services along the route;
- bicycle and pedestrian crossing provisions at traffic lights;
- bus priority capability at traffic lights and indented bus bays on both sides of Bringelly Road;
- designated turning lanes at traffic lights;
- temporary U-turn facilities located opposite traffic lights at the upgraded intersections of North Avenue, Jersey Road and Eastwood Road; and
- existing properties on Bringelly Road would continue to have direct left in/left out access until precinct development takes place.

Perceived benefits of the project include:

- increased capacity for future traffic growth;
- improved safety for motorists by:
 - reducing the number of turning movements;
 - constructing a central median to separate opposing traffic; and
 - constructing turning lanes at intersections;
- improved safety for cyclists and pedestrians by providing an off-road shared path;
- improved travel times;
- improved access to the new Leppington railway station and the M5 and M7 motorways;
- providing access to the future South West Growth Centre precincts along Bringelly Road;
- improved access and travel times for road freight in Sydney's South West;
- providing bus priority capability at traffic lights; and
- improved landscaping.

The RTA has developed a concept design and is progressing planning for the upgrade, which is proposed to be undertaken in stages in conjunction with precinct development.

1.2 Scope of Review of Environmental Factors

A Review of Environmental Factors (REF) has been prepared by the RTA for the proposed upgrade. As part of the initial assessment process to develop a concept design of the upgrade, an Aboriginal heritage assessment of the proposed upgrade was previously undertaken by Austral Archaeology Pty Ltd (Austral) (August 2010). The Austral assessment formed part of the RTA's Preliminary Environmental Investigation (PEI) to assist in the development of the concept design for the road upgrade. The preliminary assessment process was based on the requirements of Stage 2 of the RTA *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (RTA 2008).

Subsequent to the PEI, the RTA completed a concept design for the upgrade of Bringelly Road, shown in Figure 2. Kelleher Nightingale Consulting Pty Ltd (KNC) was engaged by the RTA to provide a detailed Aboriginal heritage impact assessment of the concept design corridor, partly based on Aboriginal sites previously identified in the Austral (2010) assessment. The further detailed assessment was designed to assess the impacts of the proposed upgrade, refine the concept road alignment within the route corridor and identify appropriate mitigation measures. The detailed assessment would meet the objectives of Stages 3 and 4 of the RTA Procedure.

The Cultural Heritage Assessment Report (CHAR) fulfils the RTA's requirements for Aboriginal heritage consultation and investigation and documents an appropriate management strategy. The CHAR is based on an ongoing consultation process and the results of previous heritage reports.

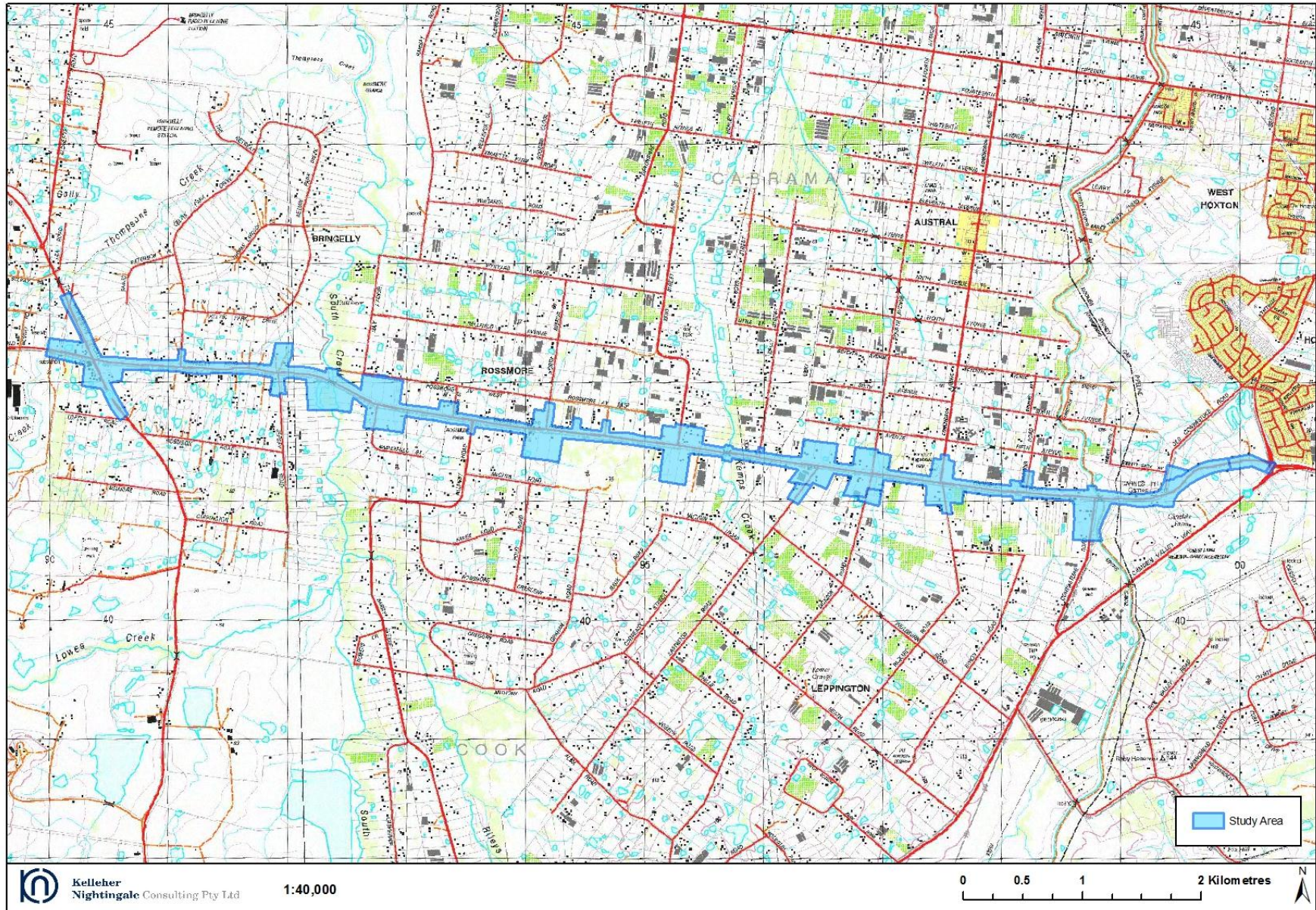


Figure 1. Study area (concept design corridor)

2 Study Objectives

The objectives of the integrated Aboriginal cultural heritage assessment were in accordance with the RTA *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (PACHCI).

The processes undertaken for the PEI and REF (impact assessment and survey) comply with the requirements of Stages 2, 3 and 4 of the procedure.

The results of the detailed consultation and assessment are integrated into this Cultural Heritage Assessment Report. The report comprises:

- a description of the location and scope of the proposed project (section 1);
- description and map of the study area (section 1);
- details of Aboriginal stakeholder identification, consultation and participation in the cultural and archaeological assessments (sections 3 and 4);
- description of the archaeological assessments (section 5);
- statement of significance, incorporating assessed cultural and archaeological values (section 6);
- outline of statutory requirements (section 7);
- an assessment of the potential impacts of the proposed upgrade on identified cultural heritage values (section 8); and
- management and mitigation measures recommended for archaeological sites and cultural values identified through the assessment (section 9).

3 Aboriginal Community Involvement

The RTA is committed to effective consultation with Aboriginal communities regarding RTA activities and their potential for impact on Aboriginal cultural heritage. The RTA *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (RTA 2008) has been developed to provide a consistent means of effective consultation for RTA activities across NSW.

3.1 Survey Participation

The local Aboriginal community has been involved in the previous survey and assessment of the study area. In accordance with Stage 2 of the RTA Procedure, the preliminary Aboriginal heritage assessment completed by Austral (2010) was carried out with:

- Tharawal Local Aboriginal Land Council (TLALC); and
- Gandangara Local Aboriginal Land Council (GLALC); and,

Bringelly Road is the boundary between the two land councils, with TLALC to the south and GLALC to the north.

There were no written comments from any of the Aboriginal groups consulted as part of the Stage 2 preliminary assessment attached to the Austral (2010) report. However, it was noted in the report that "All of the Aboriginal representatives consulted ... expressed a contemporary link with the local area and the archaeological record contained within. The general area where the Bringelly Road Upgrade is located was not identified by the representatives as being cultural (sic) sensitive and no known areas of cultural sensitivity were identified during the survey" (Austral 2010:61).

3.2 Stakeholder Identification and Consultation

As potential impacts to Aboriginal cultural heritage were identified, in accordance with the PACHCI the RTA initiated an Aboriginal stakeholder identification and consultation program.

The RTA advertised (refer Appendix A) for Aboriginal stakeholders following the Office of Environment and Heritage (OEH) (formerly Department of Environment, Climate Change and Water, DECCW) *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, April 2010) and the RTA PACHCI. Registered Aboriginal stakeholders have been consulted as part of the Aboriginal cultural heritage assessment.

Registered stakeholders for the Bringelly Road upgrade between Camden Valley Way and The Northern Road are listed in the table below.

Table 1. Registered Aboriginal Stakeholders

Group / Individual	Representative / Contact
Tharawal Local Aboriginal Land Council	Robyn Straub
Gandangara Local Aboriginal Land Council	Cindy Cronin
Wargon and Burra Aboriginal Centre	Scott Franks
Individual	Yvonne Simms
Darug Land Observations	Gordon Workman
Darug Aboriginal Cultural Heritage Assessments	Gordon Morton
Cubbitch Barta Native Title Claimants	Glenda Chalker
Darug Tribal Aboriginal Corporation	Sandra Lee
Darug Custodian Aboriginal Corporation	Leanne Watson
Darug Aboriginal Land Care	Des Dyer

The formal consultation process included:

- advertising for registered stakeholders in local and Indigenous media (refer Appendix A);
- notification of closing date for registration (refer Appendix A);
- ongoing compilation of registrants list, through continuing to register individuals and groups for consultation on the project;

- Aboriginal Focus Group (AFG) meeting held at RTA offices on March 3rd 2011 at which the results of the preliminary archaeological and Aboriginal cultural heritage assessments and methodologies for a further archaeological and Aboriginal cultural assessment were presented and discussed; and
- ongoing consultation with the local Aboriginal community.

The Aboriginal cultural heritage assessment for the Bringelly Road upgrade between Camden Valley Way and The Northern Road has been undertaken in accordance with the RTA Procedure. Stages 3 and 4 of the Procedure were implemented for the preparation of this CHAR. The CHAR outlines specific management and mitigation measures required for Aboriginal cultural heritage, developed in consultation with Aboriginal stakeholders.

A copy of the draft CHAR was provided to Aboriginal stakeholders for review and comment. An Aboriginal Focus Group (AFG) meeting was held on March 3rd 2011 to discuss the CHAR prior to submission of comments and finalisation of the document. Comments received from stakeholders are attached in full in Appendix B.

4 Aboriginal Cultural Assessment

As part of the cultural assessment, registered Aboriginal stakeholders were invited to identify individuals they regarded as knowledge holders for the area at the AFG. Identified knowledge holders would be invited to participate in the cultural assessment process. To date no specific knowledge holders have been identified for the study area although the Aboriginal community has identified cultural heritage values for the study area.

4.1 Aboriginal Cultural Values

It has been clearly identified that the study area has cultural heritage value to the local Aboriginal community. Some of the Aboriginal cultural heritage values expressed by stakeholders include:

- strong association with the land;
- responsibility to look after the land, including the heritage sites, plants and animals, creeks and the land itself;
- scarred trees;
- artefact sites and landscape features;
- creek lines;
- Indigenous plants and animals; and
- general concern for burials, as their locations are not always known and they can be found anywhere.

5 Archaeological Assessment

The preliminary archaeological assessment of the Bringelly Road upgrade undertaken by Austral (2010) comprised a background assessment and survey. The preliminary assessment included consideration of the environmental context of the study area, including climate, topography, hydrology, geology, soils, vegetation, fauna and historic land use (Austral 2010). The information presented in this section, based on the Stage 2 preliminary archaeological assessment, offers an understanding of the archaeological resource potentially impacted by the road upgrade.

5.1 Environmental Information

The study area is within the broad physiographic region of Sydney known as the Cumberland Lowlands (Hazelton and Tille 1990:2). It largely comprises a generally undulating landscape of low hills or ridges with shallow creek valleys. Elevation along the study area ranges between approximately 70m and 100m above sea level (a.s.l.).

Underlying geology is Triassic Wianamatta Group Shales. This geological unit includes shale, sandstone, carbonaceous claystone, laminate and coal (Stroud *et al.* 1985). Quaternary Alluvium also occurs along Bonds Creek at Leppington to the east (Jones and Clark 1991-Penrith 1:100K Geological Series Sheet 9030), and along South/Wianamatta Creek in the west (Stroud *et al.* 1985-Wollongong to Port Hacking 1:100K Geological Sheet).

Archaeological implications related to geology are centred on raised shale landforms along the alluvial margins (primarily South Wianamatta Creek and related tributaries).

Soils along the survey route straddle both the Penrith and Wollongong-Port Hacking 1:100K map sheets (Bannerman and Hazelton 1990, and Hazelton and Tille 1990). Most of the study area is mapped as the Blacktown Soil Landscape. There is a small area of Luddenham Soil Landscape at the eastern end of Bringelly Road. The South Creek Soil Landscape, a fluvial landscape on floodplains, valley flats and drainage depressions, occurs along Kemps Creek and Bonds Creek at Leppington and South Creek in the western end of the study area. These watercourses are noted as prone to flash flooding (Chesnut 1991:158).

The Blacktown Soil Landscape is characterised by an A1 horizon of thick brown coloured silty loam or silty clay loam, an A2 horizon of hard-setting bleached clay loam with iron indurated gravel sized shale fragments and a B horizon of mottled orange silty or fine grained sandy clay and commonly occurring strongly weathered ironstone concretions and rock fragments. The South Creek Soil Landscape, predominantly occurring along the drainage lines in the study area, comprises an A1 horizon of thick brown sandy loam to sandy clay loam, an A2 horizon of hard-setting dull brown clay loam and a B horizon of bright yellowish brown clay with a high proportion of gravels and shale fragments throughout. The Luddenham Soil Landscape, contained in the east of the study area, comprises an A1 horizon of friable dark brown loam to silty clay, an A2 horizon of clay loam to fine sandy clay loam and a B horizon of reddish brown to a bright yellowish brown silty clay to heavy clay with shale rock fragments common throughout.

Archaeological implications of the Blacktown podzolic soils indicate good conditions for artefact survivability but limited stratigraphic potential. Artefacts will exist where soil conditions are stable, but the active (aggraded/deflated) nature of podzolics means most artefacts will collect above the B horizon. South Creek soils suffer from low pedogenesis and flooding, such that only exceptional margins – marked bench terraces raised above the primary flood plain – are likely to exhibit intact archaeological deposit.

The Bringelly Road corridor crosses the upper catchment areas of South Creek, Kemps Creek and Bonds Creek. South Creek is the major one in the study area, with a catchment area of 56 square kilometres, flowing north for approximately 70km to its confluence with the Hawkesbury River near Windsor. Many of the watercourses in proximity to the road are upper minor tributaries (1st order streams), with some hills overlooking higher order creek channels.

Native vegetation within the study area has been significantly altered by previous land clearing for agricultural practises. The area would have been dominated by Forest Red Gum (*Eucalyptus tereticornis*) and Narrow-leaved Ironbark (*Eucalyptus crebra*). Today there are remnants of original open forest and woodland vegetation and regrowth along the road corridor. Predominant tree species are Grey Box (*Eucalyptus moluccana*), Forest Red Gum (*Eucalyptus tereticornis*) and Narrow-leaved Ironbark (*Eucalyptus crebra*), with understorey of *Acacia* spp., Australian Blackthorn (*Bursaria spinosa*), *Exocarpos* spp. and native grasses such as Kangaroo Grass (*Themeda australis*).

The area has been affected by the history of agricultural and grazing activities in the area. The Bringelly area was quickly settled after Governor Macquarie's visit to the area in 1810, with land grants marked out to Bringelly from 1811 and the first land grant given to Robert Lowe in 1812, followed by further grants so that

Bringelly developed as a predominantly pastoral and agricultural district. A number of large historic pastoral estates border Camden Valley Way, formerly known as Old Cowpasture Road. These include "Raby", "Gledswood" and "Molles Main" which have been used for stock grazing since the early 19th century. By 1826 a road network was established in the district, including Bringelly Road, The Northern Road between Camden and Richmond and Old Cowpasture Road. From 1891 grants in the area were subdivided to form the settlement of Bringelly.

Land use in the study area is still predominantly rural and includes market gardens and small farm allotments. Other key uses include road and power infrastructure, residential and industrial development.

5.2 Previous Archaeological Investigations

As mentioned previously, Austral (2010) conducted an earlier Aboriginal heritage assessment of the proposed Bringelly Road upgrade as part of the initial assessment process for the RTA's Preliminary Environmental Investigation (PEI).

Prior to the Austral survey of the Bringelly Road upgrade corridor, only one previously recorded site was registered on the OEH Aboriginal Heritage Information Management System (AHIMS) site database in the study area (AHIMS site number 45-5-3536; site name "SWRL Site 4"). The site was recorded as part of the South West Rail Link investigations covering a larger area which traversed the Bringelly Road study area (AMBS 2010). A review of the AMBS study, however, revealed an additional site situated within the study area (SWRL Site 7) which does not appear to be registered on AHIMS. In addition, a preliminary assessment for the South West Rail Link (Heritage Concepts 2006) identified two sites to the south of Bringelly Road, outside the current study area boundaries. A recent survey and assessment along Camden Valley Way, near to its junction with Bringelly Road, also identified a number of sites to the east of the study area (KNC 2010). The results of previous assessments of the study area and immediate surrounds are outlined below.

South West Rail Link Preliminary Aboriginal Heritage Assessment (Heritage Concepts, 2006)

Heritage Concepts (2006) conducted a preliminary archaeological investigation of the South West Rail Link (SWRL) corridor, which ran to the south of Bringelly Road. There were seven sites identified during the preliminary investigation, comprising two open artefact scatters, four isolated artefacts and a possible scarred tree. Two of these, isolated artefact SW1 and possible scarred tree SWST1, were situated approximately 480m and 450m (respectively) south of Bringelly Road. These sites were not listed on the AHIMS register search.

Site SW1 was a single quartz artefact described as being situated on a low slope of a closed depression. The area in which SW1 was located had been disturbed by market gardening and was low-lying. As such, it was not considered to have substantial or undisturbed deposit. Site SWST1 was described as a possible scarred tree, a Grey Box eucalypt, on flat ground approximately 500m from a creekline. AMBS (2010:61) subsequently determined the scarred tree to not be an Aboriginal site.

South West Rail Link Aboriginal Heritage Assessment (AMBS, 2010)

AMBS (2010) conducted an Aboriginal Heritage assessment of the SWRL, following from Heritage Concepts (2006) preliminary assessment. The SWRL corridor passes through the eastern end of the current study area. The study identified four sites, all artefact scatters, in the vicinity of the current study area, two of which (SWRL Site 4 and SWRL Site 7) are situated within the Bringelly Road upgrade concept design corridor. Only one of these (SWRL Site 4) appears to be registered on AHIMS (45-5-3536).

