6.0 Assessment of cultural significance

6.1. Introduction to the assessment process

The presence of archaeological remains does not necessarily equate to research potential or archaeological significance. The nature of the archaeological evidence and the information that it may provide must be considered when making decisions about the management of archaeological sites. An assessment of significance seeks to understand and establish the importance or value that a place, site, or item may have to the community. The concept of cultural significance is intrinsically connected to the physical fabric of an item or place, its location, setting and relationship with other items in its surrounds. The criteria for evaluating cultural heritage value are generally applied to sites, places or items that have tangible historic structures or visible relics, or where there is general understanding of the extent of the historic resources. Archaeological deposits can also offer types of information that may not always be available through other sources. The contribution they can make to our understanding of a place of past human activities may also be of cultural heritage significance.

The Australia ICOMOS *Charter for the conservation of places of cultural significance* (the Burra Charter) was formulated in 1979 and most recently revised in 1999. It is the standard adopted by most heritage practitioners in Australia. The Burra Charter defines five central categories for the assessment of significance of a place, item or site:

- Historical
- Aesthetic
- Social
- Scientific/Technical
- Other (rare or representative).

These categories provide the basis for many of the criteria used by the States and Territories for the assessment of significance of a heritage place, item or site.

6.2. Criteria for the assessment of Aboriginal cultural heritage

The NSW DECC assessment criteria shown in Table 6-1 are based on the Burra Charter and have been adapted by the NSW DECC to address Aboriginal archaeological and cultural heritage values. It is important to note, however, that the determination of Aboriginal cultural heritage values cannot be adequately conducted without the input of the relevant Aboriginal stakeholders.

Table 6.1 Criteria for assessment of Aboriginal cultural heritage

Aboriginal heritage values based on the Burra Charter
Social value (sometimes termed *Aboriginal value*) refers to the spiritual, traditional, historical or contemporary associations and attachments which the place or area has for the present-day Aboriginal community. Places of social significance have associations with contemporary community identity. These places can have associations with tragic or warmly remembered experiences, periods, or events. Communities can experience a sense of loss should a place of social significance be damaged or destroyed. These aspects of heritage significance can only be determined through consultative processes with one or more Aboriginal communities.
Historic value refers to the associations of a place with a person, event, phase, or activity of importance to the history of an Aboriginal community. Historic places may or may not have physical evidence of their historical importance (such as structures, planted vegetation or landscape modifications). Gaining a sufficient understanding of this aspect of significance will often require the collection of oral histories and archival or documentary research, as well as field documentation. These places may have 'shared' historic values with other (non-Aboriginal) communities. Places of post-contact Aboriginal history have generally been poorly recognised in investigations of Aboriginal heritage, and the Aboriginal involvement and contribution to important regional historical themes is often missing from accepted historical narratives.
Scientific value refers to the importance of a landscape, area, place, or object because of its archaeological and/or other technical aspects. Assessment of scientific value is often based on the likely research potential of the area, place, or object and will consider the importance of the data involved, its rarity, quality or representativeness and the degree to which it may contribute further substantial information.

Aesthetic value refers to the sensory, scenic, architectural, and creative aspects of the place. It is often closely linked with social values and may include consideration of form, scale, colour, texture, and material of the fabric or landscape, and the smell and sounds associated with the place and its use.

These aspects of the heritage significance of a place or object are commonly inter-related. As all assessments of heritage values occur within a social and historical context, all potential heritage values will have a social or Aboriginal community heritage component.

6.3. Aboriginal cultural heritage values in the study area

6.3.1 Social value

The Quakers to Vineyard landscape once formed a part of a highly significant region of social and cultural importance to Aboriginal people. Archaeological sites identified in this study provide an important link to this once extensive cultural landscape and are of high social value to Aboriginal people today.

Cultural statements regarding the Aboriginal resource within the study area are located in Appendix D.

6.3.2 Historic value

No historic associations with 'place' were identified during the course of the review of historic records and archives.

