10. STATUTORY CONTEXT

The Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act), its regulations, schedules and guidelines provides the context and requirement for environmental impact assessments to be undertaken during land use planning (NPWS 1997).

Part 3A of the Environmental Planning and Assessment Act 1979

On 9 June 2005 the NSW Parliament passed the Environmental Planning and Assessment Amendment (Infrastructure and Other Planning Reform) Bill. The Act was assented to on 16 June 2005 and commenced on 1 August 2005. This amendment contains key elements of the NSW Government's planning system reforms and makes major changes to both plan-making and major development assessment.

A key component of the amendments is the insertion of a new Part 3A (Major Projects) into the EP&A Act. The new Part 3A consolidates the assessment and approval regime for all major developments which previously were addressed under Part 4 (Development Assessment) or Part 5 (Environmental Assessment).

Part 3A applies to all major State government infrastructure projects, developments previously classified as State significant and other projects, plans or programs of works declared by the Minister. The amendments aim to provide a streamlined assessment and approvals regime and also to improve the mechanisms available under the EP&A Act to enforce compliance with approval conditions of the Act.

The current report has been compiled for inclusion within an Environmental Assessment Report.

Under the terms of Part 3A of the Environmental Planning and Assessment Act 1979 the following authorizations are not required for an approved project (and accordingly the provisions of an Act that prohibit an activity without such an authority do not apply):

- a permit under section 87 or a consent under section 90 of the <u>National Parks and Wildlife</u> <u>Act 1974;</u>
- an approval under Part 4, or an excavation permit under section 139, of the <u>Heritage Act</u> <u>1977</u>.

11. SIGNIFICANCE ASSESSMENT

The information provided in this report and the assessment of significance provides the basis for the proponent to make informed decisions regarding the management and degree of protection which should be undertaken in regard to the Aboriginal objects and Non-Indigenous items located within the study area.

11.1 Significance Assessment Criteria - Indigenous

The NPWS (1997) defines significance as relating to the meaning of sites: "meaning is to do with the values people put on things, places, sites, land". The following significance assessment criteria is derived from the relevant aspects of ICOMOS Burra Charter and NSW Department of Urban Affairs and Planning's 'State Heritage Inventory Evaluation Criteria and Management Guidelines'.

Aboriginal archaeological sites are assessed under the following categories of significance:

- o cultural value to contemporary Aboriginal people,
- o archaeological value,
- o aesthetic value,
- \circ representativeness, and
- \circ educational value.

Aboriginal cultural significance

The Aboriginal community will value a place in accordance with a variety of factors including contemporary associations and beliefs and historical relationships. Most heritage evidence is highly valued by Aboriginal people given its symbolic embodiment and physical relationship with their ancestral past.

Archaeological value

The assessment of archaeological value involves determining the potential of a place to provide information which is of value in scientific analysis and the resolution of potential archaeological research questions. Relevant research topics may be defined and addressed within the academy, the context of cultural heritage management or Aboriginal communities. Increasingly, research issues are being constructed with reference to the broader landscape rather than focusing specifically on individual site locales. In order to assess scientific value sites are evaluated in terms of nature of the evidence, whether or not they contain undisturbed artefactual material, occur within a context which enables the testing of certain propositions, are very old or contain significant time depth, contain large artefactual assemblages or material diversity, have unusual characteristics, are of good preservation, or are a part of a larger site complex. Increasingly, a range of site types, including low density artefact distributions, are regarded to be just as important as high density sites for providing research opportunities.

Representativeness

Representative value is the degree to which a "class of sites are conserved and whether the particular site being assessed should be conserved in order to ensure that we retain a representative sample of the archaeological record as a whole" (NPWS 1997). Factors defined by NPWS (1997) for assessing sites in terms of representativeness include defining variability, knowing what is already conserved and considering the connectivity of sites.

Educational value

The educational value of cultural heritage is dependent on the potential for interpretation to a general visitor audience, compatible Aboriginal values, a resistant site fabric, and feasible site access and management resources.

Aesthetic value

Aesthetic value relates to aspects of sensory perception. This value is culturally contingent.

11.2 Significance Value of the Aboriginal Objects in the Study Area

The scientific significance of the recorded Aboriginal artefact locales in the project area are listed below in Table 8:

SU	Locale	Artefact	Predicted	Integrity	Subsurface	Subsurface	Significance	Criteria
		Number	Density		potential at site	potential away from site		
SU1	Ll	1	very low	moderately disturbed: ploughed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU2	L1	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU8	L1	1	very low	moderately disturbed	No	Yes	Low local scientific significance	Common site type; not a common implement Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU9	L1	2	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU10	L1	4	low; possible single knapping event	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU10	L2	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU10	L3	3	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common site type; however one artefact not a common implement Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU12	Ll	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential:

SU	Locale	Artefact Number	Predicted Density	Integrity	Subsurface potential at site	Subsurface potential away from site	Significance	Criteria
								predicted very low artefact
SU12	L2	3	very low	moderately disturbed	Yes	Yes	Low local scientific significance	density in Survey Unit Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU12	L3	3	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU12	L4	2	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU12	L5	2	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU12	L6	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU13	Ll	1	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low/moderate artefact density in majority of Survey Unit
SU13	L2	1	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low/moderate artefact density in majority of Survey Unit
SU13	L3	4	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low/moderate artefact density in majority of Survey Unit
SU13	L4	5	low	moderately disturbed	No	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value