SWRL Site 4 was an isolated red silcrete flake situated on a mid-slope context, having been exposed as a result of installation of a gas pipeline. The site was located approximately 40m south of Bringelly Road. It was described as having no archaeological research potential, being a single artefact out of context (AMBS 2010:44, 71).

SWRL Site 7 was a low density artefact scatter in a highly disturbed context resulting from construction of the Upper Canal and service track. The site comprised four artefacts spread along approximately 100m of the vehicle access track on the eastern side of the Upper Canal, approximately 250m south of Bringelly Road. Artefacts were silcrete and one of mudstone and included flaked and heat shattered pieces. The site was considered to have low research potential.

Camden Valley Way upgrade, Cobbitty Road to Cowpasture Road, Aboriginal heritage assessment (KNC, 2010)

An archaeological survey and assessment was undertaken as part of the Review of Environmental Factors for the proposed upgrade of Camden Valley Way, between Cobbitty Road at Narellan and the Cowpasture/Bringelly Road intersection at Horningsea Park (KNC 2010). The survey covered both sides of Camden Valley Way and ranged in width between 70-550m wide. Fourteen archaeological sites, all artefact

scatters with the exception of two scarred trees, were located. Three of these sites (LP1, LP2 and LP3) were towards the Bringelly Road end, in the vicinity of the current study area.

Site LP1 was an isolated silcrete artefact, found on the eastern side of Camden Valley Way between Bonds Creek and the Sydney Water Supply Channel. Landform was gentle lower hill slopes which ran to the south west towards the marginal floodplain of Bonds Creek. The artefact was in the cleared road easement, approximately 15m east of Camden Valley Way. The site was 250m north of Bonds Creek, a tributary of Kemps Creek, within a disturbed context in close proximity to utilities such as the Eastern Gas Pipeline, Telstra fibre optic cables and overhead powerlines. It was considered to have low archaeological potential.

Site LP2 was an open artefact scatter located on the eastern side of Camden Valley Way, at the southern end of Forest Lawn Memorial Garden Cemetery, Leppington, 80m east of Camden Valley Way and 50m north of the Sydney Water Supply Canal. Landform was ridge crest which been cleared. Five artefacts were exposed on patches of sheet wash erosion over a cleared area approximately 80m long by 30m wide. The site area incorporated the ridge crest landform which extends back to Camden Valley Way. It comprised four silcrete artefacts, including one backed artefact, and a silicified tuff angular fragment. The site was considered to have high archaeological potential.

Site LP3 was an isolated silcrete artefact found on the western side of Camden Valley Way on a mid-slope track exposure. The artefact was a retouched silcrete flake, however, localised disturbance meant the site was considered to have low archaeological potential.

Bringelly Road Upgrade Preliminary Aboriginal Heritage Assessment (Austral, 2010)

The preliminary archaeological heritage assessment survey of the Bringelly Road upgrade corridor identified 42 Aboriginal archaeological sites and one associated area of potential archaeological deposit (PAD with artefacts). The survey comprised a pedestrian inspection either side of Bringelly Road of the entire length of the road upgrade corridor, a length of approximately 10km, and identified neighbouring properties which ranged in width from approximately 20m to 100m from the existing road corridor / edge.

All of the recorded sites were of stone artefact locations, 26 of which were open artefact scatters (60.5%) and 16 were isolated artefacts (37.2%). The remaining recording was a PAD (2.3%) (Austral 2010:55). A total of 138 artefacts were identified at the sites, predominantly of silcrete (49%), mudstone (20%) and chert (13%) with smaller percentages of quartz, quartzite and tuff. The majority of recorded artefacts were flakes or flake fragments, with smaller numbers of cores, flaked pieces and blades.

5.3 Aboriginal Heritage Information Management System (AHIMS)

A search of the OEH Aboriginal Heritage Information Management System (AHIMS) was conducted to identify any registered (known) Aboriginal sites within or immediately adjacent to the study area, as well as to determine the type and distribution of recorded sites in the area.

The AHIMS database search was conducted with the following coordinates:

GDA 94 MGA Zone 56
 Easting 0289000E to 0302000N
 Northing 6240000N to 6243000N

A total of 79 sites were registered within the search area. The locations of sites listed on AHIMS, as well as known sites identified by previous investigations, within the search area are shown in Figure 2.

Of these known sites, 44 are situated within or in immediate proximity to the proposed road upgrade concept design corridor, including those identified during the preliminary Aboriginal heritage assessment (Austral 2010). Previously recorded Aboriginal sites within or in the immediate vicinity of the study area are listed in Table 1 below and their locations in relation to the concept design corridor are shown in Figure 3.

Table 2. Aboriginal archaeological sites in the study area

AHIMS Number	Site ID	Easting (MGA)	Northing (MGA)	Site Type	Recorded By
45-5-3536	SWRL Site 4	██████	██████	Isolated artefact	AMBS (2010)
Not registered	SWRL Site 7	██████	██████	Open artefact scatter	AMBS (2010)
45-5-3850	BRP-IF-01	██████	██████	Isolated artefact	Austral (2010)
45-5-3851	BRP-IF-02	██████	██████	Isolated artefact	Austral (2010)
45-5-3852	BRP-IF-03	██████	██████	Isolated artefact	Austral (2010)
45-5-3853	BRP-IF-04	██████	██████	Isolated artefact	Austral (2010)
45-5-3854	BRP-IF-05	██████	██████	Isolated artefact	Austral (2010)
45-5-3855	BRP-IF-06	██████	██████	Isolated artefact	Austral (2010)
45-5-3856	BRP-IF-07	██████	██████	Isolated artefact	Austral (2010)
45-5-3857	BRP-IF-08	██████	██████	Isolated artefact	Austral (2010)
45-5-3858	BRP-IF-09	██████	██████	Isolated artefact	Austral (2010)
45-5-3859	BRP-IF-10	██████	██████	Isolated artefact	Austral (2010)
45-5-3860	BRP-IF-11	██████	██████	Isolated artefact	Austral (2010)
45-5-3866	BRP-IF-12	██████	██████	Isolated artefact	Austral (2010)
45-5-3867	BRP-IF-13	██████	██████	Isolated artefact	Austral (2010)
45-5-3868	BRP-S-13	██████	██████	Open artefact scatter	Austral (2010)
45-5-3869	BRP-S-14	██████	██████	Open artefact scatter	Austral (2010)
45-5-3870	BRP-S-15	██████	██████	Open artefact scatter	Austral (2010)
45-5-3871	BRP-S-16	██████	██████	Open artefact scatter	Austral (2010)
45-5-3872	BRP-S-17	██████	██████	Open artefact scatter	Austral (2010)
45-5-3873	BRP-S-18	██████	██████	Open artefact scatter	Austral (2010)
45-5-3874	BRP-S-19	██████	██████	Open artefact scatter	Austral (2010)
45-5-3875	BRP-S-20	██████	██████	Open artefact scatter	Austral (2010)
45-5-3876	BRP-S-21	██████	██████	Open artefact scatter	Austral (2010)
45-5-3877	BRP-S-22	██████	██████	Open artefact scatter	Austral (2010)

AHIMS Number	Site ID	Easting (MGA)	Northing (MGA)	Site Type	Recorded By
45-5-3878	BRP-S-23	██████	██████	Open artefact scatter	Austral (2010)
45-5-3879	BRP-S-24	██████	██████	Open artefact scatter	Austral (2010)
45-5-3884	BRP-IF-14	██████	██████	Isolated artefact	Austral (2010)
45-5-3885	BRP-IF-15	██████	██████	Isolated artefact	Austral (2010)
45-5-3886	BRP-IF-16	██████	██████	Isolated artefact	Austral (2010)
45-5-3887	BRP-S-10	██████	██████	Open artefact scatter	Austral (2010)
45-5-3888	BRP-S-01	██████	██████	Open artefact scatter	Austral (2010)
45-5-3889	BRP-S-02	██████	██████	Open artefact scatter	Austral (2010)
45-5-3890	BRP-S-03	██████	██████	Open artefact scatter	Austral (2010)
45-5-3891	BRP-S-04	██████	██████	Open artefact scatter	Austral (2010)
45-5-3892	BRP-S-05	██████	██████	Open artefact scatter	Austral (2010)
45-5-3893	BRP-S-06	██████	██████	Open artefact scatter	Austral (2010)
45-5-3894	BRP-S-07	██████	██████	Open artefact scatter	Austral (2010)
45-5-3895	BRP-S-08	██████	██████	Open artefact scatter	Austral (2010)
45-5-3896	BRP-S-09	██████	██████	Open artefact scatter	Austral (2010)
45-5-3897	BRP-S-11	██████	██████	Open artefact scatter	Austral (2010)
45-5-3898	BRP-S-12	██████	██████	Open artefact scatter	Austral (2010)
45-5-3899	BRP-S-25	██████	██████	Open artefact scatter	Austral (2010)
45-5-3900	BRP-S-10 PAD	██████	██████	Open artefact scatter (formerly area of potential archaeological deposit)	KNC (2010) Austral (2010)

5.4 Predictive Model

Based on information from previous archaeological investigations, environmental context and the OEH AHIMS register search, the most likely site types to occur within the study area would be:

Open artefact scatters / isolated finds. Surface artefacts are likely to be visible in areas with high surface visibility and exposure. Environmental context, such as proximity to water sources and sources of stone material, are also likely to influence the likelihood of identifying artefact scatters / isolated finds. It is more likely for these site types to occur in gently sloping / flat topographic contexts in proximity to sources of water.

Figure deleted from public document.

Figure 2. AHIMS registered and previously recorded sites in the vicinity of the study area

Figure deleted from public document.

Figure 3. Aboriginal sites in the study area

5.5 Archaeological Sites in the Concept Design Corridor

There are 44 Aboriginal archaeological sites identified within the proposed Bringelly Road upgrade concept design corridor. These sites have the potential to be impacted by the upgrade. These are described below and their locations shown on Figures 4-10 at the end of the section.

5.5.1. **BRP-S-01 (AHIMS# 45-5-3888)**

Site BRP-S-01 consists of one chert and four silcrete artefacts located in a pastoral paddock on the south side of Greendale Road West, [REDACTED]

[REDACTED] The site landform is gentle hill slope, part of the same landform associated with sites BRP-S-02 and BRP-S-03. At the time of recording the area had been highly disturbed with concrete and metal bar footings visible from a recently removed building.

5.5.2. **BRP-S-02 (AHIMS# 45-5-3889)**

Site BRP-S-02 consists of two chert flakes and two silcrete flakes located at the north side of a dam exposure approximately [REDACTED]

[REDACTED] The exposed area around the dam is approximately 40m long x 20m wide. Site BRP-S-03 (located approximately 130m further to the west) and BRP-S-02 are likely to be extensions of a larger site area associated with north flowing creek-lines draining from a broad, low ridge-line. The area is disturbed and has been highly modified due to construction of the dam.

5.5.3. **BRP-S-03 (AHIMS# 45-5-3890)**

Site BRP-S-03 consists of one tuff flake and one mudstone flaked piece [REDACTED]

[REDACTED] The site landform is gentle lower hill slope and marginal floodplain associated with a minor drainage channel approximately 80m west of the area. [REDACTED]

[REDACTED] The area has been highly modified from the building of the substation, road base/fill deposition and ground penetration works such as drainage pipe construction. At the time of site re-visitation ground visibility was low, < 20%, limited by a background of imported gravels and blue metal. One grey, banded chert flaked piece was located during the visit.

5.5.4. **BRP-S-04 (AHIMS# 45-5-3891)**

Site BRP-S-04 consists of a small artefact scatter [REDACTED]

[REDACTED] Two chert flakes and one mudstone flake were located over an area of 70m heading south from the driveway of the property. [REDACTED]

[REDACTED] The area is disturbed by contemporary development.

5.5.5. **BRP-S-05 (AHIMS# 45-5-3892)**

Site BRP-S-05 consists of one mudstone and two chert artefacts [REDACTED]

[REDACTED] Visibility was limited due to a background of gravels and road base. The landform associated with the site consists of a north facing gentle lower hill slope immediately south of a small intermittent drainage channel. KNC identified a further chert flaked piece during recent surveys. The location is disturbed by road cutting and imported fill. The artefacts are exposed by drainage caused erosion unlikely to be in-situ.



Plate 1. View north along Kelvin Park Drive, [REDACTED]

5.5.6. BRP-S-06 (AHIMS# 45-5-3893)

Site BRP-S-06 consists of a small scatter of four silcrete [REDACTED]

[REDACTED] One flaked piece and three whole flakes were found at the site. The site landform consists of gentle north facing upper hill slope with low gradient. The area is cleared of native vegetation with exotic, mown grasses covering the majority of the road embankment. The deposit has been substantially altered along the edges of the road embankment and is unlikely to have substantial intact subsurface deposits.



Plate 2. View west along Bringelly Road



Plate 3. [REDACTED]

5.5.7. **BRP-S-07 (AHIMS# 45-5-3894)**

Site BRP-S-07 consists of one chert and one silcrete artefact [REDACTED]

[REDACTED]. The landform associated with the site is the upper slope of a gentle north-east running spur. The area is highly modified and disturbed with a road cutting across the surface of the slope. Road base gravels are evident in areas of exposure and the ground surface has been modified.



Plate 4. [REDACTED]



Plate 5. Road base gravels BRP-S-07



Plate 6. View east along disturbed area [REDACTED]

5.5.8. **BRP-S-08 (AHIMS# 45-5-3895)**

Site BRP-S-08 consists of a scatter of six silcrete and four chert artefacts [REDACTED]

[REDACTED] The area is covered with imported sand for grass growing. A number of artefacts were located within the imported sand in an area 50m long x 50m wide.

[REDACTED] The majority of the identified artefacts have been brought into the area within the imported sand. The landform is not archaeologically significant.

[REDACTED] The landform associated with the site consists of a gentle lower hill slope, at the edge of a marginal low floodplain associated with minor, intermittent drainage channels of Thompson's Creek. BRP-S-08 is likely part of a larger site (now disturbed) that encompasses site BRP-S-04.

5.5.9. BRP-S-09 (AHIMS# 45-5-3896)

Site BRP-S-09 consists of a small scatter of artefacts

The artefacts recorded include one silcrete and one mudstone flake. The site is heavily disturbed and is located within a cleared paddock area with natural revegetation occurring. The site landform consists of the upper area of a north facing hill-slope. The site is situated at the headwaters of a minor tributary of Kemps Creek. The area is not archaeologically significant due to disturbance.



Plate 7.



Plate 8.

5.5.10. BRP-S-10 (AHIMS# 45-5-3887)

Site BRP-S-10 consists of an open scatter of artefacts

Twelve of these were recorded in detail by Austral and consist of nine silcrete flakes, one quartz and two chert flakes. At the time of recording, ground surface visibility was considered high, at around 80%. The artefacts were located over an area approximately 200m long x 200m wide.

The majority of the site is disturbed archaeologically by intensive land use except for the northern portion. Intact subsurface deposits will still exist along the northern boundary where the land consists of a gentle lower slope approximately 60m to the west of a 1st Order tributary of Kemps Creek (Figure 8, Less Disturbed). The north-west portion is of moderate archaeological significance, while the remainder is low significance.



Plate 9.



Plate 10. View east to tributary of Kemps Creek



Plate 11. Tilled market garden beds

5.5.11. **BRP-S-11 (AHIMS# 45-5-3897)**

Site BRP-S-11 consists of an open scatter of artefacts

Artefacts were observed over area approximately 100m long x 100m wide. The location is heavily disturbed along the eastern boundary of the property from fence-line construction and within the north-east corner due to heavy earth tilling for agriculture. As such there is substantial disturbance to the areas subsurface deposits (from relatively deep tillage c.>20cm). KNC identified an additional silcrete flake along the east boundary. The site is located on the north-east facing edge of a hill crest with low gradient.



Plate 12. North view along Eastwood Road



Plate 13. Tilled earth on



Plate 14. Fence-line along property with associated disturbance



Plate 15. Silcrete flake ventral surface at BRP-S-11



Plate 16. Silcrete flake dorsal surface

5.5.12. BRP-S-12 (AHIMS# 45-5-3898)

Site BRP-S-12 consists of an open scatter of [REDACTED]

Two silcrete artefacts-one core and one flake- were recorded in an exposure approximately 15m². [REDACTED]



Plate 17. Driveway entrance with imported road base [REDACTED]

5.5.13. BRP-S-13 (AHIMS# 45-5-3868)

Site BRP-S-13 consists of a small open scatter of artefacts [REDACTED]

[REDACTED] One mudstone and two silcrete flakes were recorded. The site is located in a heavily disturbed context along the roadside corridor and is unlikely to have large areas of intact subsurface deposits. The site is located on a west facing mid-hill slope with low gradient.

5.5.14. BRP-S-14 (AHIMS# 45-5-3869)

Site BRP-S-14 consists of one silcrete and two mudstone [REDACTED]

[REDACTED] The artefacts have been imported with the crushed rock for the driveway road base. The site landform consists of the mid-lower slope of a north-east facing hill-slope with low gradient.



Plate 18. View south across Bringelly Road



Plate 19. West view [REDACTED]

5.5.15. BRP-S-15 (AHIMS# 45-5-3870)

Site BRP-S-15 consists of two artefacts [REDACTED]. One mudstone and one silcrete core were recorded in an exposure approximately 15m long x 5m wide. The area is heavily disturbed with a roadside drain cut into the deposit and a scattering of imported road base gravels across the site area. The artefacts were imported to the area with the road base gravels.

The site landform consists of the mid-slope of an east facing hill-slope with low gradient. A minor intermittent drainage line is marked within 50m to the east of the site, draining north-east into Kemps Creek.



Plate 20. [REDACTED]



Plate 21. Disturbed deposit, east view

5.5.16. BRP-S-16 (AHIMS# 45-5-3871)

Site BRP-S-16 consists of a small scatter of artefacts [REDACTED]. The artefacts were recorded along the road verge in an exposed area 1m², consisting of one chert and one mudstone flake. [REDACTED]

As with these sites, the area is heavily disturbed and eroded. A scattering of imported road base gravels occurs across part of the site area. It is likely that the artefacts were imported to the area with the road base gravels or have been washed onto the site by erosion. The site landform consists of the mid-slope of an east facing hill-slope with low gradient.



Plate 22. [REDACTED]



Plate 23. View east showing eroded deposit

5.5.17. **BRP-S-17 (AHIMS# 45-5-3872)**

Site BRP-S-17 consists of a scatter of six silcrete artefacts [REDACTED]. The exposure is approximately 70m long x 7m wide. The area is heavily disturbed with by an east-west running levy bank approximately 700 millimetres high. The bank has been created by stripping back the nearby upper deposit and piling the soil adjacent to the roadside (approximately 10m to the south of Bringelly Road). A transmission line easement has also been constructed between Bringelly Road and the fence-line. Artefacts have been exposed by erosion and have been washed into the area from the largely intact rise located south of the fence-line. The exposure where artefacts were recorded exhibits a scattering of buckshot gravels across the surface usually associated with the lower sections of the areas subsurface deposits. This demonstrates that substantial disturbance has occurred to the upper deposit (now missing). KNC recorded one silcrete artefact during the current assessment. The site landform consists of the mid-slope of a north-east facing hill-slope with moderate gradient.