6.3.3 Scientific value

Considered individually, archaeological sites QV1, QV2, QV3, QV4, QV5, QV6, and QV7, hold little scientific value. These surface finds do not contribute significantly to the existing archaeological record concerning Aboriginal occupation on the Cumberland Plain, as they simply inform a basic presence or absence of sites in the area. However, archaeological sites QV1, QV2, QV6 and QV7 are associated with areas of PAD QVP and V2. As such, this association has the potential to further inform the archaeological context of these sites.

Archaeological sites QV3 and QV4 are associated with an extensive occupation area, with sub surface deposit. However, as this site has been tested and recorded no further information can be gained from these finds.

The PADs identified as a result of this study have the potential to hold archaeological material in its primary context. As such they have the potential to generate meaningful information which could expand the present knowledge of past Aboriginal land use, site distribution, and movement through the landscape and are therefore considered to be of moderate to high significance. Whilst a large body of information already exists in relation to the Aboriginal archaeological sites of the Cumberland Plain, continuing archaeological excavation works are starting to provide a more detailed picture of both intra and inter site variability. Test excavations across the Cumberland Plain are beginning to reveal changes in raw material use and treatment through time and distinct inter site spatial patterning according to the type of raw materials chosen.

For instance, models developed for the Cumberland Plain are informed to a large extent by surface artefact recordings, whereby silcrete forms the predominant raw material choice. Test excavations in the Parramatta region, suggest that this overview of raw material use for all Cumberland plain sub regions, may in fact be erroneous, as quartz and silicified tuff were found to be co-dominant and sometimes the dominant raw material in excavated artefact assemblages (Casey and Lowe 2004:32). There are still substantial data gaps concerning relationships between sites across the Cumberland Plain that can only be addressed through the ongoing assessment of PADs such as those identified in this study. This will not only continue to inform the record of past Aboriginal occupation of the region, but provide more detailed and accurate information regarding, changes in technology and occupation through time, and spatial relationships between sites, which can not be accurately discerned through surface artefact recordings.

6.3.4 Aesthetic value

Since no social heritage, cultural heritage items or historic associations were identified during the course of the assessment, the study area has no specific aesthetic Aboriginal heritage value

7.0 Statement of heritage impact

7.1. Requirements of a statement of heritage impact

The objective of a SoHI is to evaluate and explain how a proposed development, rehabilitation or land use change will affect the value of a heritage item and/or place. A SoHI should also address how the heritage value of the item/place can be conserved or maintained, or preferably enhanced by the proposed activity.

7.2. Proposed works

The Project would involve the construction of a duplicate rail line within and adjacent to the current rail corridor between the Quakers Hill and Vineyard stations.

7.3. Impact assessment

The following section measures the likely level of impact of the Project on the potential archaeological remains that are considered to be located within the construction footprint.

Is the development sited on any known, or potentially significant, archaeological deposits?

The study area contains seven Aboriginal finds, nine areas of PAD and one potential conservation area. The areas of PAD have the potential to contain sub surface Aboriginal archaeological remains. Archaeological remains are predicted to be situated within the biomantle of the Blacktown soil landscape in PAD's V1, V2, S1, S2, QVP and Q4, and at various depths from below the immediate ground surface within the alluvial South Creek and Berkshire Park soil landscapes at PADs V2, V3, Q1, Q2 and Q3.

Past land use activities, which included the original construction and ongoing maintenance of the existing rail corridor, urban development, road construction and maintenance and drainage management works are likely to have substantially affected the integrity of the sub-surface deposits within the rail corridor and areas outside of the rail corridor identified with low heritage constraint.

Works to be undertaken as part of the Project will impact seven Aboriginal finds and are also likely to encounter undisturbed and/or partially disturbed archaeological remains within the areas of PAD identified as Q1, Q2, Q3, Q4, QVP, S1, S2, V1, V2 and V3.