SU	Locale	Artefact Number	Predicted Density	Integrity	Subsurface potential at site	Subsurface potential away from	Significance	Criteria
						site		Low research potential: predicted low/moderate artefact density in majority of Survey Unit
SU13	L5	44	low moderate	moderately disturbed	Yes	Yes	Moderate local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Moderate research potential: predicted low/moderate artefact density at locale
SU13	L6	5	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low/moderate artefact density in majority of Survey Unit
SU13	L7	2	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low/moderate artefact density in majority of Survey Unit
SU13	L8	6	low moderate	moderately disturbed	Yes	Yes	Moderate local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Moderate research potential: predicted low/moderate artefact density at locale
SU14	Ll	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU14	L2	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU15	L1	2	very low	highly disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact density in majority of Survey Unit
SU15	L2	8	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact density in majority of Survey Unit

SU	Locale	Artefact Number	Predicted Density	Integrity	Subsurface potential at site	Subsurface potential away from site	Significance	Criteria
SU15	L3	2	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact density in majority of Survey Unit
SU15	L4	1	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact density in majority of Survey Unit
SU15	L5	1	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact density in majority of Survey Unit
SU16	L1	5	low	highly disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU16	L2	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU16	L3	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU16	L4	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU16	L5	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU16	L6	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact

SU	Locale	Artefact Number	Predicted Density	Integrity	Subsurface potential at	Subsurface potential	Significance	Criteria
		Tumber	Density		site	away from site		
								density in Survey Unit
SU16	L7	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU16	L8	7	low	moderately disturbed	No	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU17	L1	4	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU17	L2	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU19	L1	3	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact density in Survey Unit
SU19	L2	50 + on surface	low/ moderate	moderately disturbed	Yes	Yes	Moderate local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Moderate research potential: predicted low/moderate artefact density at locale
SU19	L3	7	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact density in Survey Unit
SU19	L4	1	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact density in Survey Unit
SU19	L5	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact density in Survey Unit

SU	Locale	Artefact Number	Predicted Density	Integrity	Subsurface potential at site	Subsurface potential away from site	Significance	Criteria
SU19	L6	1	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact density in Survey Unit
SU19	L7	1	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact density in Survey Unit
SU21	L1	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU21	L2	7	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU23	L1	1	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact density in Survey Unit
SU35	L1	1	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low/moderate artefact density in Survey Unit
SU35	L2	11	low moderate	moderately disturbed	Yes		Low moderate local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low/moderate research potential: predicted low/ moderate artefact density in Survey Unit
SU35	L3	27	low moderate	moderately disturbed	Yes	Yes	Low moderate local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low/moderate research potential: predicted low/ moderate artefact density in Survey Unit
SU36	L1	6	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low artefact

SU	Locale	Artefact Number	Predicted Density	Integrity	Subsurface potential at site	Subsurface potential away from site	Significance	Criteria
								density in Survey Unit
SU38	L1	3	low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted low/moderate artefact density in Survey Unit
SU38	L2	10 50+	low moderate	moderately disturbed	Yes	Yes	Low moderate local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low/moderate research potential: predicted low/ moderate artefact density in of Survey Unit
SU40	L1	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit
SU40	L2	1	very low	moderately disturbed	Yes	Yes	Low local scientific significance	Common Aboriginal object and site type Low educational value Low aesthetic value Low research potential: predicted very low artefact density in Survey Unit

Table 8. Archaeological significance assessment of recorded Aboriginal object locales.

11.3 Significance Assessment Criteria – Non-Indigenous

The NSW Heritage Office and Planning NSW have defined a set of criteria and methodology for the assessment of cultural heritage significance for items and places, where these do not include Aboriginal heritage from the pre-contact period (NSW Heritage Office & DUAP 1996, NSW Heritage Office 2001, Heritage Council of NSW 2008).

The Heritage Council of NSW recognises the following four levels of significance for heritage in NSW:

- o Local
- o State
- o National
- o World

These four levels refer to the context in which a heritage item is important and does not refer to a ranking of significance. A heritage item may have significance at more than one level; items of local significance are by far the most common in New South Wales and make the greatest contribution to our living historic environment (Heritage Council of NSW 2008).

The following heritage assessment criteria are those set out for Listing on the State Heritage Register. In many cases items will be significant under only one or two criteria. The State Heritage Register was established under Part 3A of the Heritage Act (as amended in 1999) for listing of items of environmental heritage which are of state heritage significance. Environmental heritage means those places, buildings, works, relics, moveable objects, and precincts, of state or local heritage significance (section 4, Heritage Act 1977).

An item will be considered to be of State (or local) heritage significance if, in the opinion of the Heritage Council of NSW, it meets one or more of the following criteria:

Criterion (a)	an item is important in the course, or pattern, of NSW's cultural or natural
	history (or the cultural or natural history of the local area) - known as historic
	significance;
Criterion (b)	an item has strong or special association with the life or works of a person, or
	group of persons, of importance in NSW's cultural or natural history (or the
	cultural or natural history of the local area) – known as <i>historic associations</i> ;
Criterion (c)	an item is important in demonstrating aesthetic characteristics and/or a high
	degree of creative or technical achievement in NSW (or the local area) – known as
	aesthetic or technical significance;
Criterion (d)	an item has strong or special association with a particular community or cultural
	group in NSW (or the local area) for social, cultural or spiritual reasons- known
	as social significance;
Criterion (e)	an item has potential to yield information that will contribute to an
	understanding of NSW's cultural or natural history (or the cultural or natural
	history of the local area) – known as research potential or educational significance;
Criterion (f)	an item possesses uncommon, rare or endangered aspects of NSW's cultural or
	natural history (or the cultural or natural history of the local area) - known as
	rarity;
Criterion (g)	an item is important in demonstrating the principal characteristics of a class of
	NSW's cultural or natural places or cultural or natural environments (or a class of
	the local areas) – known as <i>representative significance</i> .