Plate 24. Disturbed area, view to west



Plate 25. Intact area south of fence-line



Plate 26. [REDACTED] Levy bank to right with cut deposit at base of bank



Plate 27. Gravels associated with lower areas of subsurface deposits

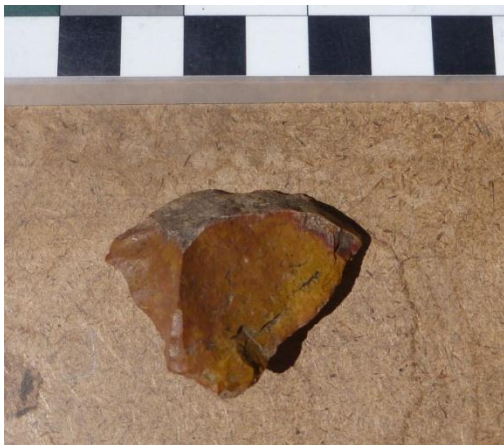


Plate 28. Silcrete flake dorsal surface

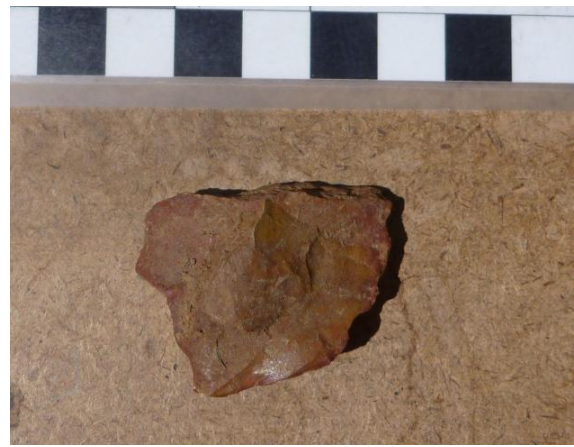


Plate 29. Silcrete flake ventral surface

5.5.18. BRP-S-18 (AHIMS# 45-5-3873)

Site BRP-S-18 consists of a scatter of mudstone, silcrete and quartz flakes

Artefacts have been exposed by erosion and have been washed into the area from the largely intact rise located south of the fence-line. The existing road verge is highly disturbed, however the ground five metres south of the fence line there appears to be an intact deposit. The site landform consists of the mid-slope of a north facing hill-slope with moderate gradient.

5.5.19. **BRP-S-19 (AHIMS# 45-5-3874)**

Site BRP-S-19 consists of an open scatter of artefacts

Two silcrete flakes were recorded along a small area of exposure

The site area is heavily disturbed due to construction of the vehicle access track and the water supply channel.

The site landform consists of gentle mid slope of a north-west facing hill draining into a 1st Order tributary of Kemps Creek.



Plate 30.



Plate 31.



Plate 32.

5.5.20. **BRP-S-20 (AHIMS# 45-5-3875)**

Site BRP-S-20 consists of a small scatter of artefacts

One silcrete flake and one chert core were recorded at the site. Artefacts have been exposed by erosion and have been washed into the area from the largely intact rise located south of the fence-line. The existing road verge is highly disturbed, however the ground five metres south of the fence line there appears to be an intact deposit. The site landform consists of the mid-slope of a north facing hill-slope with moderate gradient.

5.5.21. BRP-S-21 (AHIMS# 45-5-3876)

Site BRP-S-21 consists of a small scatter of [REDACTED]

The site landform consists of the upper north facing slope of an east-west running ridge-line with low gradient and adjacent to (south of) a minor drainage line of South Creek.



Plate 33. [REDACTED]

5.5.22. BRP-S-22 (AHIMS# 45-5-3877)

Site BRP-S-22 consists of two mudstone flakes [REDACTED]

The site landform consists of the mid-upper slope of a north-west facing hill-slope with low gradient.



Plate 34. [REDACTED]



Plate 35. [REDACTED]

5.5.23. BRP-S-23 (AHIMS# 45-5-3878)

Site BRP-S-23 consists of two mudstone artefacts [REDACTED] [REDACTED] appears to be heavily disturbed with imported sandstone road base (river gravels) deposited across the surface. It is likely that the artefacts have been imported into the area [REDACTED]. The site is located on the mid-upper slope of a north-west running ridge-line with low gradient.



Plate 36. [REDACTED]



Plate 37. [REDACTED]



Plate 38. Imported sandstone gravels [REDACTED]

5.5.24. BRP-S-24 (AHIMS# 45-5-3879)

Site BRP-S-24 consists of two mudstone flakes

Bringelly Road verge and tree planting from bush revegetation with associated ground disturbance has also occurred at the site. The emergence of artefacts is probably due to recent fencing of the site along the road verge. The site is in good condition and the landform consists of a mid-slope area of a west facing hill with very low gradient (low colluvial potential). The site is situated immediately south-west of a ridge-line saddle and overlooks South Wianamatta Creek. The site is of moderate archaeological potential due to its location, condition and identified archaeology.



Plate 39.



Plate 40. Disturbed surface with vehicle tracks



Plate 41.

5.5.25. BRP-S-25 (AHIMS# 45-5-3899)

Site BRP-S-25 is part of a larger area comprising three previously recorded sites associated with the lower slope of an east facing hill of low relief [REDACTED] is a low density scatter of one silcrete and one mudstone flake [REDACTED]

The area has been cleared of native vegetation.

[REDACTED] They appear to be associated with the same landform feature, a marginal terrace/bench, and as such they are likely to be part of one large open campsite extending along the creek margin. The northern portion of the site [REDACTED] exhibits moderate archaeological significance: less disturbed shale margin bordering alluvial soils. The portion of the site [REDACTED] (current road reserve) is more disturbed and represents only low archaeological significance.



Plate 42. [REDACTED]



Plate 43. Modified area [REDACTED]

5.5.26. BRP-IF-01 (AHIMS# 45-5-3850)

Site BRP-IF-01 is part of a larger area comprising three previously recorded sites associated with the lower slope of an east facing hill of low relief (i.e. with sites BRP-S-25 and BRP-IF-02). Site BRP-IF-01 consists of one silcrete core [REDACTED]

Sites BRP-S-25, BRP-IF-01 and BRP-IF-02 are located in close proximity to each other, [REDACTED] They appear to be associated with the same landform feature and as such they are likely to be part of one large open campsite covering the lower slopes of the hill heading west towards South Creek. The site area is disturbed.

5.5.27. BRP-IF-02 (AHIMS# 45-5-3851)

Site BRP-IF-02 is part of a larger area comprising three previously recorded sites associated with the lower slope of an east facing hill of low relief (i.e. with sites BRP-S-25 and BRP-IF-01). Site BRP-IF-02 consists of an isolated silcrete flake [REDACTED]

Sites BRP-S-25, BRP-IF-01 and BRP-IF-02 are located in close proximity to each other, [REDACTED] They appear to be associated with the same landform feature and as such they are likely to be part of one large open campsite covering the lower slopes of the hill heading west towards South Creek. The site area is disturbed.

5.5.28. BRP-IF-03 (AHIMS# 45-5-3852)

Site BRP-IF-03 consists of a single mudstone core [REDACTED]

[REDACTED] Significant deposit disturbance is likely to have occurred in areas associated with the construction of these facilities. The site landform consists of the lower slope of a west facing hill with a low gradient facing towards a marginal floodplain of South Creek.



Plate 44. [REDACTED]



Plate 45. [REDACTED]

5.5.29. BRP-IF-04 (AHIMS# 45-5-3853)

Site BRP-IF-04 consists of an isolated mudstone core [REDACTED]

[REDACTED] The site is located on the mid-upper slope of a north-east facing hill-slope with low gradient, immediately west of the upper section of a minor tributary of Kemps Creek. The artefact is located in a disturbed context.

5.5.30. BRP-IF-05 (AHIMS# 45-5-3854)

Site BRP-IF-05 consists of an isolated silcrete flake located [REDACTED]. The artefact was recorded in an exposure less than 1m² along a cut drainage line. The enclosure has been scattered with imported sand for lawn growing. It is unlikely that the artefacts are from an *in-situ* deposit and have possibly been brought into the area with the imported sand. The site is located on a lower slope and marginal floodplain of an east facing bank of Kemps Creek, approximately 90 m west of the creek. The artefact is in a disturbed context.



Plate 46. [REDACTED]

5.5.31. BRP- IF-06 (AHIMS# 45-5-3855)

Site BRP-IF-06 consists of an isolated silcrete artefact [REDACTED]

Heavy disturbance from erosion and a scattering of road-base gravels occurs at the site and appears to have increased the level of ground surface visibility (Plate 50). It is unlikely that the area has large areas of intact subsurface deposits due to substantial land disturbance [REDACTED]. The site landform consists of gentle mid slope of a north-west facing hill draining into a 1st Order tributary of Kemps Creek.



Plate 47. [REDACTED]



Plate 48. [REDACTED]

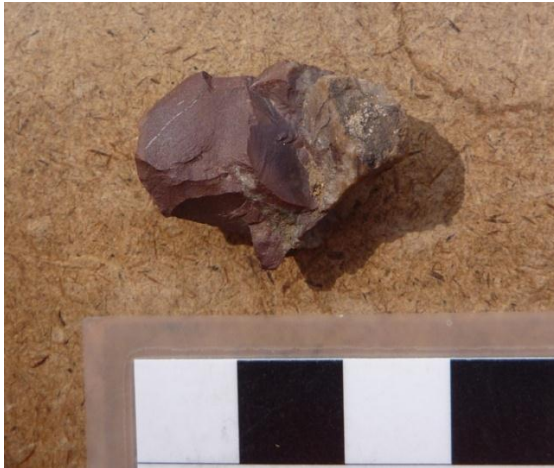


Plate 49. Silcrete artefact BRP-IF-06

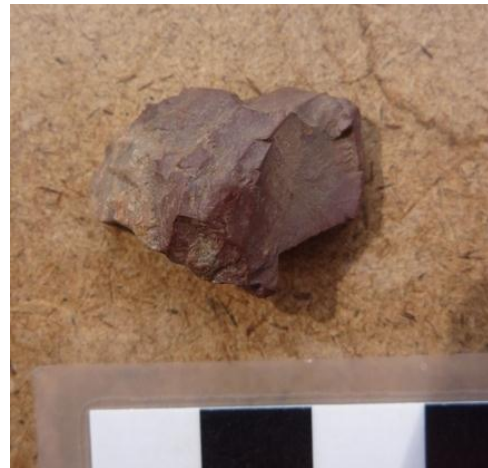


Plate 50. Silcrete artefact BRP-IF-06

5.5.32. ***BRP-IF-07 (AHIMS# 45-5-3856)***

Site BRP-IF-07 consists of an isolated silcrete artefact [REDACTED].

[REDACTED]. The area is heavily disturbed with road-base and gravel scattered across the surface. It is unlikely that the area has large areas of intact subsurface deposits due to substantial land disturbance associated with the adjacent oval construction.

The site landform consists of a gentle mid slope of a north-east facing hill draining into a 1st Order tributary of Kemps Creek.



Plate 51. Site location for BRP-IF-07

5.5.33. ***BRP-IF-08 (AHIMS# 45-5-3857)***

Site BRP-IF-08 consists of an isolated silcrete artefact [REDACTED].

[REDACTED] The site landform consists of gentle mid slope of a north facing hill draining into a 1st Order tributary of Kemps Creek.

5.5.34. BRP-IF-09 (AHIMS# 45-5-3858)

Site BRP-IF-09 consists of an isolated mudstone flake [REDACTED]

[REDACTED] The site faces west and is situated on a lower slope and marginal floodplain of an east bank of Kemps Creek approximately 300m to the east of the creek.

5.5.35. BRP-IF-10 (AHIMS# 45-5-3859)

Site BRP-IF-10 consists of an isolated mudstone flake [REDACTED]

[REDACTED] The site landform consists of the mid-slope of a north-east facing hill-slope with low gradient. The artefact is in a disturbed context exhibiting erosional soil movement.

5.5.36. BRP-IF-11 (AHIMS# 45-5-3860)

Site BRP-IF-11 consists of an isolated silcrete flake [REDACTED]

[REDACTED] As with these two sites it is likely that the artefacts have been washed into the area from the largely intact rise located south of the fence-line. The site landform consists of the mid-slope of a north-east facing hill-slope with low gradient.

5.5.37. BRP-IF-12 (AHIMS# 45-5-3866)

Site BRP-IF-12 consists of an isolated silcrete [REDACTED]

[REDACTED] The landform was flat and the site was considered to have low archaeological potential. The site is not impacted by the current road design.

5.5.38. BRP-IF-13 (AHIMS# 45-5-3867)

Site BRP-IF-13 consists of an isolated silcrete [REDACTED]

[REDACTED] The landform associated with the site consists of the lower slope of a west facing hillside heading towards a marginal floodplain of South Creek. Bringelly Road has bisected the lower slopes of the hill that sites BRP-IF-13 and BRP-IF-03 are located on. The soils in the area are erosional and have been moderately disturbed.

5.5.39. BRP-IF-14 (AHIMS# 45-5-3884)

Site BRP-IF-14 consists of a single silcrete flaked piece [REDACTED]

[REDACTED] Bringelly Road has bisected the lower east facing slopes of the hill encompassing the sites Bringelly 1 and BRP-IF-14. The general site area has been modified.



Plate 52. [REDACTED]

5.5.40. BRP-IF-15 (AHIMS# 45-5-3885)

Site BRP-IF-15 consists of an isolated silcrete flake

The site landform consists of an east facing gentle mid slope with low gradient. The soils on the site have been modified and are erosional.

5.5.41. BRP-IF-16 (AHIMS# 45-5-3886)

Site BRP-IF-16 consists of an isolated silcrete artefact

This area encompasses the crest of the low hill-top and the north and west running slopes from the hill-top. Minor damage to the deposit may have occurred in some areas due contemporary disturbance. The site exhibits some archaeological significance related to its landscape position, association with known archaeological sites and access to a range of resources.



Plate 53. [REDACTED]



Plate 54. View south towards top of hillslope



Plate 55. Silcrete flake ventral surface



Plate 56. Silcrete flake dorsal surface

5.5.42. BRP-PAD-01 (AHIMS# 45-5-3900)

Site BRP-PAD-01 was recorded by Austral (2010) as an area of 200 x 200m on a gentle slope approximately 50m from an unnamed first order tributary of South Creek. The PAD is a misnomer as it is part of a larger archaeological site BRP-S-10, comprising 34 artefacts.

Artefacts were predominantly silcrete, with low numbers of chert and quartz, and included flakes, cores and flaked pieces. Archaeological significance for BRP-PAD-01/BRP-S-10 resides only in the north portion of the lot (Figure 8, Less Disturbed). The remainder of the land is disturbed.

5.5.43. SWRL Site 4 (AHIMS# 45-5-3536)

SWRL Site 4 consists of an isolated silcrete flake which was identified on a mid-slope context where the soil had been exposed following installation of a major gas pipeline. [REDACTED]

[REDACTED] Given the disturbance, it was considered likely that the artefact was out of context, having been displaced by soil dumping from trenching for the gas pipeline (AMBS 2010:44). The surrounding area was not considered to have archaeological potential.



Plate 57. [REDACTED]



Plate 58. West view towards Cowpasture Road



Plate 59. [REDACTED]

5.5.44. SWRL Site 7

SWRL Site 7 comprised four stone artefacts [REDACTED]

[REDACTED] There were three silcrete artefacts including two flaked pieces and a heat shatter piece, and one mudstone proximal flake. The site had been impacted by erosion and vehicle use and was not considered to have archaeological potential.

5.6 Effective Survey Coverage

The total surveyed area, undertaken by Austral (2010), covered an area of c. 2,000,000m². The effective survey coverage was c. 0.02% outside of exposures (Austral 2010 Appendix D).

Figure deleted from public document.

Figure 4. Aboriginal sites in the concept design corridor (western end)

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Figure 5. Aboriginal sites in the concept design corridor (western portion)

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Figure 6. Aboriginal sites in the concept design corridor (central portion - west)

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Figure 7. Aboriginal sites in the concept design corridor (central portion)

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Figure 8. Aboriginal sites in the concept design corridor (central portion - east)

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Figure 9. Aboriginal sites in the concept design corridor (eastern portion)

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Figure 10. Aboriginal sites in the concept design corridor (eastern end)

6 Significance Assessment

6.1 Significance Assessment Criteria

One of the important primary steps in the process of cultural heritage management is the assessment of significance. Not all sites are equally significant and not all are worthy of equal consideration and management (Sullivan and Bowdler 1984, Pearson and Sullivan 1995:7). The determination of significance can be a difficult process as the social and scientific context within which these decisions are made is subject to change (Sullivan and Bowdler 1984). This does not lessen the value of the heritage approach, but enriches both the process and the long-term outcomes for future generations as the nature of what is conserved and why, also changes over time.

Significance assessment can generally be described under three broad headings (Pearson and Sullivan 1995:7):

- value to groups such as Aboriginal communities;
- value to scientists and other information gatherers; and
- value to the general public in the context of regional, state and national heritage.

Professional guidelines for the assessment of significance (NPWS 1997) discuss two key types of significance relevant to the assessment of Aboriginal sites: social significance and archaeological significance.

Cultural / Social Significance

This area of assessment concerns the value(s) of a place, feature or site to a particular community group, in this case the local Aboriginal community. Aspects of social significance are relevant to sites, objects and landscapes that are important or have become important to the local Aboriginal community. This importance involves both traditional links with specific areas as well as an overall concern by Aboriginal people for sites generally and their continued protection. Aboriginal cultural significance may include social, spiritual, historic and archaeological values.

Scientific / Archaeological Significance

For archaeologists, scientific significance refers to the potential of a site to contribute to current research questions. Alternately, a site may be an in situ repository of demonstrably important information, for example rare artefacts of unusually high antiquity.

Scientific significance is assessed using criteria to evaluate the contents of a site, state of preservation, integrity of deposits, representativeness of the site type, rarity/uniqueness and potential to answer research questions on past human behaviour (NPWS 1997). OEH recommended criteria for assessing archaeological significance include:

- Archaeological Research Potential - significance may be based on the potential of a site or landscape to explain past human behaviour and can incorporate the intactness, stratigraphic integrity or state of preservation of a site, the association of the site to other sites in the region (connectivity), or a datable chronology;
- Representativeness - all sites are representative of those in their class (site type/subtype) however the issue here relates to whether particular sites should be conserved to ensure a representative sample of the archaeological record is retained. Representativeness is based on an understanding of the regional archaeological context in terms of site variability in and around the study area, the resources already conserved and the relationship of sites across the landscape; and
- Rarity – which defines how distinctive a site may be, based on an understanding of what is unique in the archaeological record and consideration of key archaeological research questions (i.e. some sites are considered more important due to their ability to provide certain information). It may be assessed at local, regional, state and national levels.

High significance is usually attributed to sites which are so rare or unique that the loss of the site would affect our ability to understand an aspect of past Aboriginal use/occupation of an area. In some cases a site may be considered highly significant because it is now rare due to destruction of the archaeological record through development. Moderate (medium) significance is attributed to sites which provide information on an established research question. Low significance is attributed to sites which cannot contribute new information about past Aboriginal use/occupation of an area. This may be due to site disturbance or the nature of the site's contents.