Works to be undertaken as part of the Project are unlikely to encounter archaeological deposits within the existing rail corridor, identified with nil heritage constraint, or within areas identified with low heritage constraint.

What impact will the proposed development have on any known, or potentially significant, archaeological deposits?

Excavation works associated with the proposed works will involve removal of topsoil in all identified PAD locations and disturbance to all seven surface Aboriginal finds. The proposed excavation works would remove the identified surface finds and the portion of each PAD within the impact zone.

Can the retention of known or potentially significant deposits outside the development area be used to mitigate the impact of the proposed works?

All of the identified PADs are estimated to extend outside the extent of the development area; however, the extent and integrity of the PADs beyond the impact zone has not been formally assessed. Without formal assessment of the potential PAD areas outside the impact zone and binding agreements to preserve those areas in the long term; their assumed presence cannot be used to mitigate the destruction of the PADs that have been formally identified within the development area

8.0 Management recommendations

8.1. Discussion

The following section outlines recommended measures for the management for identified heritage items, and mitigation measures in relation to the proposed development of the site, where appropriate. As a general rule, impacts on Aboriginal archaeological and cultural heritage places should be avoided altogether, or minimised as much as is practically possible, with mitigation measures used to offset site destruction as a last resort.

Recommendation 1

Aboriginal archaeological sites QV1, QV2, QV3, QV4, QV5, QV6, and QV7 and should be registered on the DECC AHIMS database.

Explanation:

Under Section 91 of the Act it is a requirement to notify the DECC Director-General of the location of an Aboriginal object. Identified Aboriginal items and sites are registered with the NSW DECC on the Aboriginal Heritage Information Management System (AHIMS).

Site Cards will be submitted to the DECC by the consultant

Recommendation 2

PAD's V1, V2, V3, S1, S2, Q1, Q2, Q3, Q4 and QVP will need to be registered on the DECC AHIMS database in the event that a S87 Preliminary Research Permit is applied for, or if approval is given under Part 3A of the EP&A Act, a testing program is implemented.

Explanation:

Through consultation with DECC Sydney Region all Aboriginal PADs are requested to be registered on the AHIMS database in the event that theses areas are to be subject to a testing program.

Recommendation 3

Areas of high heritage constraint (see Figure 5-9) represent potential conservation zones that have been identified as areas of PAD with associated surface artefacts (QV- Complex).

It is recommended that development is avoided in these areas and consideration to amending the proposed development design be given.

Should amendments to the development design not be feasible, it is recommended that archaeological test excavations are carried out in areas of high heritage constraint. The test excavations will need to be carried out in accordance with the requirements of Section 87 of the *National Parks and Wildlife Act 1974*. **Note**: A S87 Preliminary Research Permit will not be required from DECC for the Project if project approval is granted under Part 3A of the EP&A Act. However the Director General, Department of Planning is likely to require any works should conform to the principals and guidelines which this legislation provides.

Recommendation 4

Areas of moderate heritage constraint (see Figures 5-8 to 5-9 and 5-11 to 5-12) represent areas that have been identified as areas of PAD (see Figures 5-2 to 5-4).

It is recommended that test excavations are carried out for areas of moderate Aboriginal archaeological potential, identified as V1, V2, V3, S1, S2 Q1, Q2, Q3 and Q4. These test excavations will need to be carried out in accordance with the requirements of Section 87 of the *National Parks and Wildlife Act 1974*. **Note**: A S87 Preliminary Research Permit will not be required from DECC for the Project if project approval is granted under Part 3A of the EP&A Act. However the Director General, Department of Planning is likely to require any works should conform to the principals and guidelines which this legislation provides.

Recommendation 5

Surface archaeological sites QV3, QV4 and QV5 (see Figures 5-3 and 5-4), located in areas of low heritage constraint (see Figures 5-8 and 5-12) should be collected / relocated and maintained through a care and control agreement. This should be carried out in accordance with the requirements of Section 87 of the *National Parks and Wildlife Act 1974*. **Note**: A S87 Collection Permit will not be required from DECC for the Project if project approval is granted under Part 3A of the EP&A Act. However the Director General, Department of Planning is likely

to require any works should conform to the principals and guidelines which this legislation provides.