An item is not to be excluded from the Register on the ground that items with similar characteristics have already been listed on the Register. Only particularly complex items or places will be significant under all criteria.

In using these criteria it is important to assess the values first, then the local or State context in which they may be significant. In instances where a heritage item is complex and/or comprises numerous elements a hierarchy of significance may be useful in assigning significance to individual elements or areas of a site as different components of a place may make a different relative contribution to its heritage value. For example, loss of integrity or condition may diminish significance. In some cases it is constructive to note the relative contribution of an item or its components. Table 9 below provides a guide to ascribing relative values for components of an individual item.

Grading	Justification	Status
Exceptional	Rare or outstanding item of local or State significance.	Fulfils criteria for local or State listing.
	High degree of intactness	
	Item can be interpreted relatively easily.	
High	High degree of original fabric.	Fulfils criteria for local or State listing.
	Demonstrates a key element of the item's significance.	of State Isting.
	Alterations do not detract from	

	significance.	
Moderate	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils criteria for local or State listing.
Little	Alterations detract from significance. Difficult to interpret.	Does not fulfil criteria for local or State listing.
Intrusive	Damaging to the item's heritage significance.	Does not fulfil criteria for local or State listing.

Table 9. Significance grading – Non-Indigenous heritage.

11.4 Significance Assessment – Non-Indigenous

The potential heritage items recorded during this survey have been assessed against the State Heritage Register criteria and have been guided by the NSW Heritage Office update Assessing Heritage Significance (2001) and the Heritage Council of NSW update Levels of Heritage Significance (2008). A statement of significance for each item is provided below in Table 10; a brief description of the reasoning behind the significance assessment is included in the table. Further details regarding the heritage assessment are also discussed below in terms of the thresholds for each significance category and individual site details where appropriate.

Item	Listing	Statement of Significance
	warranted	
SU10/H1	No	This item cannot be directly linked to people or events of historical
		importance; there is only very limited potential for the site to yield
		additional information and the site is not rare, representative of its type
		and does not display technological or aesthetic qualities that warrant
		listing.
SU10/H2	No	This item appears to relate to fencing practices from the second half of
		the nineteenth century and may be associated with Chinese workers and
		the process of land alienation following the Robertson Land Acts.
		However, due to the overall poor integrity of this item it does not
		warrant listing as an individual item. Nevertheless, it is part of a broader
		cultural landscape that is of local and State significance.
SU12/H1	No	This item appears to relate to fencing practices from the second half of
		the nineteenth century and may be associated with Chinese workers and
		the process of land alienation following the Robertson Land Acts.
		However, due to the overall poor integrity of this item it does not
		warrant listing as an individual item. Nevertheless, it is part of a broader
		cultural landscape that is of local and State significance.
SU12/H2	No	This item appears to relate to fencing practices from the second half of
		the nineteenth century and may be associated with Chinese workers and
		the process of land alienation following the Robertson Land Acts.
		However, due to the overall poor integrity of this item it does not
		warrant listing as an individual item. Nevertheless, it is part of a broader
		cultural landscape that is of local and State significance.

Item	Listing warranted	Statement of Significance
SU13/H1	No	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and
		the infected in century and may be associated with emilese workers and the process of land alienation following the Robertson Land Acts. However, due to the overall poor integrity of this item it does not warrant listing as an individual item. Nevertheless, it is part of a broader cultural landscape that is of local and State significance.
SU14/H1	Yes	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. The item is also in a relatively intact state and displays aesthetic value. This item is of local significance and it is part of a broader cultural landscape that is of local and State significance.
SU14/H2	Yes	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. The item is also in a relatively intact state and displays aesthetic value. This item is of local significance and it is part of a broader cultural landscape that is of local and State significance.
SU16/H1	No	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. However, due to the overall poor integrity of this item it does not warrant listing as an individual item. Nevertheless, it is part of a broader cultural landscape that is of local and State significance.
SU16/H2	Yes	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. The item is also in a relatively intact state and displays aesthetic value. This item is of local significance and it is part of a broader cultural landscape that is of local and State significance.
SU16/H3	No	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. However, due to the overall poor integrity of this item it does not warrant listing as an individual item. Nevertheless, it is part of a broader cultural landscape that is of local and State significance.
SU17/H1	No	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. However, due to the overall poor integrity of this item it does not warrant listing as an individual item. Nevertheless, it is part of a broader cultural landscape that is of local and State significance.
SU17/H2	No	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. However, due to the overall poor integrity of this item it does not warrant listing as an individual item. Nevertheless, it is part of a broader cultural landscape that is of local and State significance.
SU17/H3	No	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. However, due to the overall poor integrity of this item it does not warrant listing as an individual item. Nevertheless, it is part of a broader cultural landscape that is of local and State significance.

Item	Listing warranted	Statement of Significance
SU17/H4	No	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. It is also associated with shepherding, a pastoral practice that is characteristic of the nineteenth century on the Monaro. However, due to the overall poor integrity of this item it does not warrant listing as an individual item. Nevertheless, it is part of a broader cultural landscape that is of local and State significance.
SU18/H1	No	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. However, due to the overall poor integrity of this item it does not warrant listing as an individual item. Nevertheless, it is part of a broader cultural landscape that is of local and State significance.
SU18/H2	Yes	This item appears to relate to patterns of increased settlement associated with land alienation following the introduction of the Robertson Land Acts. The site has potential to yield additional information that may reveal whether the site related to genuine land selection or dummying associated with consolidation of a larger property. As such the site also has importance in the local history of the area. This item is of local significance.
SU19/H1	No	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. However, due to the overall poor integrity of this item it does not warrant listing as an individual item. Nevertheless, it is part of a broader cultural landscape that is of local and State significance.
SU19/H2	No	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. However, due to the overall poor integrity of this item it does not warrant listing as an individual item. Nevertheless, it is part of a broader cultural landscape that is of local and State significance.
SU19/H3	No	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. However, due to the overall poor integrity of this item it does not warrant listing as an individual item. Nevertheless, it is part of a broader cultural landscape that is of local and State significance.
SU19/H4	No	This item appears to relate to fencing practices from the second half of the nineteenth century. While it does not warrant listing as an individual item, it is part of a broader cultural landscape that is of local and State significance.
SU19/H5	No	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. However, due to the overall poor integrity of this item it does not warrant listing as an individual item. Nevertheless, it is part of a broader cultural landscape that is of local and State significance.
SU20/H1	Yes	This item appears to relate to fencing practices from the second half of the nineteenth century and may be associated with Chinese workers and the process of land alienation following the Robertson Land Acts. The item is also in a relatively intact state and displays aesthetic value. This item is of local significance and it is part of a broader cultural landscape that is of local and State significance.