6.2 Statement of Significance

The following significance assessment can be made in relation to the 44 sites located within the study area:

- 39 archaeological sites identified along the Bringelly Road corridor have been assessed as low or low-moderate archaeological significance. This assessment was based on their site contents (isolated occurrences or low number of artefacts) in disturbed context with poor condition and site integrity (e.g. soil intactness, extent of previous land use disturbance), resulting in low archaeological potential). Much of the road corridor displays moderate to high levels of disturbance. None of the low significant sites pose a constraint to development (although each will require an AHIP prior to impact).
- Five sites (BRP-S-10, BRP-PAD-01, BRP-S-24, BRP-S-25 and BRP-IF-16) were assessed as being of *moderate* archaeological significance. These sites were generally the remnant portions of larger and more disturbed areas. The remnant portions of these landform areas were considered to have a moderate potential for subsurface material. Each of these sites displays the ability to offer valuable information about the area's Aboriginal archaeology. It may be possible to limit impact to each of these sites through detail road design.
- No sites were assessed as being of *high* archaeological significance.

Statements of cultural significance and recommendations have been commented on by Aboriginal stakeholders.

- It was concluded that the project is likely to affect significant Aboriginal cultural heritage features as identified during the survey (especially BRP-S-10, BRP-S-24, BRP-S-25 and BRP-IF-16).
- It was recommended that where possible Aboriginal sites should be avoided.

7 Statutory Requirements

The *National Parks and Wildlife Act 1974* (NPW Act) is the primary statutory control dealing with Aboriginal heritage in New South Wales. Items of Aboriginal heritage (Aboriginal objects) or Aboriginal places (declared under section 84) are protected and regulated under the NPW Act.

Under the Act, an "Aboriginal object" is defined as "any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains". As such, Aboriginal objects are confined to physical evidence and are commonly referred to as Aboriginal sites.

Aboriginal objects are protected under section 86 of the Act. It is an offence to harm or desecrate an Aboriginal object, either knowingly [section 86 (1)] or unknowingly [section 86 (2)].

Section 87 (2) of the Act provides a defence against prosecution under section 86 (2) if "the defendant exercised due diligence to determine whether the act or omission constituting the alleged offence would harm an Aboriginal object and reasonably determined that no Aboriginal object would be harmed".

Under section 87 (1) it is also a defence if "(a) the harm or desecration concerned was authorised by an Aboriginal heritage impact permit, and (b) the conditions to which that Aboriginal heritage impact permit was subject were not contravened".

Section 89A of the Act relates to the notification of sites of Aboriginal objects, under which it is an offence if the location of an Aboriginal object is not notified to the Director-General in the prescribed manner within a reasonable time.

Under section 90 (1) of the Act "the Director-General may issue an Aboriginal heritage impact permit" (AHIP). The regulation of Aboriginal heritage impact permits is provided in Part 6 Division 2 of the Act, including regulations relating to consultation (section 90N).

8 Impact Assessment and Mitigation Strategies

All identified Aboriginal archaeological sites recorded within or near the proposed Bringelly Road upgrade have been considered by the RTA. Furthermore, within the impact assessment, the CHAR has evaluated the potential harm of the road upgrade on Aboriginal archaeological heritage in terms of Ecologically Sustainable Development (ESD). The ESD assessment of Aboriginal heritage evaluated: long-term and short-term considerations, precautionary environmental impacts, maintenance and enhancement for future generations and cost/benefit of impacting on archaeological objects. The majority of the archaeological sites (39 sites, see Section 6) exhibit low archaeological significance and do not necessitate avoidance based on ESD principles, although the archaeological sites have still been considered by the RTA design. These archaeological sites are not critical to ESD because they are located in disturbed context, transferal objects mixed into imported road gravels, poor quality objects or simply isolated finds which lack significant information potential. The low significance archaeological sites do not impinge on the principles of ESD. The remaining archaeological sites, which exhibit moderate archaeological significance, have been carefully considered to limit potential harm in line with RTA and ESD principles.

8.1 Consideration of Alternatives / Mitigation of Harm

All identified Aboriginal archaeological sites within the boundaries of the Bringelly Road upgrade have been considered in relation to the proposed road construction and associated activities. Some level of impact is unfortunately unavoidable for such a large road project. Best practice is to try to limit impacts, however, despite the attempts to limit impacts, a number of identified archaeological places will still be impacted by the upgrade of Bringelly Road. Most of the impacted archaeological sites are of low value and do not warrant conservation. Where sites of higher value exist, alternative designs and conservation principles have been considered by the RTA to limit the cumulative harm to Aboriginal heritage sites.

Limiting Harm

Where significant sites were identified, where possible the design has been modified to avoid or limit the impact. For example, five archaeological sites BRP-S-10, BRP-PAD-01, BRP-S-24, BRP-S-25 and BRP-IF-16 exhibit a moderate level of significance. The road design has been careful not to impact on the better (more intact) portions of the archaeological sites (BRP-S-10, BRP-PAD-01) or to limit the direct impact by narrowing the road corridor in relation to the sites (BRP-S-24, BRP-S-25 and BRP-IF-16).

Value of Partial Impacts

Seven archaeological sites will only be partially impacted by the proposed road upgrade (BRP-S-10 BRP-PAD-01, BRP-S-11 BRP-S-12, BRP-S-13, BRP-S-24 and BRP-IF-16). In these cases the impacts amount to only a relatively small portion of the site or place. Moreover, it can be argued that partial impacts represent a positive outcome for Aboriginal heritage, especially for sites of moderate significance. Partial impacts allow for the conservation of a portion, while also allowing an assessment of the conserved information gathered through mitigation. Where moderate (or higher) significant sites are partially harmed, the impacted portion of the sites should be excavated and salvaged. The information obtained will offset the impact because it gives us insight into value of the conserved portion. Conservation without an understanding of what is being conserved has little scientific value. The value of archaeological sites resides in the information they contain and is not intrinsic to the objects. In this light, the Bringelly Road upgrade is an opportunity for increasing our understanding, strengthening our interpretation and bettering our recognition of Aboriginal culture and heritage within culturally and archaeologically significant portion of greater Sydney.

8.2 Impacts

14 Aboriginal archaeological sites will not be impacted by the road upgrade as they are located outside the proposed impact area (see Appendix E). The remaining 30 Aboriginal archaeological sites are all located within the impact area and will be impacted by the road upgrade, either completely or partially (see Appendix E for concept design). All sites (and portions of sites) not impacted will be identified in the construction environmental management plan to ensure the highest level of protection. Specific mitigation strategies for each site are outlined in Table 3.

Table 3 below provides the site reference number, site type, a brief description, significance, impact and mitigation strategies for each identified archaeological site identified along Bringelly Road. For simplicity, impacts are colour coded.

Table 3. Impact of concept design and management/mitigation measures

Site ID	Site Type	Comment	Significance	Impact Assessment	Management / Mitigation Measures
BRP-S-01	Open artefact scatter	Site is a low density artefact scatter in a highly disturbed context.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.
BRP-S-02	Open artefact scatter	Site is a low density artefact scatter in a disturbed context.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.
BRP-S-03	Open artefact scatter	Site is a low density artefact scatter in a highly disturbed context.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.
BRP-S-04	Open artefact scatter	Site is a low density artefact scatter in a disturbed context.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.
BRP-S-05	Open artefact scatter	Site is a low density artefact scatter in a disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Artefacts to be salvaged through surface collection.
BRP-S-06	Open artefact scatter	Site is a low density artefact scatter in a disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Artefacts to be salvaged through surface collection.
BRP-S-07	Open artefact scatter	Site is a low density artefact scatter in a disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Artefacts to be salvaged through surface collection.
BRP-S-08	Open artefact scatter	Site is a low density artefact scatter in a highly disturbed context.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.
BRP-S-09	Open artefact scatter	Site is a low density artefact scatter in a disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-S-10	Open artefact scatter	Artefacts recorded in highly disturbed context. Moderate archaeological potential is associated with the less disturbed northern portion of the site.	Moderate	Impacted (Partial)	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. The northern (Less Disturbed, Figure 8) portion of this site is significant, if this portion of the site is impacted salvage excavation will be required to obtain a representative sample of the site.
BRP-S-11	Open artefact scatter	Site is a low density artefact scatter in a disturbed context.	Low	Impacted (Partial)	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Artefacts to be salvaged through surface collection.

Site ID	Site Type	Comment	Significance	Impact Assessment	Management / Mitigation Measures
BRP-S-12	Open artefact scatter	Artefacts recorded in disturbed context.	Low	Impacted (Partial)	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Artefacts to be salvaged through surface collection.
BRP-S-13	Open artefact scatter	Site is a low density artefact scatter in a disturbed context.	Low	Impacted (Partial)	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-S-14	Open artefact scatter	Artefacts recorded in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-S-15	Open artefact scatter	Artefacts recorded in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-S-16	Open artefact scatter	Artefacts recorded in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-S-17	Open artefact scatter	Site is a low density artefact scatter in disturbed context. Surrounding areas away from the disturbed road easement is less disturbed by erosion.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Artefacts to be salvaged through surface collection.
BRP-S-18	Open artefact scatter	Site is a low density artefact scatter in disturbed context. Surrounding areas away from the disturbed road easement is less disturbed by erosion.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Artefacts to be salvaged through surface collection.
BRP-S-19	Open artefact scatter	Artefacts recorded in disturbed context.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.
BRP-S-20	Open artefact scatter	Site is a low density artefact scatter in disturbed context. Surrounding areas away from the disturbed road easement is less disturbed by erosion.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Artefacts to be salvaged through surface collection.
BRP-S-21	Open artefact scatter	Artefacts recorded in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-S-22	Open artefact scatter	Artefacts recorded in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-S-23	Open artefact scatter	Artefacts recorded in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.

Site ID	Site Type	Comment	Significance	Impact Assessment	Management / Mitigation Measures
BRP-S-24	Open artefact scatter	Site is an artefact scatter located on a relatively intact landform associated with level ground in an elevated position.	Moderate	Impacted (Partial)	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Given the moderate significance of the site if a significant portion of the site is impacted a salvage excavation will be required.
BRP-S-25	Open artefact scatter	Artefacts recorded in highly disturbed context along the road verge. Moderate archaeological potential is associated with the less disturbed northern portion of the site.	Moderate	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. The northern (Less Disturbed, Figure 5) portion of this site is significant, if this portion of the site is impacted salvage excavation will be required to obtain a representative sample of the site.
BRP-IF-01	Isolated artefact	Artefacts recorded in a modified and disturbed context. Site is part of a large distributed complex.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Artefacts to be salvaged through surface collection.
BRP-IF-02	Isolated artefact	Artefacts recorded in a modified and disturbed context. Site is part of a large distributed complex.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.
BRP-IF-03	Isolated artefact	Single artefact in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-IF-04	Isolated artefact	Single artefact in disturbed context.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.
BRP-IF-05	Isolated artefact	Single artefact out of context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-IF-06	Isolated artefact	Single artefact in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-IF-07	Isolated artefact	Single artefact in disturbed context.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.
BRP-IF-08	Isolated artefact	Single artefact in disturbed context.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.
BRP-IF-09	Isolated artefact	Single artefact in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-IF-10	Isolated artefact	Single artefact in disturbed context.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.

Site ID	Site Type	Comment	Significance	Impact Assessment	Management / Mitigation Measures
BRP-IF-11	Isolated artefact	Single artefact in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Artefacts to be salvaged through surface collection.
BRP-IF-12	Isolated artefact	Single artefact in disturbed context.	Low	Not impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.
BRP-IF-13	Isolated artefact	Single artefact in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-IF-14	Isolated artefact	Single artefact in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Artefacts to be salvaged through surface collection.
BRP-IF-15	Isolated artefact	Single artefact in disturbed context.	Low	Impacted	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site.
BRP-IF-16	Isolated artefact	Site is located on a low hill top which displays archaeological significance based on environment and surrounding archaeological sites. The soils of the site are relatively intact.	Moderate	Impacted (Partial)	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. Given the moderate significance of the site if a significant portion of the site is impacted a salvage excavation will be required.
BRP-PAD-01	Open artefact scatter (formerly area of potential archaeological deposit)	Artefacts recorded in highly disturbed context. Moderate archaeological potential is associated with the less disturbed northern portion of the site.	Moderate	Impacted (Partial)	Aboriginal Heritage Impact Permit (AHIP) required prior to commencement of works affecting the site. The northern (Less Disturbed, Figure 8) portion of this site is significant, if this portion of the site is impacted salvage excavation will be required to obtain a representative sample of the site.
SWRL Site 4	Isolated artefact	Single artefact out of context.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.
SWRL Site 7	Open artefact scatter	Site is a low density artefact scatter in a disturbed context.	Low	Not Impacted	Site location to be included in environmental construction management plan to avoid inadvertent impact.

9 Management Outcomes

The following general management outcomes will be implemented in accordance with the management policy as outlined in section 8.

AHIP conditions

These management outcomes are subject to any conditions related to the Aboriginal Heritage Impact Permit (AHIP) issued for this project.

An AHIP must be obtained prior to any action which may harm an Aboriginal object.

9.1 Conservation of archaeological sites not being impacted by road construction

14 archaeological sites will not be impacted by the upgrade project (Table 4). The location of these sites should be identified in the contractors environmental management plan, construction heritage sites map and project inductions to ensure they are not inadvertently damaged as a result of construction works. Archaeological sites within the project boundary will require protective fencing.

Table 4. Aboriginal archaeological sites not impacted by road construction

Archaeological sites not impacted	
Archaeological Sites	BRP-S-01, BRP-S-02, BRP-S-03, BRP-S-04, BRP-S-08, BRP-S-19, BRP-IF-02, BRP-IF-04, BRP-IF-07, BRP-IF-08, BRP-IF-10, BRP-IF-12, SWRL Site 4, SWRL Site 7

9.2 Impacted archaeological sites no mitigation required

14 archaeological sites will be impacted by road construction (Table 5). The archaeological impacts to these sites are minimal and do not require mitigation.

Table 5. Archaeological sites impacted by road construction

Impacted archaeological sites	
Archaeological Sites	BRP-S-09, BRP-S-13, BRP-S-14, BRP-S-15, BRP-S-16, BRP-S-21, BRP-S-22, BRP-S-23, BRP-IF-03, BRP-IF-05, BRP-IF-06, BRP-IF-09, BRP-IF-13, BRP-IF-15,

9.3 Salvage through the collection of surface artefacts

Salvage through the collection of surface artefacts will be undertaken at the archaeological sites in Table 6. Surface collection can only occur after an AHIP is obtained.

Table 6. Aboriginal archaeological sites requiring surface collection

Surface collection of archaeological sites	
Archaeological Sites	BRP-S-05, BRP-S-06, BRP-S-07,, BRP-S-11, BRP-S-12, BRP-S-17, BRP-S-18, BRP-S-20, BRP-IF-01, , BRP-IF-11, BRP-IF-14

9.4 Salvage excavation required to mitigate impacts on significant archaeological sites

The five archaeological sites in Table 7 are of moderate Aboriginal heritage significance and require archaeological salvage excavation to mitigate the impacts if the sites cannot be avoided. All excavation can only occur after an AHIP is obtained.

Table 7. Aboriginal archaeological sites requiring salvage excavation

Salvage excavation of archaeological sites	
Archaeological Sites	BRP-S-10, BRP-PAD-01, BRP-S-24, BRP-S-25, BRP-IF-16

9.5 Proposed Changes to Approved Projects

The RTA recognises that in the course of undertaking the Bringelly Road upgrade, design alterations or other changes to the Approved Project may be required.

Sections 9.6 – 9.9 outline the processes that the Proponent must follow to ensure that any changes to the Approved Project which may impact on Aboriginal cultural heritage are dealt with consistently and with ongoing consultation with Aboriginal stakeholders and OEH.

9.6 Management Policy for Aboriginal Heritage

The policy for the management and conservation of Aboriginal heritage in relation to salvage activities and construction activities (or fencing, investigative drilling, minor clearing, establishing site compounds, adjustment to services/utilities etc.) is described below:

Responsibility for compliance with Management Policy

1. The Proponent must ensure all of its employees, contractors and subcontractors and agents are made aware of and comply with this management policy.
2. The Proponent must appoint a suitably qualified and experienced environmental manager who is responsible for overseeing the activities related to this management policy.
3. The Proponent must appoint a suitably qualified and experienced Archaeologist who is responsible for overseeing, for and on behalf of the Proponent, the salvage activities relating to the project.

Operational constraints

4. Where salvage activities have been nominated for impacted sites, no construction activities (or fencing, investigative drilling, minor clearing, establishing site compounds, adjustment to services/utilities etc.) can occur on the lands to be salvaged until the relevant salvage activities at the nominated site have been completed. This restriction only relates to the specifically identified portion of an archaeological site to be salvaged and not the entire archaeological site (unless specified). Construction activities may proceed on the portion of a site not designated for salvage provided they do not impact or impede the salvage excavation and that the area to be salvaged is fenced in consultation with the Archaeologist prior to the commencement of those construction activities.
5. Prior to the commencement of early works activity (e.g. fencing, minor clearing, establishing site compounds etc.) a construction heritage site map identifying conserved sites (excluded from impact) and sites to be salvaged must be prepared. The construction heritage site map should be prepared to the satisfaction of the RTA.
6. All employees, contractors, subcontractors and agents carrying out construction activities (e.g. fencing, minor clearing, establishing site compounds etc.) must undertake a Project induction (including the distribution of a construction heritage site map) to ensure that they have an understanding and are aware of the Aboriginal heritage issues affecting the activity.

Protection and management of sites excluded from impacts

7. All sites listed in section 9.1 are excluded from impact.
8. All excluded archaeological sites located outside of the construction corridor must be identified on construction maps and are not to be impacted.

Cultural places, Aboriginal archaeological sites and objects to be impacted

9. The archaeological sites identified as being impacted by construction activities are listed in sections 9.2-9.4.

Human Remains

10. This management policy does not authorise any damage of human remains.
11. If potential human remains are disturbed the Proponent must follow the procedures outlined in section 9.7 below.

Salvage Activities

12. The archaeological salvage excavation must be carried out in accordance with the methodology specified in Appendix D of this report.

Involvement of Aboriginal groups and/or individuals

13. Opportunity must be provided to the approved applicants from the local Aboriginal community to be involved in the following activities:
 - a. assist with the collection and salvage excavation as outlined in sections 9.3-9.4

Reporting requirements

14. A written salvage report about the salvage works must be provided to the RTA in accordance with the Aboriginal Heritage Impact Permit (AHIP).

Salvaged Aboriginal objects

15. Following analysis, any salvaged Aboriginal objects will be deposited at the Australian Museum in accordance with legislation.
16. In the event that Aboriginal stakeholders choose to undertake a care agreement for the salvaged Aboriginal objects the Proponent must assist in the permit application process.

Notification and reporting about incidents that breach this management policy

17. Incident reporting requirements in accordance with the Project Approval is to include Aboriginal heritage.
18. Where the RTA reasonably suspects that an incident has occurred that contravenes the management policy presented here the Proponent must prepare a written report within 5 days detailing that incident. The report must describe
 - a. the nature of the incident
 - b. the notification of the environmental manager, and specialist where required
 - c. the nature and location of relevant Aboriginal sites and/ or PADs, with reference to and provision of maps and photographs where appropriate
 - d. the impact of the incident on Aboriginal sites and/ or PADs, with the appropriate specialist input where required
 - e. the measures which have been taken or will be taken to prevent a reoccurrence of the incident.