Recommendation 6

Areas of low heritage constraint (see Figures 5-8 to 5-12) which do not contain archaeological sites require no further archaeological mitigation measures.

Recommendation 7

Aboriginal stakeholder groups have requested that a cultural officer be present for earth moving works in areas not marked for further archaeological management.

Recommendation 8

No mitigation or management is required for the nil heritage constraints zone.

8.2. Authorship

This report was produced collaboratively, by a number of members of Heritage Concepts staff, including Charles Parkinson, Cornelia de Rochefort, Geordie Oakes, Meg Whithers, and Lori Sciusco The site inspection was carried out by Cornelia de Rochefort, Meg Withers, Peter Howard and Geordie Oaks (Heritage Concepts), with the participation of Phil Kahn (DLALC), Leanne Watson (DCAC), Justine Coplin (DCAC) Gordon Morton (DACHA), Celestine Everingham (DACHA) Ron Workman (DTAC), Gordon Workman (DTAC, later affiliated with DLO), and Jamie Workman (DLO).

8.3. Acknowledgements

Heritage Concepts would like to thank the following individuals and/or organisation for contributing to the completion of this project:

- Sally Crowther – PB
- Justine Coplin – DCAC
- Angelique Easton - PB
- Celestine Everingham - DACHA
- Paul Greenhalgh – PB
- David Gordon – DECC
- Dennis Hardy – DTAC
- Cassandra Hay - PB
- Phil Kahn – DLALC
- Sandra Lee – DTAC
- Gordon Morton – DACHA
- Leanne Watson – DCAC
- Gordon Workman – DLO
- Jamie Workman – DLO
- Ron Workman – DTAC.

9.0 Bibliography

Attenbrow, V. (2002) Sydney's Aboriginal Past: Investigating the Archaeological and Historic Records. UNSW Press: NSW.

Attenbrow, V. (2004) *What's changing: Population Size or Land-Use Patterns? The archaeology of Upper Mangrove Creek, Sydney Basin*. Terra Australis 21, Pandanus Book, Research School of Pacific and Asian Studies, ANU.

Attenbrow, V. and D. Steele (1995) Fishing in Port Jackson, New South Wales: more than met the eye. In: *Antiquity* 69: 47-60.

Bannerman, S. M. & P. A. Hazelton (1990) *Soil Landscapes of the Penrith 1:100 000 Sheet.* Soil Conservation Service of New South Wales.

Benson, D. (1981) *Explanatory Notes for the Vegetation of the Penrith 1:100, 000 Map Sheet*. Royal Botanic Gardens, Sydney.

Bowler, J.M., R. Jones, H. Allen, and A.G. Thorne (1970) Pleistocene human remains from Australia: A living site and human cremation from Lake Mungo, western New South Wales. *World Archaeology* 2:39-60.

Bowdler, S. (1976) Hook, line and dillybag: an interpretation of an Australian coastal shell midden. *Mankind* 10:248-258.

Brayshaw McDonald Pty Ltd Consultant Archaeologists, (1987) *Archaeological Investigation of Open Site Vineyard 1 Western Cumberland Plains*, Report prepared for State Rail Authority of NSW.

Casey and Lowe (2004) *Archaeological Test Excavation at 1 Smith Street (Site SSP1) Parramatta, NSW.* Report prepared for Sydney Water, NSW.

Corkhill, T. (1999) *Here and there. Links between stone sources and Aboriginal archaeological sites in Sydney, Australia.* M.Phil thesis. Department of Archaeology. Sydney University.

Dallas, M (1982) *An Archaeological Survey at Riverstone, Schofields and Quakers Hill, NSW*, Report prepared for Land Commission of NSW.

Dallas, M. (1981) *An Archaeological Survey of the South Penrith Development Site*, Report prepared for Housing Commission of NSW.