Item	Listing	Statement of Significance
	warranted	
SU21/H1	No	This item appears to relate to fencing practices from the second half of
		the nineteenth century and may be associated with Chinese workers and
		the process of land alienation following the Robertson Land Acts.
		However, due to the overall poor integrity of this item it does not
		warrant listing as an individual item. Nevertheless, it is part of a broader
		cultural landscape that is of local and State significance.
SU21/H2	No	This item appears to relate to fencing practices from the second half of
		the nineteenth century and may be associated with Chinese workers and
		the process of land alienation following the Robertson Land Acts.
		However, due to the overall poor integrity of this item it does not
		warrant listing as an individual item. Nevertheless, it is part of a broader
		cultural landscape that is of local and State significance.
SU21/H3	No	This item appears to relate to fencing practices from the second half of
		the nineteenth century and may be associated with Chinese workers and
		the process of land alienation following the Robertson Land Acts.
		However, due to the overall poor integrity of this item it does not
		warrant listing as an individual item. Nevertheless, it is part of a broader
		cultural landscape that is of local and State significance.
SU21/H4	No	This item appears to relate to fencing practices from the second half of
		the nineteenth century and may be associated with Chinese workers and
		the process of land alienation following the Robertson Land Acts. It is
		also associated with shepherding, a pastoral practice that is characteristic
		of the nineteenth century on the Monaro. However, due to the overall
		poor integrity of this item it does not warrant listing as an individual
		item. Nevertheless, it is part of a broader cultural landscape that is of
		local and State significance.
SU29/H1	No	This item appears to relate to fencing practices from the second half of
		the nineteenth century and may be associated with Chinese workers and
		the process of land alienation following the Robertson Land Acts.
		However, due to the overall poor integrity of this item it does not
		warrant listing as an individual item. Nevertheless, it is part of a broader
0770 - 177-		cultural landscape that is of local and State significance.
SU35/H1	No	This item appears to relate to fencing practices from the second half of
		the nineteenth century and may be associated with Chinese workers and
		the process of land alienation following the Robertson Land Acts.
		However, due to the overall poor integrity of this item it does not
		warrant listing as an individual item. Nevertheless, it is part of a broader
CIL125/III2	N ⊺	cultural landscape that is of local and State significance.
SU35/H2	No	This item appears to relate to fencing practices from the second half of
		the nineteenth century and may be associated with Chinese workers and
		the process of land alienation following the Robertson Land Acts.
		However, due to the overall poor integrity of this item it does not
		warrant listing as an individual item. Nevertheless, it is part of a broader
		cultural landscape that is of local and State significance.

Table 10. Significance assessment of potential Non-Indigenous heritage items.

There are five items within or adjacent the proposal area that are assessed to be of sufficient significance to warrant listing at a local level. These comprise four examples of relatively intact fences (SU14/H1, SU14/H2, SU16/H2 and SU20/H1) and the ruins of a homestead (SU18/H2). The fences are assessed to be of local significance due to their associations with the Chinese (Criterion b/d) and patterns of land alienation and pastoral development (Criterion a) and their aesthetic values (Criterion c). More specifically, these examples have been identified as being of greater significance than the other recorded stone fences due to their relatively intact state of preservation.

As is discussed below, all of the fences, regardless of their integrity are part of a broader cultural landscape that needs to be dealt with as a separate case in terms of potential heritage significance. Essentially the differing levels of significance for individual fences are of most relevance with regard to the management strategies applicable to each item (see Section 12.3 below).

The majority of potential heritage items recorded within the proposal area are not assessed to be of sufficient significance to warrant heritage listing. As individual items most of the recorded sites cannot be linked to people or events of historical importance or they present limited research potential, aesthetic qualities or other values that might be associated with an item of heritage significance. Nevertheless, these same sites are part of a much broader cultural landscape that is of importance in the pattern of land alienation in the local area (Criterion a) and they appear to have special associations with the Chinese (Criterion b/d). As such, the fences should not simply be dealt with as individual items but they should be considered in terms of their significance as components of a larger cultural landscape. Together the fences contribute to a landscape with aesthetic characteristics and they arguably reflect a degree of creative/technical achievement (Criterion c). Furthermore the fences and the broader landscape as a whole have the potential to yield information that will contribute to an understanding of local history and to some extent the history of NSW (Criterion e). Below are examples of some of the questions for which answers might be found through additional research into the stone fences and their associated landscape features.

- When were the fences built and by whom?
- Are there identifiable camp sites where the workers lived during construction?
- How do the fences relate to property boundaries?
- Are the fences directly associated with land alienation and if so what do they reveal about this process?
- How do the fences relate to the alignment of Crown roads?
- Are there different types/styles of fences?
- When were the fences replaced with wire?
- How do existing wire fence lines relate to the stone fences and what does this reveal about changes in land use?
- Were some fences deliberately destroyed and if so why?