9.7 Procedures for Handling Human Remains

- **Note that Project Approvals do not include the destruction of Aboriginal remains**

This section outlines the procedure for handling human remains in accordance with the 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 (NPWS 1997). In the event that construction activity reveals possible human skeletal material (remains), the following procedure is to be followed:

1. as soon as remains are exposed, all work is to halt at that location immediately and the Project environmental manager on site is to be immediately notified to allow assessment and management;
 - i. stop all activities; and
 - ii. secure the site.
2. contact police, the discovery of human remains triggers a process which assumes that they are associated with a crime. The NSW Police retain carriage of the process until such time as the remains are confirmed to be Aboriginal or historic;
3. once the police process is complete and if remains are not associated with a contemporary crime contact OEH's Environment line on 131 555 and the Heritage Branch on (02) 9873 8500;
 - i. if the remains are identified as Aboriginal, the site is to be secured and OEH and all Aboriginal stakeholders are to be notified in writing; or
 - ii. if the remains are identified as non-Aboriginal (historical) remains, the site is to be secured and the Heritage Branch is to be contacted.
4. once the police process is complete and if the remains are identified as not being human work can recommence once the appropriate clearances have been given.

9.8 Procedure for proposed changes to Approved Projects

A proposed change to the Approved Project (such as an alteration of the current alignment, the location of ancillary facilities) within the project corridor may result in a:

- Reduced impact to Aboriginal cultural heritage; or an
- Increased impact to Aboriginal cultural heritage.

Note: the use of the word impact in this section is defined as an impact on the significance of Aboriginal cultural heritage rather than simply an increased physical impact.

To ensure consistency with the Approved Project and this document any change in the overall impact on Aboriginal cultural heritage will need to be considered. The process to determine consistency is outlined in section 9.8.1 below.

Where a proposed change to the Approved Project occurs outside of the project corridor considered for the REF further heritage assessment will be required to determine if there would be an impact on Aboriginal cultural heritage and whether this represents a modification to the Approved Project (outlined below).

9.8.1 Changes in heritage impact

Where the Proponent seeks to make a change to the design and construction of the Approved Project which changes the assessed impact on Aboriginal cultural heritage, as detailed in sections 9.1-9.4 of this document, the Proponent will need to prepare an assessment of the new impacts of this work in consultation with the appointed Archaeologist. The continued involvement of the Aboriginal stakeholders in this process is outlined in section 9.9.

- ♦ New impacts consistent with previously identified impacts

If a proposed change to the Approved Project is considered to have a neutral or lesser significant impact on Aboriginal cultural heritage than that identified in this document it would be considered a consistent impact.

If the proposed change is considered to be consistent with the Approved Project the RTA may approve the change with no requirements to seek further approval. However, in certain circumstances, further consultation with Aboriginal stakeholders may still be required (see section 9.9 below).

- ♦ New impacts inconsistent with previously identified impacts

If a proposed change to the Approved Project is considered to have a more significant impact on Aboriginal cultural heritage than that identified in the REF it would be considered an inconsistent impact.

If the proposed change is considered inconsistent with the assessed impact on Aboriginal cultural heritage, as detailed in sections 9.1-9.4 of this document, the RTA would require an amendment to the mitigation measures agreed in this report. If this proposed change is considered inconsistent with the Approved Project the RTA would require a modification of the Approved Project. Further consultation with Aboriginal stakeholders will be undertaken (see 9.9 below).

9.9 Process for continued consultation with Aboriginal stakeholders

The extent to which the RTA will continue to consult with Aboriginal stakeholders is dependent upon the level of impact and whether the area was assessed as part of the REF. The types of potential impacts are identified as reduced impacts, neutral impacts, increased impacts or unknown impacts. Assessment of the impact to an Aboriginal heritage item is rated against the overall heritage significance of the study area (i.e. the cumulative impact).

a) Neutral or reduced impact

If as a result of alterations to the project design a previously identified impact to an Aboriginal heritage item is reduced or neutral then no further consultation is required.

b) Increased Impact

Where as a result of alterations to the project design an impact on Aboriginal heritage is considered to be greater than identified by the Approved Project further consultation will be undertaken. This consultation will either entail a phone call and phone log of comments received or the provision of a report for comment (10 working days).

c) Unknown impacts: Assessment process

Where a proposed change is an area located outside of the project corridor assessed as part of the Approved Project the impact on Aboriginal cultural heritage is considered to be unknown. This area would require preliminary assessment to determine any impacts upon Aboriginal heritage. Should no impacts be identified then no consultation with Aboriginal stakeholders is required. Should potential impacts be identified consultation with Aboriginal stakeholders will be undertaken. This consultation will entail the provision of a report for stakeholder comment (10 working days) detailing the impacts and mitigation strategies proposed.

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Appendix A Advertisement for Stakeholders

The RTA placed the following advertisement inviting stakeholders to register their interest for the Bringelly Road upgrade project:

**Advertisement for Aboriginal Heritage
Bringelly Road upgrade – Camden Valley Way to The Northern Road**

South Western Rural Advertiser	13 July 2010
Macarthur Chronicle	13 July 2010
Koori Mail	14 July 2010
Indigenous Times	8 July 2010

Aboriginal Heritage **BRINGELLY**
ROAD
UPGRADE

The Roads and Traffic Authority of NSW (RTA) proposes to upgrade Bringelly Road from Camden Valley Way, Leppington to The Northern Road, Bringelly.

An Aboriginal cultural heritage assessment will be undertaken for this project and may result in the RTA applying for an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the *National Parks and Wildlife Act 1974*, and may also be used in undertaking an environmental assessment under the *Environmental Planning & Assessment Act 1979*.

The RTA invites Aboriginal people and/or Aboriginal groups to register who hold cultural knowledge relevant to determining the significance of Aboriginal objects(s) and/or place(s) relating to the Bringelly Road upgrade.

Registrations from Aboriginal people and/or Aboriginal groups wishing to be consulted must be received by phone or in writing **by 28 July 2010**.

To register your interest, please contact:
Barry Gunther, RTA Aboriginal Culture and Heritage Advisor Sydney.

PO Box 973 Parramatta CBD NSW 2124
T 02 8849 2006 F 02 8849 28856.

Appendix B Aboriginal Stakeholder Comments



Deerubbin Local Aboriginal Land Council

Roads & Traffic Authority
27-31 Argyle Street
PARRAMATTA NSW 2150

Level 2, 9 Tindale Street
PENRITH NSW 2750

PO Box 3184
Mt Druitt Village
NSW 2770 AUSTRALIA

T: (02) 4724 5600
F: (02) 4722 9713
E: Staff@deerubbin.org.au
W: <http://www.deerubbin.org.au>

Our Reference: 2138

18 April 2011

SUBJECT: PROTECTION OF ABORIGINAL CULTURAL HERITAGE
Proposed Bringelly Road, Upgrade
Rossmore


Attention: Barry Gunther

A representative of the Deerubbin Local Aboriginal Land Council (Kayne Moreton & Steve Randall) inspected the road corridor for the Bringelly Road Upgrade on the Wednesday, 28th July and Tuesday 3rd August 2010. An Aboriginal cultural heritage assessment was undertaken to evaluate the likely impact that the proposed road upgrade has on the cultural heritage of the land. Consulting Archaeologist Leigh Bates of Austral Archaeology carried out a scientific survey at the same time

Our representatives reports that, no Aboriginal cultural material (in the form of stone artefacts, for example) was found within the study area.

Deerubbin LALC therefore, has no objections to the proposed development on the grounds of Aboriginal cultural heritage.

Yours Faithfully,



(Kevin Cavanagh
Chief Executive Officer)

c.c. Miranda Firman - Planning & Aboriginal Heritage Officer - Office of Environment & Heritage,
Dept. of Premier & Cabinet

c.c. General Manager, Liverpool City Council

c.c. Leigh Bates – Austral Archaeology

DARUG CUSTODIAN ABORIGINAL
CORPORATION

PO BOX 81 WINDSOR 2756

PH: 45775181 FAX: 45775098 MOB: 0415770163

ABN: 81935722930

mulgokiwi@bigpond.com

19th of April 2011

Attention: Barry Gunther.

SUBJECT: Bringelly Road Upgrade Proposal.

Dear Barry,

The Darug Custodian Aboriginal Corporation attended the focus group meeting regarding the Bringelly Road upgrade.

Bringelly Road is within Darug boundaries with many known Darug sites that will be impacted by this upgrade.

We support the findings/ recommendations and investigation methodology that Kelleher and Nightingale discussed at the Focus group meeting for the upgrade.

Our group is a community group that have a constitutional aim to protect and care for Darug sites with all profits from site works going back to community, as any funds from these projects should. Our group would like to be involved in the site works for this project and recommend that all stakeholders involved have all funds going back into Darug community.

Please contact us with any further enquiries on the above contacts.

Regards

Leanne Watson

Darug Aboriginal Cultural Heritage Assessments

ABN 51734106483

Gordon Morton

Mob: 0422 865 831
Fax: 45 677 421

Celestine Everingham
90 Hermitage Rd., Kurrajong Hills, 2755
Ph/Fax: 45677 421
Mob: 0432 528 896

18.4.11

Attention

B. Gunther
RTA

re Bringelly Road Project.

DACHA have again reviewed your proposed works and methodology for the future test excavation for this Darug land. We support your field methodology and we wish to be consulted at all times and be involved (at every stage) in all field work.

Yours Sincerely,
Gordon Morton

Matthew Kelleher

From: GUNTHER Barry E <Barry_GUNTHER@rta.nsw.gov.au>
Sent: Thursday, 28 April 2011 1:22 PM
To: Matthew Kelleher
Cc: DAVIES Emma
Subject: FW: Bringelly rd AFG - Invitation and Report

Hi Mathew,

Not sure if I gave you this one from DTAC - support for the methodology Bringelly Road.

Barry

From: Sandra Lee [mailto:darug_tribal@live.com.au]
Sent: Saturday, 12 March 2011 11:12 AM
To: GUNTHER Barry E
Cc: GUNTHER Barry E
Subject: Re: Bringelly rd AFG - Invitation and Report

Hi Barry

RE: Bringelly Road upgrade

Again sorry for the delay

We agree and support the RTA methodology for this project. We look forward to be working with your team in the future.

Kind regards,

John Reilly
Aboriginal Archaeological Assessment Officer
Darug Tribal Aboriginal Corporation (D.T.A.C.)

Appendix C Aboriginal Stakeholder Consultation Log

REGISTER OF EXPRESSIONS OF INTEREST IN BRINGELLY RD UPGRADE 2010 (Provided by RTA)

<u>DATE</u>	<u>NAME</u>	<u>GROUP REPRESENTATED AND POSITION</u>	<u>ADDRESS / EMAIL ADDRESS</u>	<u>PHONE NO.</u>	<u>FAX NO.</u>	Permission to give registration details to DECCW and LALC(s)
16/7/2010	Scott Franks	Wargon & Burra Aboriginal Centre Inc	45 Coachwood Drive Picton 2571 Yarrowalk1@bigpond.com	0404171544	02 46773126	Permission given 2/9/2010 by phone
16/7/2010	Yvonne Simms	Individual	yvonne.simms@hotmail.com	0466094491		Permission given 2/9/2010 by phone
4/5/2010	Gordon Workman	Darug Land Observation	PO Box 571 Plumpton 2761 Gordow51@bigpond.net.au (Uncle Gordon)	0415 663 763	Po Box 571 Plumpton NSW 2761	Permission given 2/9/2010 by phone
23/7/2010	Gordon Morton Celestine Everingham	Darug Aboriginal Cultural Heritage Assessments	90 Hermitage Rd Kurrajong Hills 2758 28 Calala St, Mt Druitt 2770	Ph- 45677421 Ph-9625 0005 m0422865831(GM m0432528896(CE)	Fax- 45677421	Permission given 2/9/2010 by phone

<u>DATE</u>	<u>NAME</u>	<u>GROUP REPRESENTATED AND POSITION</u>	<u>ADDRESS / EMAIL ADDRESS</u>	<u>PHONE NO.</u>	<u>FAX NO.</u>	Permission to give registration details to DECCW and LALC(s)
17/7/2010	Glenda Chalker	Cubbitch Barta Native Title Claimants	55 Nightingale Road Pheasants Nest NSW 2574 kgchalker@bigpond.com	0427218425	Fax & Ph- 02 46841129	Permission given 2/9/2010 by phone
23/7/2010	Sandra Lee	Darug Tribal Aboriginal Corporation	Po Box 441 Blacktown NSW 2148 71 Seven Hills Rd south 2147	Ph- 9 622 4081	F- 9 622 4081	Permission given 2/9/2010 by phone
2/9 /2010	Leanne Watson	Darug Custodian Aboriginal Corporation	Po Box 81 Windsor NSW 2756	4577 5181 041577 0163	4577 5098	Permission given 2/9/2010 by phone
27/7/2010	Des Dyer	Darug Aboriginal Land Care	18a Perigree Close Doonside 2767 desmond4552@hotmail.com	0408 360 814		Permission given 2/9/2010 by phone

<u>DATE</u>	<u>NAME</u>	<u>GROUP REPRESENTATED AND POSITION</u>	<u>ADDRESS / EMAIL ADDRESS</u>	<u>PHONE NO.</u>	<u>FAX NO.</u>	Permission to give registration details to DECCW and LALC(s)
2/8/2010	Cindy Cronin	Gandangara LALC	103 Moore St Liverpool 2170 Po Box 1038 Liverpool BC NSW 1871	9602 5280 96021708	9602 2741	Permission given 2/9/2010 by phone
30/7/2010	Robyn Straub	Tharawal LALC	55 Mathews Lane Picton NSW 2571	02 468 10059	02 4683 1375	Permission given 3/9/2010 by phone

MEETING MINUTES



Name of meeting: Aboriginal Focus Group – Bringelly Road Upgrade Camden Valley Way to The Northern Road

Location of meeting: Argyle Street, Parramatta. Level 3, Blue Mountains Rooms

Meeting facilitator: Barry Gunther/Matthew Kelleher

Date: 03/03/2011 **Time:** 10am

Attendees:		
Barry Gunther – RTA (BG)	John Reilly – (JR) Darug Tribal Aboriginal Corporation (DTAC)	
Emma Davies – RTA (ED)	Scott Franks – Yarrowalk (SF)	
Rebecca Murray – RTA (RM)	Gordon Workman – (GVV) Darug Land Observations (DLO)	
Matthew Kelleher – Kelleher Nightingale Consulting Pty Ltd (MK)	Glenda Chalker – Cubbitch Barta Native Title via phone	
Celestine Everingham – DACHA (CE) Gordon Morton – DACHA (GM)	Yvonne Simms – Gundungurra Elders Norma Simms - Gundungurra Elders Judy Reid - Gundungurra Elders	
Leanne Watson – DCAC (LW)		

Agenda Item	Discussion	Actions
Welcome to Country	Welcome to country given by Gordon Morton	
Project Proposal	<ul style="list-style-type: none"> • ED provided background detail on the proposal. - Aim at this stage is to investigate and obtain approvals where required - No funding for construction has been committed to date. - Commencement of works at Leppington Town Centre may kick off the road development - ED provided detail on Rossmore School and existing shops. - Camden Valley Way (CVW) to King St is identified as the first stage of works with an approximate upgrade date of 2016. Bringelly Rd (BR) forms the boundary between Camden and Liverpool Councils as well as Tharawal Local Aboriginal Land Council (TLALC) and Gandangara Local Aboriginal Land Council (GLALC). 	

Field Survey report results – overview of Aboriginal Cultural Heritage investigations & Cultural Heritage Archaeological Report (CHAR)	<ul style="list-style-type: none"> • SF & Aunty Yvonne Simms Raised concerns of Aboriginality in relation to some meeting attendees. SF is noted as being not happy that Non-Aboriginal people are attending the meeting and finds it disgraceful that CE is in attendance. • BG explained that the RTA in accordance with the DECCW 2010 Consultation Guidelines has been provided in writing a letter from Gordon Morton (DACHA) nominating CE to act on behalf of DACHA. • MK provided an overview of archaeological results <ul style="list-style-type: none"> - 44 sites have been identified; however MK noted that what was recorded isn't representative of the study area sites. - MK notes CVW and creek locations - Identified study boundary as the blue line noted on the power point. - Most areas are highly disturbed however some good areas were identified - Starting at the east (CVW and Cowpasture Rd intersection) Bringelly Rd cuts through the hills in the east. No sites were found in this area. - Heading west towards the Sydney Water Canal some archaeology was identified in relation to the canal. Some sites may be impacted however it is within a very disturbed context - Heading towards Kemps Creek some artefacts were found however once again were in a disturbed context. - Strawberry patch, known as 'Rudolph' was less disturbed (S10). It lies on a slope with a slate benching. Archaeology surviving in tact in some areas. Some artefacts were found within the strawberry patch. Deep ploughing in the areas means the artefacts were quite disturbed. The CHAR identified these for salvage. - Eastwood Rd area. Some artefacts identified near the fence. The Area is fairly small. Some lines or archaeology were identified however areas have been disturbed by housing. - Heading west of Eastwood Rd most disturbed areas were noted. The new road would head into the verge area however there are existing utilities and driveway accesses present which have disturbed the area. Imported material was observed in the locality. - The area near the chicken farm is highly disturbed. - S15, 16, 17 and 18 are identified with massive erosion in the area. The A horizon has gone. Down into B horizon of clay. Layers are 35-40 thousands years old meaning there is very little archaeology in this area. Artefacts have popped up in the area however are heavily disturbed. - Rossmore Park and property driveways: impacted material or highly disturbed. - S24 – plateau drops down towards the creek. Level ground drops down towards the water shed. There is archaeology in this area. (S24). Archaeology is popping up near the fence line rather than into the park. S24 is identified for salvage. - SF raised the note that the area is a complex and this project would be impacting on a section of the complex. - MK responses with noting the procedure of the CHAR and that the areas to be impacted would be addressed appropriately. - Glenda raised note of new artefacts found during Sydney Water investigations. 	
Minutes	<ul style="list-style-type: none"> - It was noted that the site cards detailed for Bringelly Rd following stage 2 survey have not yet been lodged. 	Page 2 of 3

Is a site visit required	<ul style="list-style-type: none"> • BG asked if a site visit is required • Auntie Yvonne Simms says she will complete her own visit • SF would like to undertake a site visit but raised concerns that voluntary site visits are not covered by their insurance • BG is to send information to Auntie Yvonne Simms regarding RTA traineeships. BG explained that next intake will be for 2012. • BG mentioned that SF should put his concerns in writing to the RTA and BG will escalate his concerns as required. • SF asked when the RTA PACHCI will be available. SF raised concerns that it hadn't be put out for comment. • SF queried the Aboriginal site Officer Applications process. BG and ED noted that they review applications and ED acts on advice from BG following the correct procedure. • SF raised concerns that the project isn't understanding of schedule 19 and loading requirements. • GW mentioned other projects (not RTA) where archaeologists have out numbered Aboriginal people on site. • SF & GW raised concerns about the LALC having more representatives on site work and who is on site. • BG explained that an equal ratio of Archaeologists and Aboriginal representatives are normally the procedure but most times the Aboriginal representatives outnumber the Archaeologists. • SF mentioned that a song line has been identified in another project. Potentially Oran Park. SF to notify MK of songline. 	<p>1) SF to notify MK of Songline.</p> <p>2) BG to provide information to Auntie Yvonne Sims regarding traineeships when they become available.</p>
Community comments in regards to proposed AHIP (s90) application to DECCW	<ul style="list-style-type: none"> • AHIP; this won't be known until further construction details are identified. 	
General business	<ul style="list-style-type: none"> • ED noted that the REF will be on display later this year. • MK noted that written comments are beneficial to the project. Verbal comments could also be accepted today or at a later date. • RTA staff & MK thanked all for attendance. 	