Darwala-Lia, (1999) Keebah Mudjil – *Riverstone Land Release Area Aboriginal Cultural Heritage Assessment*, Report prepared for Blacktown City Council.

David, B., and D. Chant 1995. Rock art and regionalization in north Queensland prehistory. *Memoirs of the Queensland Museum* 37:357-528.

David, B., and H. Lourandos (1997) 37,000 Years and more in tropical Australia: investigating long-term archaeological trends in Cape York Peninsula. *Proceedings of the Prehistoric Society* 63:1-23.

David, B., and H. Lourandos (1998) Rock art and socio-demography in northeastern Australian prehistory. *World Archaeology* 30:193-219.

Department of Lands © (2000) Topographic & Orthophoto Map 1:25,000: Riverstone 9030-1S 3rd Edition.

Gobert, V. (1976) Nepean Cainozoic sediments and Mines Department Bore Core Library. 25th International Geological Congress. Excursion Guide 22B

Gould, R.A. (1969) Puntutjarpa Rockshelter: A Reply to Messrs. Glover and Lampert. *Archaeology in Oceania* 4:229-237.

Hale, H.M. & N.B. Tindale (1930) Notes on some human remains in the Lower Murray Valley, South Australia. *Records of the South Australian Museum* 4:145-218.

Haglund, L. and J, Stockton (1983) *Riverstone Meatworks,* Report prepared for Don Fox Planning Pty. Limited.

Helen Brayshaw Heritage Consultants, (2002) *Riverstone Trotting Track Garfield Road West Blacktown LGA: Indigenous Heritage Assessment,* Report prepared for Blacktown City Council.

Hiscock, P.,(2002) Pattern and context in the Holocene proliferation of backed artefacts in Australia. *Archaeological Papers of the American Anthropological Association* 12:163-177.

Hiscock, P. and V. Attenbrow (1998). Early Holocene backed artefacts from Australia. *Archaeology in Oceania* 33:49-62.

Jo McDonald CHM Pty Ltd (1999) Survey for Archaeological Sites. Proposed Rouse Hill Stage 2 Infrastructure Works at Rouse Hill, Parklea and Kellyville, NSW (Mark II) Survey. Report prepared for GHD on behalf of RHIC.

Jo McDonald CHM Pty Ltd (2001) *Salvage Excavation of six sites along Caddies, Second Ponds, Smalls and Cattai Creeks in the Rouse Hill Development Area, NSW*. Unpublished report to Rouse Hill Infrastructure Consortium, held by NSW NPWS, Sydney.

Jo McDonald CHM Pty Ltd (2002*a*) Rouse Hill infrastructure Project (Stage 3) Development areas 2, 5, 20, 22 and 24B Second Ponds Creek area Archaeological assessment of Indigenous and European Heritage Issues. Report prepared for RHI Pty Ltd.

Jo McDonald Cultural Heritage Management Pty Ltd, (2002*b*) *Archaeological Assessment of Indigenous Cultural Heritage Values, Rose Hill Development Area Sewerage Master Plan*. Report prepared for GHD.

Jo McDonald (2003*a*) The Excavations at the Old RTA Building 109-113 George Street, Parramatta, NSW. Report prepared for Landcom.

Jo McDonald Cultural Heritage Management Pty Ltd, (2003*b*) *Aboriginal Heritage Assessment of Lots 9 and 12 DP860753 and Lot 21 DP830552,* Report prepared for Bowdens Group.

Jo McDonald (2005) Archaeological Salvage Excavation of site RTA-G1 at 109-113 George Street Parramatta, NSW. Report prepared for Landcom.

Karskens G, (1991) *Holroyd: A Social History of Western Sydney*, New South Wales University Press, Sydney.

Kohen, K. (1985*) An Archaeological Survey of Industrial Land in the City of Blacktown ,* Report prepared for Blacktown City Council.