Most of these questions are important in terms of local history; the stone fences are primarily of local significance as a cultural landscape. However, given that the fences might also reveal further information about the process of land alienation following the introduction of the Robertson Land Acts and, given that the Bibbenluke Estate presents a fairly unique example of the extent to which dummying and other tactics were used to secure land, this landscape also has State significance in terms of responses to a historically important piece of land legislation.

12. MITIGATION AND MANAGEMENT STRATEGIES

The aim of this study has been to identify Aboriginal objects and Non-Indigenous heritage items and to predict the archaeological potential within each Survey Unit, to assess site significance and thereafter, to consider the potential impact of the proposal upon this heritage.

In the following section a variety of strategies that can be considered for the mitigation and management of development impact to Aboriginal objects, Non-Indigenous heritage items and Survey Units (including those without Aboriginal object recordings) are listed and discussed.

12.1 Management and Mitigation Strategies - Indigenous

Further Investigation

The field survey has been focused on recording artefactual material present on visible ground surfaces. Further archaeological investigation would entail subsurface excavation undertaken as test pits for the purposes of identifying the presence of artefact bearing soil deposits and their nature, extent, integrity and significance.

Further archaeological investigation in the form of subsurface test excavation can be appropriate in certain situations. Such situations generally arise when the proposed development is expected to involve ground disturbance in areas which are assessed to have potential to contain high density artefactual material and when the Effective Survey Coverage achieved during a survey of a project area is low due to ground cover, vegetation etc.

No Survey Units have been identified in the proposal area to warrant further archaeological investigation in order to formulate appropriate management and mitigation strategies. Based on a consideration of the predictive model of site type applicable to the environmental context in which impacts are proposed the archaeological potential of the proposed impact areas does not warrant further investigation.

The environmental contexts in which the turbines (and associated impacts) are proposed contain eroded and disturbed soils as a result of high levels of environmental degradation and wind erosion and also are not predicted to contain artefact density sufficient to warrant test excavation. Furthermore proposed impacts are small scale, discrete and primarily narrow, linear impacts (road access, transmission line construction etc). In addition, it is considered that in regard to the archaeology itself, subsurface testing is unlikely to produce results much different to predictions made in respect of the subsurface potential of these landforms. Accordingly a program of subsurface testing undertaken within the impact assessment and planning phase of the project is not considered to be necessary or warranted.

Conservation

Conservation is a suitable management option in any situation however, it is not always feasible to achieve. Such a strategy is generally adopted in relation to sites which are assessed to be of high cultural and scientific significance, but can be adopted in relation to any site type.

When conservation is adopted as a management option it may be necessary to implement various strategies to ensure Aboriginal object locales are not inadvertently destroyed or disturbed during construction works or within the context of the life of the development project. Such procedures are essential when development works are to proceed within close proximity to identified sites.

In the case at hand, avoidance of impacts (or minimisation of impacts) in regard to some artefacts locales is considered to be desirable if at all possible. The artefact locales in question are identified in the table below (Table 11).

Mitigated Impacts

Mitigated impact usually takes the form of partial impacts only (ie conservation of part of an Aboriginal artefact locale or Survey Unit) and/or salvage in the form of further research and archaeological analysis prior to impacts. Such a management strategy is generally appropriate when Aboriginal objects are assessed to be of moderate or high significance to the scientific and/or Aboriginal community and when avoidance of impacts and hence full conservation is not feasible. Salvage can include the surface collection or subsurface excavation of Aboriginal objects and subsequent research and analysis.

Several Aboriginal object locales are assessed to be of low/moderate or moderate archaeological significance. Accordingly it is generally recommended that limiting the extent of impacts to these locales, if at all feasible, should be given consideration (Table 11).

For many Aboriginal object locales and/or discrete areas within wider Survey Units avoidance of impacts is unlikely to be feasible. Furthermore it is probable, that if a program of site avoidance was actively implemented, it is likely that other Aboriginal objects (perhaps undetected and in a subsurface context) would, instead be impacted.

It is assessed that the archaeological resource in the proposal area does not surpass significance thresholds which would preclude impacts. However given the scale and nature of the proposed impacts it is recognised that extensive disturbance to Aboriginal objects will occur, irrespective of their nature or significance. Accordingly, it is proposed that an appropriate impact mitigation strategy would be to undertake a program of archaeological salvage excavation and analysis in selected Survey Units/locales across the proposal area prior to construction. The Survey Units/artefact locales in question are identified in the table below (Table 11).

Unmitigated Impacts

Unmitigated impact to Aboriginal objects can be given consideration when they are assessed to be of low archaeological and cultural significance and otherwise in situations where conservation is simply not feasible.

The majority of Aboriginal object locales identified have been assessed to be of low archaeological significance. In addition the majority of Survey Units are assessed to be of low archaeological sensitivity. Given the nature and artefact density of the majority of artefact locales recorded in the proposal area and the low scientific significance rating they been accorded, unmitigated impacts are appropriate. The Survey Units/artefact locales in question are identified in the table below (Table 11).

Proposed management and mitigation strategies

The table below summarises the management and mitigation strategies considered to be relevant to proposal area. Management and mitigation strategies are addressed in relation to all Survey Units recorded during the study (noting that not all Survey Units contain Aboriginal object locales) and where relevant individual locales located within each Survey Unit. The recommended management strategy listed for each Survey Unit (as highlighted in table) and Aboriginal object locale is selected from the various management options as discussed above. Finally the rationale behind each recommendation is outlined, taking into consideration the nature of the Aboriginal object and its archaeological significance rating.