Appendix D Research Design

Methodology

Research Aims

The main aim of the proposed salvage excavation program is:

- ⑩ To salvage a representative sample of the five known archaeological resource at:
 - BRP-S-10/BRP-PAD-01,
 - BRP-S-24,
 - BRP-S-25 and
 - BRP-IF-16.
- ⑩ From this sample the main aim is to assess the cultural activities as they relate to the archaeological record and identify potential changes within the archaeological record in relation to variation in landform.

The further aim of the salvage excavation program is to determine the subsurface integrity, extent, spatial distribution and nature of the deposit in order to enhance the main aim.

- ⑩ Determining the integrity of the deposit involves assessing the degree of disturbance which is present.
- ⑩ Determining the extent of the sites involves identifying the boundaries associated with the identified archaeological deposit.
- ⑩ Assessing the spatial distribution involves identifying the presence/absence of archaeological material across identified land forms (e.g. crest and slope). Future management plans for south west Sydney which utilise predictive models will benefit from an increased understanding of the spatial distribution of archaeological materials. Such information will allow for more accurate assessment of the need and scope for future Aboriginal heritage management.
- ⑩ The nature of the site refers to the type of activities indicated by the artefactual material (e.g. primary production, domestic knapping, hunting camps). The goal would be to retrieve assemblages from specific activities (e.g. selective knapping, heat treatment) if such activities were present.
- ⑩ Retrieved assemblages would be compared with the results from other relevant archaeological projects in order to assess significance.

Caveat: mitigative research (i.e. consultant program) is often archaeologically limited in physical scope. Only locations impacted by development (road construction) are open to investigation. Often the best places to gather information are conserved or outside of the designated impact area. Rarely are consultant archaeologists given a free hand to investigate all aspects of a landscape. Nonetheless, an established landscape paradigm has emerged within quality research: various landforms (elevated creek flats, terrace, spurs, ridges, crests etc) should be individually assessed when the opportunity arises. Over time information can be synthesised into a structured whole, which can demonstrate how Aboriginal people organised their landscape. Each mitigative project therefore should seek to do its part to increase our knowledge of the Aboriginal past and slowly build a useful record of the past. Bringelly Road upgrade offers an opportunity to assess two landforms crest/ridgetop (BRP-S-24 and BRP-IF-16) and terrace/margin (BRP-S-10/BRP-PAD-01 and BRP-S-25).

Research Questions

The results of the proposed salvage excavation program will increase our understanding of the subsurface archaeology of south west Sydney. In particular, the ridgetop location of sites BRP-S-24 and BRP-IF-16 makes it ideal for collecting significant archaeological/cultural information. Hilltop and ridge locations have not been assessed in a systematic way across the Cumberland Plain, yet these locations are important in understanding the flow of archaeology within a landscape. Research thus far indicates that elevated locations were often used differently than the more utilitarian areas near creeks, with many locations displaying specialised uses (cf. Kelleher 2003, 2008, 2009 KNC 2008). Existing models for the region's archaeology are poorly developed or erroneous. Rather than rely on this unsatisfactory previous work, new research questions are posed in this methodology. Questions are both significant for the region and the specific Bringelly landscape.

Question 1: What cultural activities are archaeologically identifiable on elevated landforms such as BRP-S-24 and BRP-IF-16 and how does the identified archaeology compare to the general area?

It is anticipated that differences in stone tool assemblages may be related to different cultural activities (e.g. primary reduction vs maintenance flaking). The science of archaeology is paramount to any research

question and it is important to stress that the goal for the salvage program for BRP-S-24, BRP-IF-16 and all sites is straight forward: to retrieve a viable sample for comparative analysis using established techniques (see Field Methods below). In this regard interpretation will not precede data collection. The proposed archaeological program will systematically sample the relevant areas using standard techniques with the outcome being a viable, robust and comparable sample. Analysis of the sample will follow and interpretations will be made distinctly separate from the results.

In following Question 1, it can be argued that we need to explore/understand the logistical support system for elevated cultural locations. The potentially specialised activities in elevated sites do not occur in archaeological isolation. What this means is that the full range of cultural activities (such as utilitarian and domestic activities) must accompany specialised activities (such as select knapping locations, neophyte camps or ceremonial sites) for a cultural landscape to function. However, segregation between activities is directly proportional to the perceived level of importance. For example, in general daily life we find a strong overlapping in activities (think of all the activities undertaken in a home kitchen) whereas select or special purpose areas are often more spatially discrete (task separation/formalisation such as activities undertaken in an office, club or church). Therefore in order to identify truly selective activities/areas in the archaeological record (e.g. potentially BRP-S-24 and BRP-IF-16) we must be able to archaeologically show the logistical continuum for possible support camps (e.g. potentially BRP-S-10 and BRP-S-25). In other words, we are targeting the changes in the artefactual and distributional records across the landscape. BRP-S-24 and BRP-IF-16 reflect the elevated areas. However without a comparative/contrasting sample our understanding (even identification) of selective archaeological activities will prove difficult. To understand the results of BRP-S-24 and BRP-IF-16 we need a comparative/contrasting data set. Archaeologists seek cultural material not as an end in itself, rather we seek artefacts for the information they hold about past peoples. To this end our methodologies must have an apex beyond the artefacts themselves towards the information they contain.

Question 2: Does the archaeological record of BRP-S-10 and BRP-S-25 differ from elevated sites such as BRP-S-24 and BRP-IF-16? And can these differences, if any, be shown to relate to variations in cultural activities as exhibited in the archaeological record or are they purely environmental?

Archaeological Expectations and Changes

Variations in the tool kit are not an expected outcome of the salvage program, in other words no new tool types are expected. Stratigraphically the archaeological record is also limited due to the area's deflationary soils, which means identifying change within the tool kit through time is also problematic. So how will we see change? The answer: change will be identified by intersite spatial variation. Intersite variations will be defined by the comparative ratios of artefact types. For example, does BRP-S-24 have significantly more backed artefacts than BRP-S-10?

The identified salvage areas aim to encapsulate the activities associated with the ridge and drainage lines, but also address internal spatial organisation of the sites. For example, is there a variation in the activities on the ridgeline associated with vistas, access points or shelter from the prevailing winds? Are sites associated with drainage lines spatially homogenised? To this end we would expect to see internal spatial variation in the distribution of raw materials (quartz vs silcrete) and types of lithics (e.g. backed artefacts, bipolar cores, etc) within a site.

Excavations in the general region (e.g. Harrington Park and Oran Park/Turner Road) show that archaeological sites are made up of discrete concentrations of artefacts. The concentrations vary in distribution and can be shown to represent different lithic reduction events. Unfortunately, soil conditions have not yet allowed for the identification of discernable hearths or heat treatment pits.

Interpretations of the results will require an assessment of environmental constraints associated with each landform in order to temper results. In other words, we can expect the quantity of artefacts to vary greatly between environmentally friendly and not-so-friendly landforms. Rather than focus on questions of quantity we can look at artefact types and ratios. For instance are we finding higher ratios of retouched flakes or backed artefacts at vistas. Ratio based assessments have proven interesting in identifying how past peoples organised their landscape (cf. KNC 2008, Jo McDonald CHM 2004, Kelleher 2008, 2009).

Salvage Area

Salvage excavation will target the better portions of sites BRP-S-24, BRP-IF-16, BRP-S-25 and BRP-S-10/BRP-PAD-01 (i.e. relatively level ground exhibiting low levels of disturbance and erosion). Given the poor effective surface visibility across the study area and the generally accepted understanding that the lack of surface evidence is not an indication of a lack of subsurface archaeology, KNC advocates a combination testing and open area excavation program. A series of test squares will be laid out across the excavation area to locate specific activity areas and then open area excavations will be undertaken around test squares yielding higher (or otherwise significant) artefact densities.

Triggers for selecting a test square to expand around include but are not limited to the following:

- significant quantities of artefacts which contain the potential to yield statistically viable assemblages relating to changes in 1) raw material use, 2) lithic type, or 3) reduction technologies;
- chronologic potential will be explored where organic or other datable deposit exists in association with artefacts;
- taphonomic potential will be explored where a deposit shows evidence relating to the formation of site soils.

Field Methods

The goal of the excavation program is to recover a significant assemblage of artefacts which will characterise the sites and offer comparable information with other sites. The field methods reflect this goal and will use a standard (comparable) methodology often used by archaeologists on the Cumberland Plain.

Excavation squares measuring 1m x 1m would be hand excavated in bulk or (where possible) stratigraphic units. Squares would be excavated until the basal layer or culturally sterile deposit is reached. The initial excavation squares at each location would be excavated well into the sterile unit to confirm the absence of artefacts. The location of each excavated square would be identified on a surveyed plan of the site.

Excavation Scope (Diminished Returns)

All excavation will operate under the premise of diminished returns. Diminished returns occur when a trend in the distribution or ratio of raw materials/tool types is established for the site and no new scientific information can be obtained through further excavation of the site. When the distribution and/or ratios are established further excavation can only result in increased artefact numbers, but not new information. Best practice is for excavation to cease when no new information is likely to be obtained. The numbers of test and open area squares outlined in the following sections represent estimates based on previous experience and will be guided by the principle of diminished returns.

Initial Test

Testing is designed to achieve two outcomes: 1) establish a statistically robust sample for comparative analysis and 2) identify suitable archaeological deposit for open area salvage.

Excavation grids (transects) will be established during the test phase using AMG coordinates for each square. Squares will be placed at 15m intervals along a sampling transect. The squares in adjoining transects will be staggered (at five metre intervals) to achieve maximum sampling coverage. Transects are expected to be 100m in length (depending on the length of the site). Each excavation area will have 4 test transects.

Excavation using a consistent grid is important for statistical validity. Test excavation squares will not deviate from the grid pattern. Data collected from the grid is directly comparable with other stratified random samples (as opposed to open area squares, which are targeted and exhibit more bias).

Each site will require will require around 25 test squares. Experience indicates 25 test squares will be a sufficient test sample (allowing for site variations in soils).

All excavation would be limited to the proposed development area and construction zone.

Open Area

Open area (salvage) excavation will follow from the results of the initial test program.

The four areas BRP-S-24, BRP-IF-16, BRP-S-25 and BRP-S-10/BRP-PAD-01 may require around 50 additional squares, depending on the number and type of identified features. Following on from previous excavations in the area, 50 squares should be sufficient to encapsulate/investigate any identified features. Some flexibility will be factored into the final size of the open area to allow an increase or decrease in the total number of squares to ensure an adequate sample is collected. The principle of diminished return will be used to determine if additional excavation squares are required.

Total excavation area for all four sites will be approximately 300m². This total includes test squares and open area squares.

All of the deposit will be wet sieved on 2.5mm and 5.0mm nested sieves. All artefacts would be collected and bagged. Excavated squares will be backfilled with a clean fill (by RTA).

Geomorphology

Stratigraphic section detailing the stratigraphy and features within the excavated deposit would be drawn and all squares would be photographed. Detailed geomorphological analysis would be undertaken by a qualified geomorphologist where appropriate.

Spits

Soils across Bringelly and (much of the Cumberland Plain) are deflated and not stratified. A1 and A2 unit soils are archaeologically indistinguishable in terms of artefact deposition (i.e. internally within units). The cyclical nature of deflationary soils means that all cultural material compresses through time and then moves through the profiles. (Bringelly's podzolic soils tend to have an active A horizon). Best practice dictates that excavation in spits within each unit (A1 or A2) is not advisable, as statistically all spit information (within a unit) would need to be compressed to achieve a robust result. In short, excavation units should be linked to the soil profile. The A1 should be excavated as one unit and the A2 as another unit. Excavation will cease at the culturally sterile B unit podzols.

Chronology

Carbon samples (e.g. charcoal) and soil samples (sandy clays) and would be collected. Where relevant charcoal samples or quartz grains (OSL) will be dated to ascertain a base level of chronology for each site.

Analysis

Artefacts will be analysed on a comparable level with previous analyses of excavated assemblages (KNC 2008; Jo McDonald CHM 2003, 2004; Attenbrow 1981; Koettig 1985). Information derived from this analysis; in particular the identification of specific artefact types, and their distributions and associations; will be used to formulate interpretations about the site's use, antiquity, settlement patterns and assess cultural heritage values. By comparing different test areas it will be possible to determine whether there were differences in the kinds of activities carried out and the way that stone technologies were organised across the site and general landscape (from local and regional examples). Importantly it is hoped that sufficient data would be recovered from the hilltop location in order to assess the dyadic nature of archaeological landscapes (i.e. how each part works within the whole). Differences could be expected if different aspects of settlement organisation varied in relation to the landscape units as defined.

Landform/artefact comparisons from the program will look at variations from ridgetops like BRP-S-24 and lower slope margins like BRP0-S-10. These landforms (ridgetop, lower slope) may exhibit different archaeological signatures as they have elsewhere on the Cumberland Plains (cf. Second Ponds Creek).

A range of stone artefacts may be present at the site and the analysis would expand accordingly to account for artefact variability. All information would be recorded in database form (MS Excel). Various types of evidence would be used to determine the kinds of activities that were carried out. A short description of the proposed analysis is outlined below.

- ⑩ Field analysis would record basic data, such as material type, number, and any significant technological characteristics, such as backing or bipolar techniques; added to this would be any provenance data such as pit ID and spit number. The purpose of the field recording is twofold: 1) establish a basic recording of artefacts retrieved and 2) to allow on-going assessment of the excavation regime (e.g. whether higher stratigraphic resolution is required while digging).
- ⑩ Detailed (laboratory) analysis would entail recording a larger number of characteristics for each individual artefact. These details would be recorded in matrices suitable for comparative analysis (e.g. multivariate and univariate) of the assemblage on a local and regional basis.
- ⑩ Lithic characteristics to be recorded cover a range of basic information but are not limited to these categories (see Table 3). For transparency, terms and category types would in large part be derived from Holdaway and Stern (2004).

Table 8. Lithic Recording Characteristics

Sample Categories		
Record Number	% Cortex	Flake Type
Pit ID	Length	Termination Type
Spit Number	Width	Core Type
Count	Thickness	Number of Scars (Core)
Raw Material	Weight	Scar Type (Core)
Colour	Modification	Shape of Flake
Quality	Reduction Type	Platform Type

- ⑩ A detailed explanation and glossary would be provided with the final excavation report.
- ⑩ Minimum Number of Flake (MNF) calculations formulated by Hiscock (2000, 2002) will be undertaken where applicable. The main outcomes of the analysis would be to investigate: the type of activities being carried out across the subject area; stone materials used and quantity; technology; and modification/retouch (type and quantity).

The analysis of artefacts recovered during the excavation program would be undertaken in a transparent and replicable fashion so as to permit the comparison of the Bringelly assemblage with data from other parts of southwest Sydney including future excavations in the Camden/Campbelltown area. This would also allow for an enhanced interpretation of the study area's archaeological significance.

Field Team

KNC is comprised of highly qualified and experienced archaeologists with experience in all aspects of Aboriginal archaeological assessment and management, including surface survey, test and salvage excavations, sensitivity mapping, significance and impact assessment and site management.

KNC directors, Dr Matthew Kelleher and Alison Nightingale, would be responsible for the salvage excavation program. Dr Matthew Kelleher would direct the excavation component of the Aboriginal archaeological assessment. Matthew has extensive experience in managing large scale archaeological excavations and research projects.

The proposed field team personnel, roles and tasks are listed in the table below.

Table 9. Project Personnel

Person	Role	Tasks
Dr Matthew Kelleher	Director / Archaeologist	Project and Excavation director, liaison with RTA, coordinate team, lithic analysis, assessment and reporting
Alison Nightingale	Director / Archaeologist	Project manager, coordinate team, liaison, assessment and reporting
Mark Rawson	Senior Archaeologist	Excavation supervisor, lithic analysis and reporting
Josh Symons	Archaeologist/GIS	Mapping
Archaeologists (4)	Field Archaeologists	Excavation program

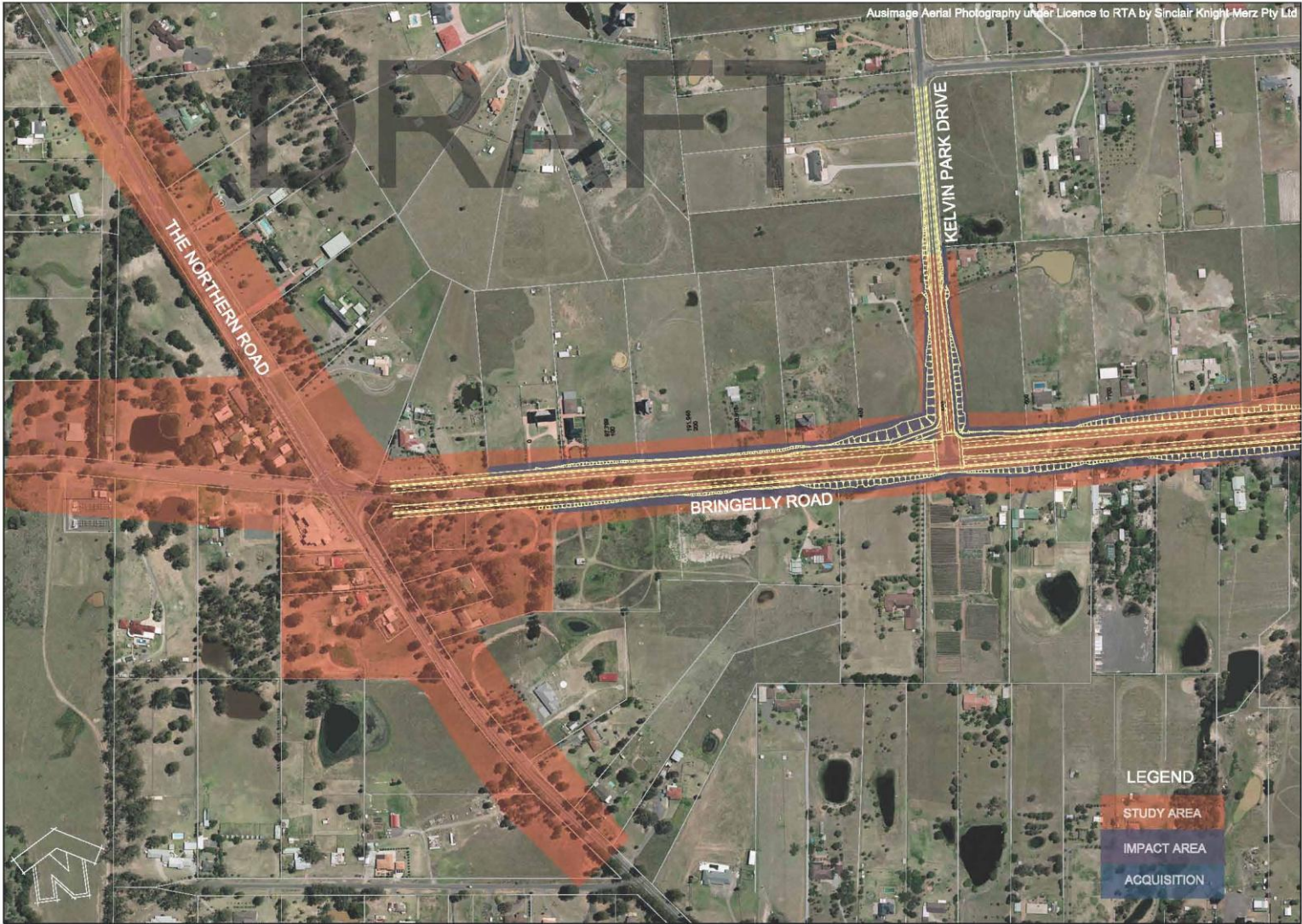
Timeframe

RTA is yet to advise KNC on a timeframe for salvage excavation as this is dependent on a detailed construction program.