Kohen, J. (1986) *An Aboriginal Study of Aboriginal Sites within the City of Blacktown*, Prepared For Blacktown City Council.

Kohen, J.L., E. Stockton, M. Williams, G. Cowling, L. Scott-Virtue and C. Sumner (1981) Where plain and plateau meet: recent excavations at Shaws Creek Rockshelter, eastern NSW. *Australian Archaeology* 13:63-68.

Lourandos, H. (1980) Change or stability? Hydraulics, hunter-gatherers and population in temperate Australia. *World Archaeology* **11:**245-266.

Lourandos, H. (1983) Intensification: a late Pleistocene-Holocene archaeological sequence from southwestern Victoria. *Archaeology in Oceania* 18:81-94.

Lourandos, H. (1984) Changing perspectives in Australian prehistory: a reply to Beaton. *Archaeology in Oceania* 19:29-33.

Lourandos, H. (1985) Problems with the interpretation of late Holocene changes in Australian prehistory. *Archaeology in Oceania* 20:37-39.

Lourandos, H. (1993) Hunter-gatherer cultural dynamics: long- and short-term trends in Australian prehistory. *Journal of Archaeological Research* 1:67-88.

Lourandos, H. (1997) *Continents of hunter-gatherers. New perspectives in Australian prehistory*. Cambridge University Press, Cambridge.

Lourandos, H., and A. Ross (1994) The great intensification debate: its history and place in Australian archaeology. *Australian Archaeology* 39:54-63.

McCarthy, F.D. (1958) Cultural succession in south eastern Australia. *Mankind* 5:177-190.

McCarthy, F.W. (1976) *Australian Aboriginal Stone Implements* The Australian Museum Trust, Sydney.

McDonald, J. (1986) *Preliminary Archaeological Reconnaissance of the Proposed Schofields Regional Depot Plumpton, NSW*, Report prepared for Metropolitan Waste Disposal Authority.

McDonald, J.J. and Rich, E. (1993) *Archaeological Investigations for the RHIP (Stage 1) Works along Caddies, Smalls and Second Ponds Creeks, Rouse Hill and Parklea, Final report of test excavation programme,* Report to RH (Stage 1) Pty Ltd, Sydney, held by NSW NPWS.

McNiven, I.J.(2000) Backed to the Pleistocene. *Archaeology in Oceania* 35:48-52.

Mulvaney, J. & E.B. Joyce (1965) Archaeological and Geomorphological Investigations on Mt. Moffatt Station, Queensland, Australia. *Proceedings of the Prehistoric Society* 31:147-212.

Mulvaney, J. & J. Kamminga (1999). *Prehistory of Australia*. Allen and Unwin, Sydney

Nanson, G.C., Young, R.W., Stockton and E. Stockton (1987) Chronology and Palaeoenvironment of the Cranebrook Terrace (near Sydney) containing artefacts more than 40,000 years old. *Archaeology in Oceania* 22(2):72-78.

Nanson, G.C., Cohen, T.J., Doyle, C.J. and D.M. Price (2003) Alluvial evidence of major late-Quaternary climate and flow regime changes on the coastal rivers of New South Wales, Australia. In *Palaeohydrology: understanding global change*. Edited by Gregory, K. and C. Benito, Wiley, Chichester, pp.233-258.

Parsons Brinckerhoff (2008) Technical *paper 5 Quakers Hill to Vineyard Duplication Biodiversity Assessment*. Report for Transport infrastructure Development Corporation

Slack, M.J., Fullagar, R.L.K., Field, J.H. and A. Border (2004) New Pleistocene ages for backed artefact technology in Australia. *Archaeology in Oceania* 39:131-137.

Stockton, E. & G.C. Nanson (2004) Cranebrook Terrace revisited. *Archaeology in Oceania* 39(1):59.

Smith, L. (Brayshaw & Associates Consultant Archaeologist) (1986) *Archaeological Survey of the Proposed Daruk Training Centre, Near Penrith, NSW,* Report for Crooks, Mitchell, Peacock, Steward Pty Limited.