SU	Locale	Artefact density (predicted and as per analysis of ESC)	Impacts	Significance	Recommended management strategy	Rationale
SU1	-	very low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Very low artefact density in survey unit
SU1	L1	very low	Access track and electrical cabling	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU2	-	very low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Very low artefact density in survey unit
SU2	Ll	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU3	Nil recordings	very low	Access track and electrical cabling	n/a	No constraints to impacts in SU Unmitigated impacts	Predicted very low density artefact distribution.
SU4	Nil recordings	very low	Access track and electrical cabling	n/a	No constraints to impacts in SU Unmitigated impacts	Predicted very low density artefact distribution.
SU5	Nil recordings	very low	Access track and electrical cabling	n/a	No constraints to impacts in SU Unmitigated impacts	Predicted very low density artefact distribution.
SU6	Nil recordings	very low	Access track and electrical cabling	n/a	No constraints to impacts in SU Unmitigated impacts	Predicted very low density artefact distribution.
SU7	Nil recordings	very low	Turbines and associated works	n/a	No constraints to impacts in SU Unmitigated impacts	Predicted very low density artefact distribution.
SU8	-	very low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Very low artefact density in survey unit
SU8	Ll	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU9	-	very low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Very low artefact density in survey unit
SU9	Ll	very low	Access track and electrical cabling	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU10	-	very low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Very low artefact density in survey unit
SU10	Ll	low; possible single knapping event	Nil; adjacent access track and electrical cabling	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU10	L2	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be

SU	Locale	Artefact density (predicted and as per analysis of ESC)	Impacts	Significance	Recommended management strategy	Rationale
SU10	L3	very low	Turbine	Low local scientific significance	No constraints Unmitigated impacts	low. Very low density artefact distribution. Archaeological significance assessed to be low.
SU11	Nil recordings	very low	Turbines and associated works	n/a	No constraints to impacts in SU Unmitigated impacts	Predicted very low density artefact distribution.
SU12	-	very low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Very low artefact density in survey unit
SU12	L1	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU12	L2	very low	Access track and electrical cabling	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU12	L3	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU12	L4	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU12	L5	very low	Turbine	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU12	L6	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU13	-	low	Turbines and associated works	-	No constraints to impacts in SU <i>however</i> Mitigated impacts see below	Low moderate artefact density in survey unit
SU13	L1	low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU13	L2	low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU13	L3	low	Access track and electrical cabling	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU13	L4	low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Low density artefact distribution. Archaeological

SU	Locale	Artefact density (predicted and as per analysis of ESC)	Impacts	Significance	Recommended management strategy	Rationale
						significance assessed to be low.
SU13	L5	low moderate	Access track and electrical cabling	Moderate local scientific significance	Mitigated impacts (minimise impacts and salvage): avoid disturbance to as much of area as practicable; subsurface salvage excavation in proposed impact area	Predicted low moderate artefact density. Archaeological significance potentially moderate.
SU13	L6	low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU13	L7	low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU13	L8	low moderate	Nil	Moderate local scientific significance	Mitigated impacts (minimise impacts and salvage): avoid disturbance to as much of area as practicable; subsurface salvage excavation in proposed impact area	Predicted low moderate artefact density. Archaeological significance potentially moderate.
SU14	-	very low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Very low artefact density in survey unit
SU14	Ll	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU14	L2	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU15	-	low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Low artefact density in survey unit
SU15	Ll	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU15	L2	low	Nil; adjacent access track and electrical cabling	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU15	L3	low	Access track and electrical cabling	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU15	L4	low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU15	L5	low	Nil; adjacent access track and electrical	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological

SU	Locale	Artefact density (predicted and as per analysis of ESC)	Impacts	Significance	Recommended management strategy	Rationale
		· · · · · · · · · · · · · · · · · · ·	cabling			significance assessed to be low.
SU16	-	very low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Very low artefact density in survey unit
SU16	Ll	low	Turbine	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU16	L2	very low	Nil; adjacent turbine	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU16	L3	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU16	L4	very low	Access track and electrical cabling and turbine	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU16	L5	very low	Turbine	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU16	L7	very low	Turbine	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU16	L6	very low	Turbine	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU16	L8	low	Turbine	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU17	-	very low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Very low artefact density in survey unit
SU17	L1	very low	Turbine	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU17	L2	very low	Access track and electrical cabling and turbine	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU18	Nil recordings	very low	Turbines and associated works	n/a	No constraints to impacts in SU Unmitigated impacts	Predicted very low density artefact distribution.
SU19	-	low	Turbines and associated works	-	No constraints to impacts in SU <i>however</i> Mitigated impacts see below	Low artefact density in survey unit

SU	Locale	Artefact density (predicted and as per analysis of ESC)	Impacts	Significance	Recommended management strategy	Rationale
SU19	L1	very low	Turbine	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU19	L2	low/moderate	Turbine	Moderate local scientific significance	Mitigated impacts (minimise impacts and salvage): avoid disturbance to as much of area as practicable; subsurface salvage excavation in proposed impact area	Predicted low moderate artefact density. Archaeological significance potentially moderate.
SU19	L3	low	Nil; adjacent access track and electrical cabling	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU19	L4	low	Turbine	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU19	L5	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU19	L6	low	Nil; adjacent turbine	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU19	L7	low	Nil; adjacent turbine	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU20	Nil recordings	very low	Turbines and associated works	n/a	No constraints to impacts in SU Unmitigated impacts	Predicted very low density artefact distribution.
SU21	-	very low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Very low artefact density in survey unit
SU21	Ll	very low	Nil; adjacent turbine	Low local scientific significance	No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU21	L2	low	Turbine	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU22	Nil recordings	very low	Access road	n/a	No constraints to impacts in SU Unmitigated impacts	Predicted very low density artefact distribution.
SU23	-	low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Low artefact density in survey unit
SU23	L1	low	Access road	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.