Collected Aboriginal Objects

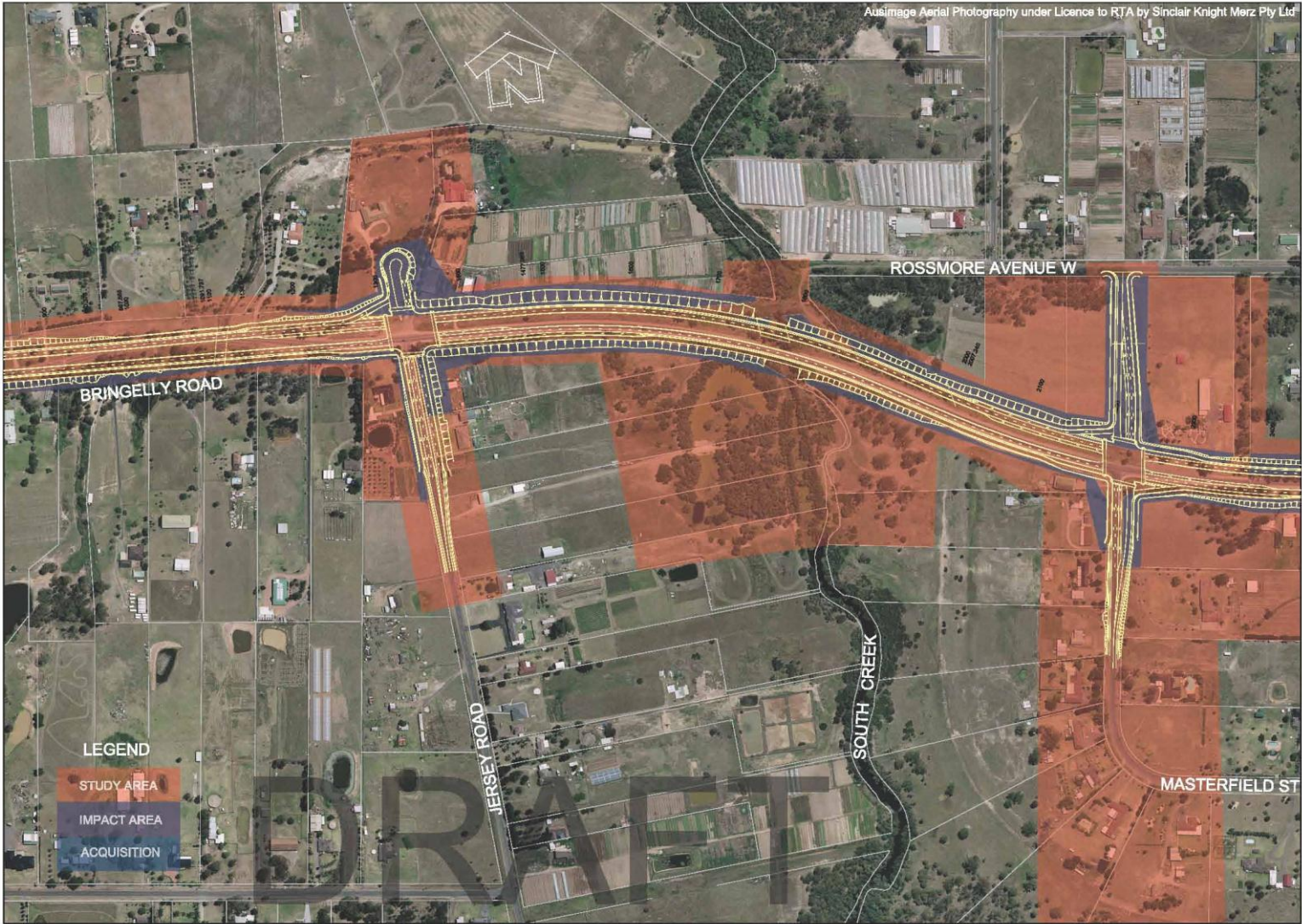
All collected Aboriginal objects will be transferred to the Australian Museum in accordance with the legislative requirements, unless a Care Agreement is sought by the Aboriginal community. KNC will advise the Aboriginal community when the archaeological program is complete and the quantity of objects is known. It is anticipated that informed decisions regarding the application for a Care Agreement can be made by the Aboriginal community at this time.

Appendix E Concept Design



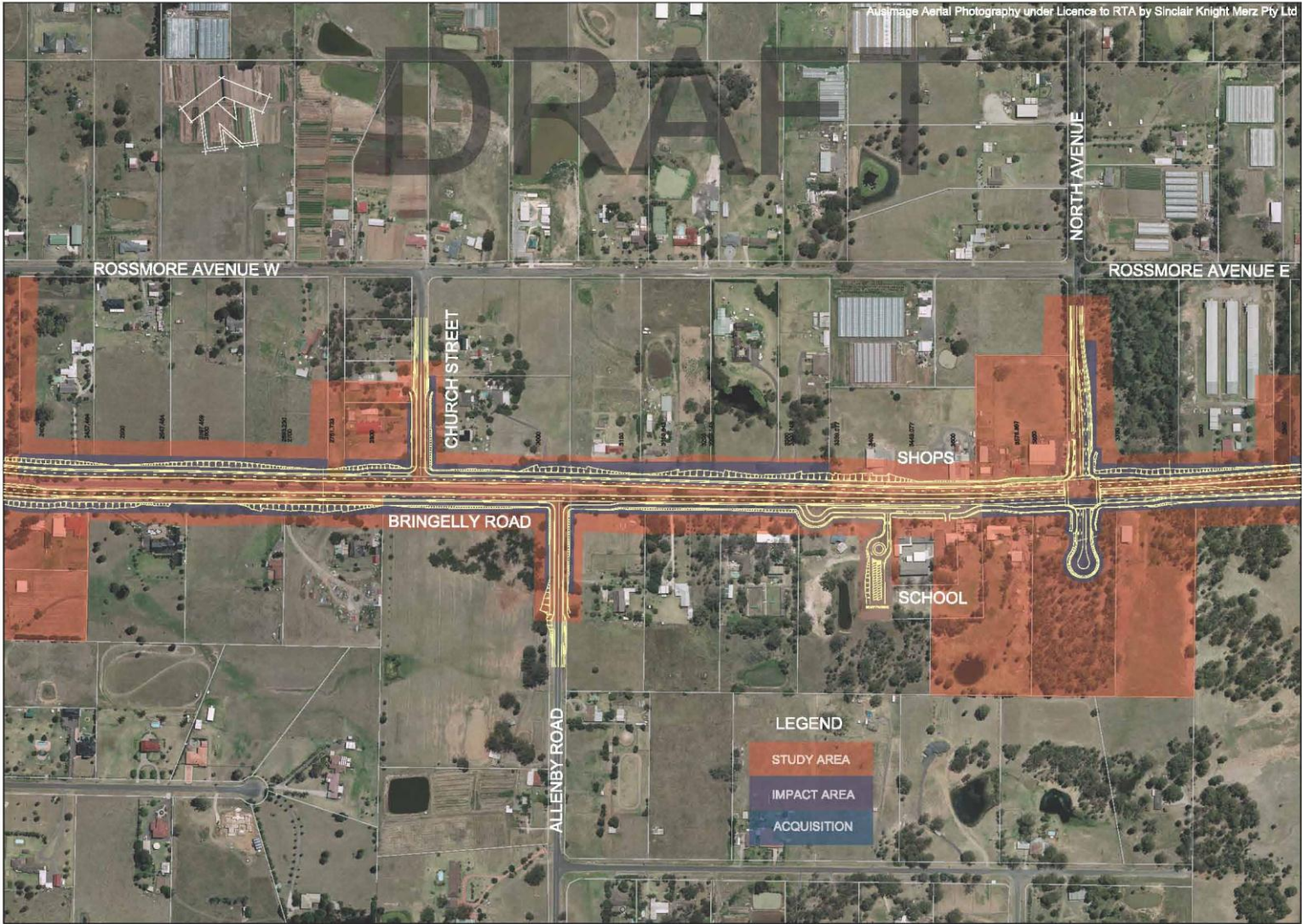
MR647 BRINGELLY ROAD - CONCEPT DESIGN

SHEET 1 OF 7



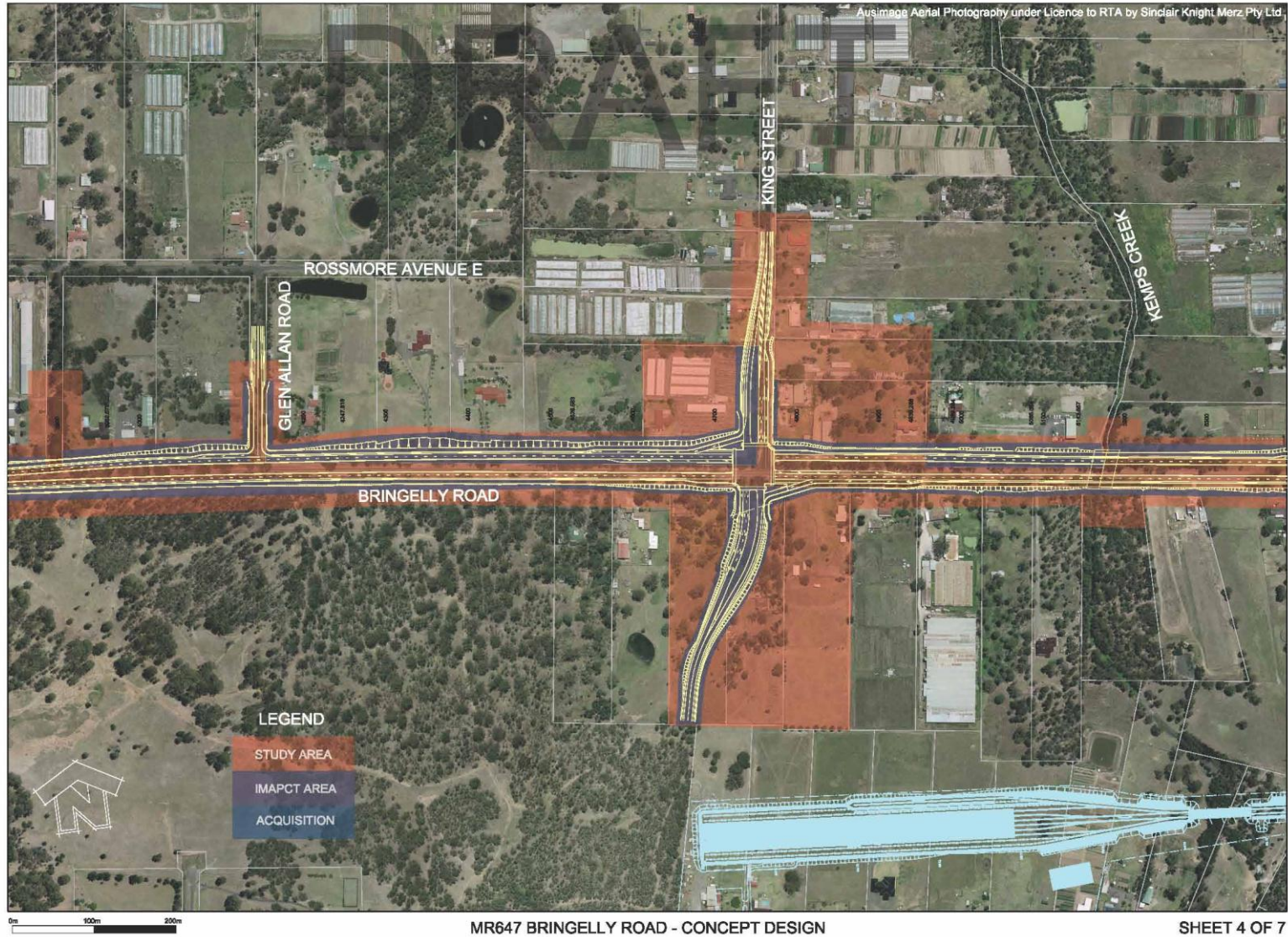
MR647 BRINGELLY ROAD - CONCEPT DESIGN

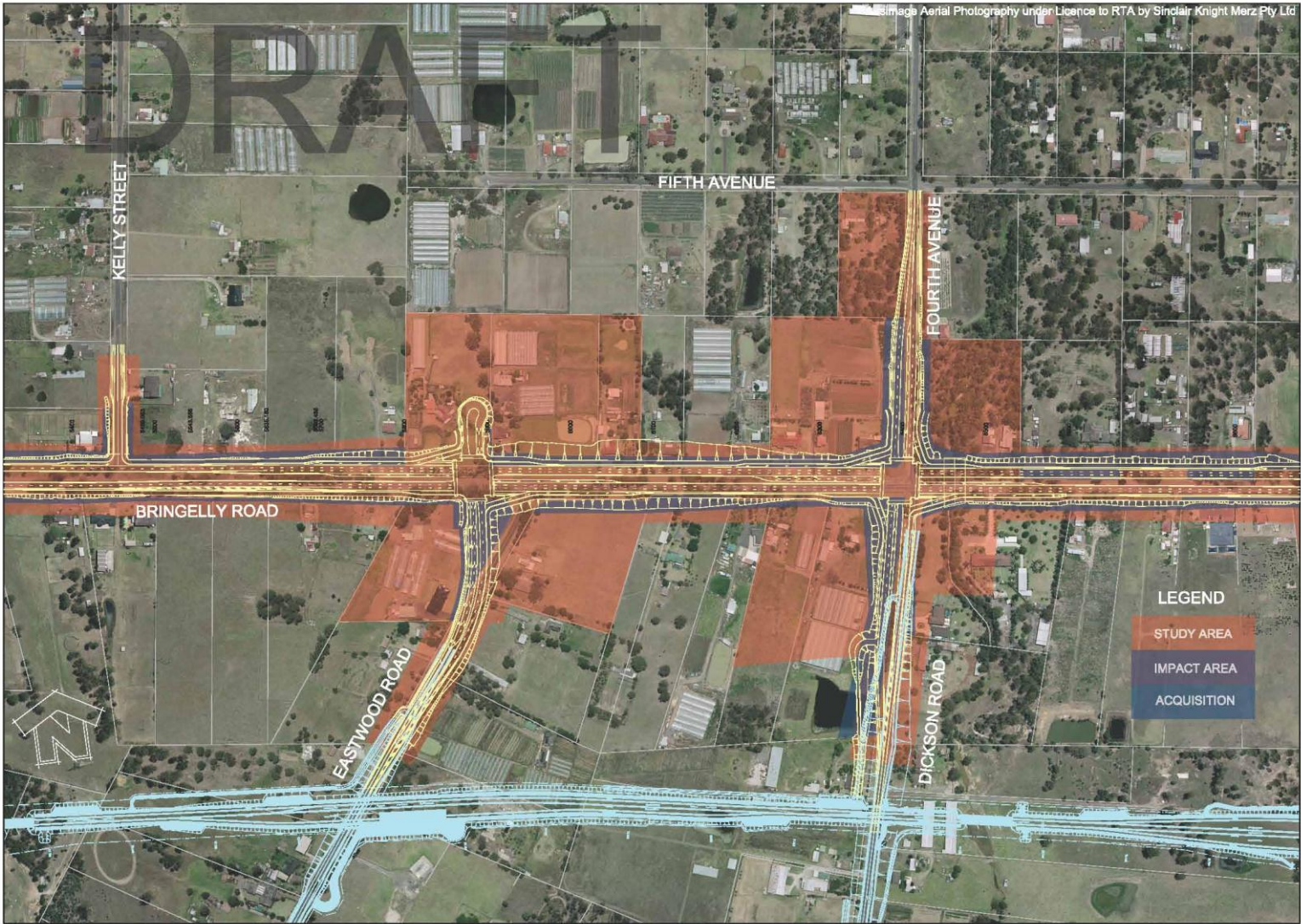
SHEET 2 OF 7



MR647 BRINGELLY ROAD - CONCEPT DESIGN

SHEET 3 OF 7

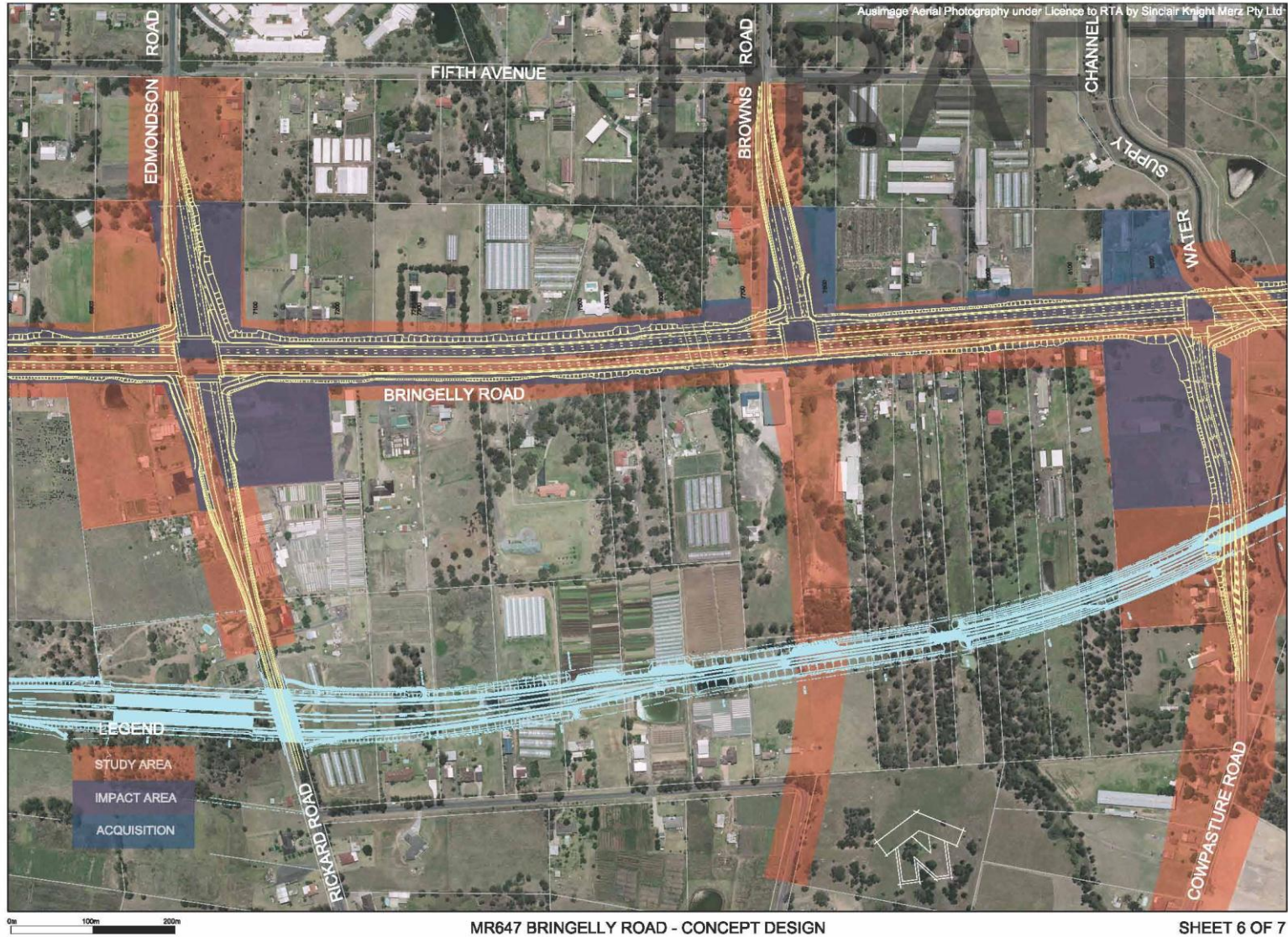




0m 100m 200m

MR647 BRINGELLY ROAD - CONCEPT DESIGN

SHEET 5 OF 7



Appendix E Government Agency Responses



OFFICE OF THE REGISTRAR
ABORIGINAL LAND RIGHTS ACT 1983 (NSW)

11-13 Mansfield Street
Glebe NSW 2037
PO Box 112, Glebe NSW 2037
P. 02 9562 6327 F. 02 9562 6350

Ms Emma Davies
Project Development Manager
Roads and Traffic Authority
Infrastructure Development Section
PO Box 973
PARRAMATTA CBD NSW 2124

7 July 2010

Dear Ms Davies

Re: Request - Search for Registered Aboriginal Owners

I refer to your letter dated 1 July 2010 regarding a Cultural Heritage Assessment report for the Bringelly Road Upgrade.