Smith, L. (1988) *Interim Report: Site Survey and Site Analysis on the Northern Cumberland Plain*, Report prepared for NSW National Parks and Wildlife Service.

Tench, W. (1793) A narrative of the expedition to Botany Bay and a complete account of the settlement at Port Jackson by Watkin Tench. Reissued by Empire Book Association, England 1986.

Therin, M. (2003a) *Aboriginal Heritage Assessment for the Proposed Upgrade of Windsor Road Between Mile End Road and Boundary Road, Vineyard,* Report prepared for Hyder Consulting.

Tindale, N.B. (1957) Culture Succession in South Eastern Australia from Late Pleistocene to the Present. *Records of the South Australian Museum* 13:1-49.

Tindale, N.B.(1968) Nomenclature of Archaeological Cultures and Associated Implements in Australia. *Records of the South Australian Museum* 15:615-640.

Tindale, N.B. & B.G. Maegraith (1931) Traces of an extinct [A]boriginal population on Kangaroo Island. *Records of the South Australian Museum* 4:275-289.

Turbet, P. (2001) *The Aborigines of the Sydney District: before 1788*, 2nd ed., Kangaroo Press, Sydney.

Appendix A Supplementary Assessment

Introduction

Parsons Brinkerhoff, on behalf of TIDC, commissioned Heritage Concepts Pty Ltd to prepare a brief supplementary assessment of the proposed construction compounds associated with the Quakers Hill to Vineyard rail duplication project. This assessment outlines the level of risk posed to the Indigenous heritage.

Development Proposal

Eleven construction compounds are proposed for the Quakers to Vineyard rail duplication project. The compounds will contain demountable buildings, storage containers, fencing, hardstands and parking for light vehicles.

Risk Assessment

This risk assessment is based on the background material collated in section 4 and the site survey and findings reported in section 5 of this report. Only one compound site (compound 11) was inspected throughout the course of the site survey and as such any statements made regarding the potential heritage value for the remaining compound sites is predictive in nature. The predictive statements tabulated in the table below describe potential impacts to surface artefactual material only. Figures 10-1 to 10-5 show the location of each construction compound and the associated level of risk for the potential occurrence of surface artefactual material.

Compound Site	Site Description	Level of Disturbance	Potential for surface artefactual material	Level of Risk
1	Built urban environment – asphalt and gravel car park.	Moderate to High	Low	Low
2	Built urban environment – bitumen road.	High	Nil	Nil
3	Site is not level. The area is comprised of large artificial earthen mounds	Moderate to High	Low	Low
4	Cleared pasture land, with concrete and bitumen hardstand and three built structures.	Low to Moderate	Nil	Nil
5	Cleared pasture land.	Low	Moderate	Moderate
6	Cleared pasture land with two built structures.	Low to Moderate	Moderate	Moderate
7	Built Urban Environment, comprising an existing car park site.	High	Nil	Nil
8	Cleared pasture land.	Low to Moderate	Moderate	Moderate
9	Built urban environment comprising the existing Riverstone station.	High	Nil	Nil
10	Cleared pasture land with evidence of possible gravel ground base.	Moderate	Moderate	Moderate
11	Cleared pasture Land. The area has been recently cleared and graded. Several storage containers are present at the site.	High	Low	Low

Management Recommendations

Recommendation 1

Areas of nil heritage risk require no further mitigation measures.

Recommendation2

In order to protect any potential surface artefactual material in areas of low and moderate heritage risk, the compound sites should be covered with geo-fabric and then covered with an inert material before the installation of any site compound structures.

Recommendation 3

Areas of low and moderate heritage risk may not be subject to the clearance of vegetation or disturbance to the existing soil surface. Should vegetation clearance or earth works be required at any of the compound sites identified with low or moderate heritage risk, an Aboriginal heritage assessment in consultation with the relevant Aboriginal stakeholder groups would need to be carried out.