SU	Locale	Artefact density	Impacts	Significance	Recommended	Rationale
		(predicted and as per analysis of ESC)	-		management strategy	
SU24	Nil	very low	Access road	n/a	No constraints to impacts	Predicted very low
	recordings				in SU	density artefact
SU25	Nil	very low	Access road	n/a	Unmitigated impacts	distribution. Predicted very low
5025	recordings	very low	Access road	II/a	No constraints to impacts in SU	density artefact
	recordings				Unmitigated impacts	distribution.
SU26	Nil	very low	Access road	n/a	No constraints to impacts	Predicted very low
~	recordings				in SU	density artefact
	U				Unmitigated impacts	distribution.
SU27	Nil	very low	Access road	n/a	No constraints to impacts	Predicted very low
	recordings				in SU	density artefact
GLIDO	37.1			,	Unmitigated impacts	distribution.
SU28	Nil	very low	Access road	n/a	No constraints to impacts	Predicted very low
	recordings				in SU	density artefact distribution.
SU29	Nil	very low	Access road	n/a	Unmitigated impacts No constraints to impacts	Predicted very low
5029	recordings	very low	Accession	11/ a	in SU	density artefact
	recordingo				Unmitigated impacts	distribution.
SU30	Nil	very low	Access road	n/a	No constraints to impacts	Predicted very low
	recordings	2			in SU	density artefact
	0				Unmitigated impacts	distribution.
SU31	Nil	very low	Access road	n/a	No constraints to impacts	Predicted very low
	recordings				in SU	density artefact
					Unmitigated impacts	distribution.
SU32	Nil	very low	Access road	n/a	No constraints to impacts	Predicted very low
	recordings				in SU	density artefact distribution.
SU33	Nil	very low	Access road	n/a	Unmitigated impacts No constraints to impacts	Predicted very low
2000	recordings	very low	Accession	11/ a	in SU	density artefact
	recordinge				Unmitigated impacts	distribution.
SU34	Nil	very low	Transmission	n/a	No constraints to impacts	Predicted very low
	recordings	2	line from		in SU	density artefact
	C		Yandra to		Unmitigated impacts	distribution.
			Sherwins			
			substation			
SU35	-	low moderate	Turbines and	-	No constraints to impacts	Low moderate artefact
			associated		in SU however	density in survey unit
			works		Mitigated impacts see below	
SU35	L1	low	Transmission	Low local	No constraints	Low density artefact
0000		10 11	line to	scientific	Unmitigated impacts	distribution.
			substation	significance	e e e e e e e e e e e e e e e e e e e	Archaeological
			from	C		significance assessed to be
			'Yandra'			low.
SU35	L2	low moderate	Transmission	Low	Mitigated impacts	Low moderate density
			line to	moderate	(minimise impacts and	artefact distribution.
			substation from	local scientific	salvage): avoid disturbance	Archaeological
			'Yandra'	scientific significance	to as much of area as practicable; subsurface	significance assessed to be low moderate.
			Tanura	significance	salvage excavation in	low moderate.
					proposed impact area	
SU35	L3	low moderate	Transmission	Low	Mitigated impacts	Low moderate density
-			line to	moderate	(minimise impacts and	artefact distribution.
			substation	local	salvage): avoid disturbance	Archaeological
			from	scientific	to as much of area as	significance assessed to be
			'Yandra'	significance	practicable; subsurface	low moderate.
					salvage excavation in	
CT IO C		1	T 1 · · ·		proposed impact area	X 7 1 . e 1 .
SU36	-	very low	Turbines and associated	-	No constraints to impacts in SU	Very low artefact density
			associated works		In SU Unmitigated impacts	in survey unit
SU36	L1	low	Transmission	Low local	No constraints	Low density artefact
5050	11	10 W	line to	scientific	Unmitigated impacts	distribution.
	1				Burea impueto	
			substation	significance		Archaeological

SU	Locale	Artefact density (predicted and as per analysis of ESC)	Impacts	Significance	Recommended management strategy	Rationale
			'Yandra'			low.
SU37	Nil recordings	very low	Transmission line to substation from 'Yandra'	n/a	No constraints to impacts in SU Unmitigated impacts	Predicted very low density artefact distribution.
SU38	-	low moderate	Turbines and associated works	-	No constraints to impacts in SU <i>however</i> Mitigated impacts see below	Low moderate artefact density in survey unit
SU38	L1	low	Transmission line to substation from 'Yandra'	Low local scientific significance	No constraints Unmitigated impacts	Low density artefact distribution. Archaeological significance assessed to be low.
SU38	L2	low moderate	Transmission line to substation from 'Yandra'	Low moderate local scientific significance	Mitigated impacts (minimise impacts and salvage): avoid disturbance to as much of area as practicable; subsurface salvage excavation in proposed impact area	Low moderate density artefact distribution. Archaeological significance assessed to be low moderate.
SU39	Nil recordings	very low	Transmission line and substation; turbine	n/a	No constraints to impacts in SU Unmitigated impacts	Predicted very low density artefact distribution.
SU40	-	very low	Turbines and associated works	-	No constraints to impacts in SU Unmitigated impacts	Very low artefact density in survey unit
SU40	L1	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU40	L2	very low	Nil	Low local scientific significance	n/a however: No constraints Unmitigated impacts	Very low density artefact distribution. Archaeological significance assessed to be low.
SU41	Nil recordings	very low	Turbines and associated works	n/a	No constraints to impacts in SU Unmitigated impacts	Predicted very low density artefact distribution.