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

I suggest you contact the Gandangarra Local Aboriginal Land Council. They may also be able to assist you in identifying other Aboriginal stakeholders for this project.

Yours sincerely

Courtney Field
Administrative Officer
Office of the Registrar, *Aboriginal Land Rights Act* (1983)

FW: Bringelly Road Upgrade local Aboriginal contacts NOTE change of details

Page 1 of 2

DAVIES Emma

From: Denise Pritchard [denise.pritchard@camden.nsw.gov.au]
Sent: Wednesday, 7 July 2010 12:10 PM
To: DAVIES Emma
Subject: FW: Bringelly Road Upgrade local Aboriginal contacts NOTE change of details

Emma
I have just been made aware of a change to the address for the Land Council
The correct one is PO Box 168 PICTON 2571

Contact name is Robyn Staub
Sorry for any confusion

Denise Pritchard

From: Denise Pritchard
Sent: Tuesday, 6 July 2010 2:57 PM
To:
Subject: Bringelly Road Upgrade local Aboriginal contacts

Emma
Thank you for your letter of 1 July 2010
The following contacts may be of assistance. Glenda Chalker is a descendent of the Dharawal people and has been engaged by a number of projects to provide similar comment. I have indicated to Glenda that you are undertaking this project and she is happy for you to call her.

Tharawal is the local Land Council organisation for the area.

Glenda Chalker
55 Nightingale R
Pheasants Nest 2574

4684 1129
0427 218 425

And

Tharawal Land Council
PO Box 20 Buxton 2571
tharawal@ideal.net.au

Best of luck with the project. If I can be of further assistance please do not hesitate to call me.

Regards,

Denise Pritchard
Community Project Officer

Camden Council | PO Box 183, Camden NSW 2570
P: 02 4645 5009 | F: 02 4645 5025
Email: denise.pritchard@camden.nsw.gov.au
www.camden.nsw.gov.au

13/07/2010

DAVIES Emma

From: Galavizh Ahmadinia [CALDCP@liverpool.nsw.gov.au]
Sent: Wednesday, 7 July 2010 3:31 PM
To: DAVIES Emma
Cc: Simon Fox
Subject: Bringelly Road Upgrade

Dear Emma,

Thank you for your letter of 1 July 2010 regarding names of Aboriginal knowledge holders to assist with the cultural heritage assessment for Bringelly Road upgrade.

The area of your study comes under Gandangara Local Aboriginal Land Council boundaries. Gandangara covers 9 Local Government Areas including Camden and Liverpool. I would like to suggest contacting Gandangara for advice and support regarding the cultural heritage assessment report.

The Gandangara Local Aboriginal Land Council contact details are as follow:
103 Moore Street, Liverpool
PO BOX 1038, Liverpool BC NSW 1871
Phone: 9602 5280

I hope the above information is sufficient to your inquiry.

Kind regards,
Galavizh

Galavizh Ahmadinia

Community Development Worker (CALD)

Liverpool City Council
1 Hoxton Park Rd, Liverpool NSW 2170
Phone 9821 7779
Fax 9821 9333

Creating our future together

This message and any attachment are confidential and may be privileged or otherwise protected from intended recipient of this message you must not copy, reproduce, store, disseminate or distribute this you are not the intended recipient please email the sender or notify Liverpool City Council and delete attachment from your system. Unauthorised retention or use of such information may be in breach of Information Protection Act (NSW) 1998. Any views expressed in this email transmission may represent and may include information that has not been approved by Liverpool City Council. Liverpool City Council does not endorse the views expressed in this email. Council does not accept any responsibility for the loss or reliance on, or the use of, any information contained in this email or attachments. Liverpool City Council and any attachments should be scanned to detect viruses and accepts no liability for loss or damage to attached files.

For further information about Liverpool City Council please visit our website at www.liverpool.nsw.gov.au.

13/07/2010



12 July 2010

Emma Davies
 Project Development Manager
 Bringelly Road Upgrade
 Infrastructure Development Section
 RTA
 PO Box 973
 Parramatta CBD NSW 2124

**New South Wales and
 Australian Capital Territory
 Registry**

Level 25, 25 Bligh Street
 Sydney NSW 2000
 GPO Box 9973
 Sydney NSW 2000
 Telephone (02) 9235 6300
 Facsimile (02) 9233 5613

Our Reference: 3617/10kc

Your Reference: D/00338.PMD.03.02

Dear Ms Davies

**Native Title Search Results of Camden Council and Liverpool City Council Local Government
 Areas**

Thank you for your letter of 1 July 2010.

My search on 12 July 2010 found:

CAMDEN COUNCIL

Register Type	NNTT Reference Numbers
National Native Title Register	Nil.
Register of Native Title Claims	NC97/8, NC97/7
Unregistered Claimant applications	Nil.
Register of Indigenous Land Use Agreements	Nil.

LIVERPOOL CITY COUNCIL

Register Type	NNTT Reference Numbers
National Native Title Register	Nil.
Register of Native Title Claims	NC97/8, NC97/7
Unregistered Claimant applications	Nil.
Register of Indigenous Land Use Agreements	Nil.

I have included register extracts, map attachments and a NNTT Registers fact sheet to help you understand the search result.

Resolution of native title issues over land and waters.

Freecall 1800 640 501
www.nntt.gov.au

Please note that there may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed in the Federal Court may not appear on the Tribunal's databases.

If you need more information please call me on 1800 640 501.

Yours sincerely



Nakari Thorpe
Case Officer

Telephone (02) 9235 6320
Facsimile (02) 9235 5613
Email nakari.thorpe@nntt.gov.au

Encl

NATIONAL NATIVE
TITLE TRIBUNAL

Application Information and
Extract from the Register of Native Title Claims

Application Information

Application numbers: Federal Court number: NSD6061/98
NNTT number: NC97/8

Application name: Darug Tribal Aboriginal Corporation

Registration history: Registered from 12/05/1997 to 29/09/1999.
Registered from 13/12/2000.

NNTT map attached.

Register Extract (pursuant to s.186 of the Native Title Act 1993)

Application lodged with: National Native Title Tribunal

Date application lodged: 12/05/1997

Date claim entered on Register: 13/12/2000

Applicants: Angela Martin, Colin Rex Gale, Gordon William Morton

Address for service: Eddy Neumann
Eddy Neumann Lawyers
Level 1
255 Castlereagh Street
SYDNEY NSW 2000
Phone: (02) 9264 9933
Fax: (02) 9264 9966

Additional Information:
Not Applicable

Area covered by the claim:

Information identifying the boundaries of:

- a) the area covered by the application; and
- b) any areas within those boundaries that are not covered by the application.

(a) 18 x AO size colour maps (1 x locality & 17 x enlargements), 1 x A3 locality map and a 21 page tenure/parcel identifier produced by the Surveyor General's Department have been filed with the National Native Title Tribunal. The 21 page tenure/parcel identifier is "Attachment C".

(b) Subject to clauses (d) and (e) the area covered by the application excludes any land or waters covered by:

- (i) a schedule interest;

- (ii) a freehold estate;
- (iii) a commercial lease that is neither an agricultural lease nor a pastoral lease;
- (iv) an exclusive agricultural lease or an exclusive pastoral lease;
- (v) a residential lease;
- (vi) a community purpose lease;
- (vii) a lease dissected from a mining lease as referred to in s23B(2)(vii);
- (viii) any lease (other than a mining lease) that confers a right of exclusive use over particular land or waters;

which was validly vested or granted on or before 23 December 1996.

(c) subject to clauses (d) and (e) the area covered by the application excludes any area covered by the valid construction or establishment of any public work, where the construction or establishment of the public work commenced on or before 23 December 1996.

(d) Where the act specified in (b) and (c) falls within the provision of

- (i) s23B(9) - Exclusion of acts benefiting Aboriginal peoples or Torres Straight Islanders;
- (ii) s23B(9A) - Establishment of a national or state park;
- (iii) s23B(9B) - Acts where legislation provides for non-extinguishment;
- (iv) s23B(9C) - Exclusion of Crown to Crown grants; and
- (v) s23B(10) - Exclusion by regulation,

the area covered by the act is not excluded from this application.

(e) Where an act referred to in clauses 2 and 3 covers land or waters referred to in:

- s47 - Pastoral leases held by native title claimants;
- s47A - Reserves etc covered by claimant applications; and
- s47B - Vacant crown land covered by claimant applications,

the area covered by the act is not excluded from the application.

(f) Where an area is covered by a previous non-exclusive possession act (s 23F) the native title claim group does not claim the native title rights and interests set out in clause 1 of Attachment E to the exclusion of all others.

(g) The area covered by the application excludes land where native title has been extinguished at common law.

Persons claiming to hold native title:

The native title claim group comprises all the members of the Darug Tribal Aboriginal Corporation and their descendants

Registered native title rights and interests:

The following Native Title Rights & Interests were entered on the Register on 13/12/2000:

1. Subject to paragraphs 2 - 5 below the applicants claim the full and free enjoyment of the following native title rights in relation to area subject to application.

- (a) a right to possess, occupy, use and enjoy the claimed area
- (b) a right to make decisions about the use and enjoyment of the claimed area
- (c) a right of access to the claimed area
- (d) a right to control the access of others to the claimed area
- (e) a right to use and enjoy the resources of the claimed area
- (f) a right to control the use and enjoyment of others or resources of the claimed area
- (g) a right to trade in resources of the claimed area

(h) (right not registered)

(i) a right to maintain and protect places of importance under traditional laws, customs and practices in the claimed area

(j) (right not registered)

2. With respect to those parts of the area the subject of the application which are, or have been the subject of a previous non-exclusive possession act within the meaning of s23F of the NTA, the applicants claim the native title rights and interests set out in 1 above subject to the rights and interests created in the "non exclusive possession act" which are not inconsistent with the rights and interests claimed and, in the case of rights granted which are inconsistent with the rights and interests claimed, subject to any suspension of the native title rights and interests which those inconsistent rights and interests cause.

3. With respect to those parts of the area the subject of the application which are, or have been, the subject of

(a) a Category B intermediate period act within the meaning of s232C;

(b) a Category C intermediate period act within the meaning of s232D; or

(c) a Category D intermediate period act within the meaning of s232E;

the applicants claim the native title rights and interests set out in 1 above subject to the rights and interests created in the "non exclusive possession act" which are not inconsistent with the rights and interests claimed and, in the case of rights granted which are inconsistent with the rights and interests claimed, subject to any suspension of the native title rights and interests which those inconsistent rights and interests cause.

4. With respect to those parts of the area the subject of the application which are, or have been the subject of

(a) a Category B past act within the meaning of s230;

(b) a Category C past act within the meaning of s231; or

(c) a Category D past act within the meaning of s232;

the applicants claim the native title rights and interests set out in 1 above subject to the rights and interests created in the "non exclusive possession act" which are not inconsistent with the rights and interests claimed and, in the case of the rights granted which are inconsistent with the rights and interests claimed, subject to any suspension of native title rights and interests which those inconsistent rights and interests cause.

5. The native title rights and interests identified above do not extend to ownership of any minerals, petroleum or gas which are wholly owned by the Crown.

6. The native title rights and interests identified above do not include a claim for exclusive occupation and use of off shore areas as defined by s253.

Register attachments:

1. Tenure/Parcel Identifier (Available for inspection at the Sydney Registry of the Tribunal), Attachment C of the Application, 21 pages - A4, Attached 12/05/1997.

Note: The Register may, in accordance with s.188 of the Native Title Act 1993, contain confidential information that will not appear on the Extract.

NATIONAL NATIVE
TITLE TRIBUNAL

Application Information and
Extract from the Register of Native Title Claims

Application Information

Application numbers: Federal Court number: NSD6060/98
NNTT number: NC97/7

Application name: Gundungurra Tribal Council Aboriginal Corporation #6

Registration history: Registered from 29/04/1997.

Register Extract (pursuant to s.186 of the Native Title Act 1993)

Application lodged with: National Native Title Tribunal

Date application lodged: 29/04/1997

Date claim entered on Register: 29/04/1997

Applicants: Ms Elsie Stockwell, Ms Pamela Stockwell

Address for service: Eddy Neumann
Eddy Neumann Lawyers
Level 1
255 Castlereagh Street
SYDNEY NSW 2000
Phone: (02) 9264 9933
Fax: (02) 9264 9966

Additional Information:
Not Applicable

Area covered by the claim:

(a) Commencing at 150.52997 east longitude and 34.591636 south latitude, approximately 15.5 kilometres east south east of Moss Vale, the application traverses clockwise starting in a south-westerly direction, passing through points 2 to 36,765 of the following geographic coordinates. They are in decimal degrees and referenced to Australian Geodetic Datum 1984 (AGD84). These coordinates are based on the position of spatial reference data sourced by Land Information Centre, Department of Information Management and Technology, New South Wales as of 18 May 1999.

(b) Subject to clauses (d) and (e) the area covered by the application excludes any land or waters covered by:

- (i) a scheduled interest;
- (ii) freehold estate;

- (iii) a commercial lease that is neither an agricultural lease nor a pastoral lease;
- (iv) an exclusive agricultural lease or an exclusive pastoral lease;
- (v) a residential lease;
- (vi) a community purposes lease;
- (vii) a lease dissected from a mining lease as referred to in s23B(2)(vii);
- (viii) any lease (other than a mining lease) that confers a right of exclusive use over particular land or waters;

which was validly vested or granted on or before 23 December 1996.

(c) Subject to clauses (d) and (e) the area covered by the application excludes any area covered by the valid construction or establishment of any public work, where the construction or establishment of the public work commenced on or before 23 December 1996.

(d) Where the act specified in (b) and (c) falls within the provisions of

- (i) s23B(9) - Exclusion of acts benefiting Aboriginal peoples or Torres Strait Islanders;
- (ii) s23B (9A) - Establishment of a national or state park;
- (iii) s23B (9B) - Acts where legislation provides for non-extinguishment;
- (iv) s23B (9C) - Exclusion of Crown to Crown grants; and
- (v) s23B (10) - Exclusion by regulation,

the area covered by the act is not excluded from this application.

(e) Where an act referred to in clauses (b) and (c) covers land or waters referred to in:

- s47 - Pastoral leases held by native title claimants;
- s47A - Reserves etc covered by claimant applications; and
- s47B - Vacant crown land covered by claimant applications,

the area covered by the act is not excluded from the application.

(f) Where an area is covered by a previous non-exclusive possession act (s 23F) the native title claim group does not claim possession, occupation, use and enjoyment to the exclusion of all others.

(g) The area covered by the application excludes land where native title has been extinguished at common law.

(h) The area covered by the application excludes areas covered by prior Gundungurra claims filed with the National Native Title Tribunal being NC96/7, NC96/27, NC96/30, NC96/36 and NC97/4.

Persons claiming to hold native title:

The native title claim group comprises all members of the Gundungurra Tribal Council Aboriginal Corporation

Registered native title rights and interests:

The following Native Title Rights & Interests were entered on the Register on 23/06/2000:

1. Subject to (2) - (5) below, the full and free enjoyment of the following native title rights and interests area are claimed in relation to the land and waters the subject of the application:

- a. A right to possess, occupy, use and enjoy the claim area;
- b. A right to make decisions about the use and enjoyment of the claim area;
- c. A right of access to the claimed area;
- d. A right to control the access of others to the claimed area;
- e. The right to control the use and enjoyment of others of resources of the claimed area.
- f. (Right not registered)
- g. (Right not registered)
- h. (Right not registered)

2. With respect of those parts of the area the subject of the application which are, or have been, the subject of a previous non-exclusive possession act within the meaning of s 23F of the Native Title Act 1993, the native title rights and interests area set out in (1) are claimed subject to the rights and interests created in the 'non-exclusive possession act' which are not inconsistent with the rights and interests claimed and, in the case of rights granted which are inconsistent with the rights and interests claimed, subject to any suspension of the native title rights and interests which those inconsistent rights and interests cause.

3. With respect to those parts of the area the subject of the application which are, or have been, the subject of:

- a. a category B intermediate period act within the meaning of s232C of the Native Title Act 1993;
- b. a category C intermediate period act within the meaning of s232D of the Native Title Act 1993;
- c. a category D intermediate period act within the meaning of s232E of the Native Title Act 1993;

the native title rights and interests claimed are those set out in (1) above subject to the rights and interests created in the non-exclusive possession act which are not inconsistent with the rights and interests claimed and, in the case of any rights granted which are inconsistent with the rights and interests claimed, subject to any suspension of the native title rights and interests which those inconsistent rights and interests cause.

4. With respect to those parts of the area of the application which are, or have been, the subject of:

- a. a category B past act within the meaning of s230 of the Native Title Act 1993;
- b. a category C past act within the meaning of s231 of the Native Title Act 1993;
- c. a category D past act within the meaning of s232 of the Native Title Act 1993;

the native title rights and interests claimed area those set out in (1) above subject to the rights and interests created in the non-exclusive possession act which are not inconsistent with the rights and

interests claimed and, in the case of any rights granted which are inconsistent with the rights and interests claimed, subject to any extinguishment or suspension of the native title rights and interests which those inconsistent rights and interests cause.

5. The native title rights and interests identified above do not extend to ownership of any minerals, petroleum or gas which are wholly owned by the Crown.

6. The native title rights and interests identified above do not include a claim for exclusive occupation and use of offshore areas as defined by s253 of the Native Title Act 1993.

Register attachments:

1. Plan of Application Area, Attachment C of the Application, 1 page - A4, Attached 29/04/1997.

Note: The Register may, in accordance with s.188 of the Native Title Act 1993, contain confidential information that will not appear on the Extract.