Table 11. Recommended management strategies relating to Survey Units (as highlighted in left column) and Aboriginal object locales in the proposal area.

12.2 Management and Mitigation Strategies - Non-Indigenous

The table below details specific management strategies for the recorded historical items on a case by case basis. It should be noted that many of the recorded stone fences are highly disturbed and/or in a poor state of repair; in terms of individual recordings these items do not warrant heritage listing. Nevertheless, these items are part of a broader cultural landscape that dates to the late nineteenth century that appears to be associated with the introduction of the Robertson Land Acts, the conversion of Bibbenluke land from leasehold to freehold land and the activities of Chinese workers in the local area. There are a number of potential research questions that also relate to these items, which increases the overall research significance at a local level. Given the historical associations and the research potential that exists for these items as a complex of sites and features it is preferable to minimise impacts as much as possible. In many instances this means restricting impacts to sections of fence lines that are already disturbed or avoiding fences all together where feasible. Particular care to avoid impacts should be adopted with regard to the more intact fences such as SU14/H1, SU14/H2, SU16/H2 and SU20/H1.

Given that the proposed wind farm will materially impact the existing cultural landscape there is a strong argument for mitigation work in the form of additional research and survey of the existing stone fences. While it is generally understood that the stone fences are the product of Chinese labour in the second half of the nineteenth century (Dawson 2000; Plowman 2007), there is a great deal that remains unclear about these fences including their construction, purpose and eventual abandonment. A program of additional research and survey could potentially tackle the questions outlined above in the discussion of heritage significance (see Section 11).

Item	Management	Rationale/Comments
SU10/H1	Avoid if feasible	While this item is not located in an area of direct impacts it is
		located in relatively close proximity to a proposed road and
		associated turbine site. Inadvertent impacts to this item should be
		avoided.
SU10/H2	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum. If
		feasible keep impacts to the south and the east of the recorded fence
		lines
SU12/H1	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum.
SU12/H2	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum.
SU13/H1	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum.
SU14/H1	Avoid if feasible	This item is of local significance and is part of a broader cultural
		landscape that is of local and state significance. Impacts to the item
		should be avoided if at all possible. Otherwise impacts should be
		restricted to the more disturbed sections of the fence.
SU14/H2	Avoid if feasible	This item is of local significance and is part of a broader cultural
		landscape that is of local and state significance. Impacts to the item
		should be avoided if at all possible. Otherwise impacts should be
		restricted to the more disturbed sections of the fence such as the
		existing crossing at the grid.
SU16/H1	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum.
SU16/H2	Avoid if feasible	This item is of local significance and is part of a broader cultural
		landscape that is of local and state significance. Impacts to the item
		should be avoided if at all possible. Otherwise impacts should be
		restricted to the more disturbed sections of the fence such as the
SU16/H3	Thursdail and a diana and a	section 10m to the east of the grid.
5010/115	Unmitigated impacts	This item does not warrant heritage listing. It is however a component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum.
SU17/H1	Unmitigated impacts	This item does not warrant heritage listing. It is however a
5017/111	Chinicigated impacts	component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum. This
		item is not in an area or proposed works; Inadvertent impacts to the
		fence should be avoided.
SU17/H2	Unmitigated impacts	This item does not warrant heritage listing. It is however a
5010112	Chintingatta impacts	component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum and
		where possible impacts should be restricted to the more disturbed
		sections of the fence.
SU17/H3	Avoid if feasible	This item does not warrant heritage listing. It is however a
2011/110		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum. Turbines
		should preferably be kept off the fence line and the proposed road
		might be best located in a disturbed section ca. 60 metres to the east
		of the recorded site.
	1	

Item	Management	Rationale/Comments
SU17/H4	Avoid if feasible	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum. This
		item is not in an area or proposed works; Inadvertent impacts to the
		fence should be avoided.
SU18/H1	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum and
		where possible impacts should be restricted to the more disturbed
		sections of the fence (eg. the recorded location of the site, which
		corresponds to an existing breach in the fence).
SU18/H2	Avoid if feasible	This item is of local significance and has good research potential.
		While it is not in an area of proposed impacts care should be taken to
		avoid any inadvertent impacts to this site.
SU19/H1	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum and
		where possible impacts should be restricted to the more disturbed
		sections of the fence.
SU19/H2	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum and
		where possible impacts should be restricted to the more disturbed
		sections of the fence.
SU19/H3	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum; it is
		preferable to keep turbine locations off the fence.
SU19/H4	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum.
SU19/H5	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum and
		where possible impacts should be restricted to the more disturbed
		sections of the fence (eg. the recorded location of the site, which
		corresponds to an existing breach in the fence).
SU20/H1	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum; it is
		preferable to keep turbine locations off the fence.
SU21/H1	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum.
SU21/H2	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum and
		where possible impacts should be restricted to the more disturbed
		sections of the fence (eg. the recorded location of the site, which
		corresponds to an existing breach in the fence).
SU21/H3	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum.
SU21/H4	Avoid if feasible	This item is of local significance and has good research potential.
		While it is not in an area of proposed impacts care should be taken to
		avoid any inadvertent impacts to this site.
SU29/H1	Unmitigated impacts	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum. The
		existing access road already crosses the fence but care should be
		taken not cause additional impacts to the more intact section of
		fence to the west of the road.
SU35/H1	Avoid if feasible	This item does not warrant heritage listing. It is however a
SU35/H1	Avoid if feasible	This item does not warrant heritage listing. It is however a component of a broader cultural landscape that is of local and state
SU35/H1	Avoid if feasible	This item does not warrant heritage listing. It is however a component of a broader cultural landscape that is of local and state significance, as such impacts should be kept to a minimum or if

Item	Management	Rationale/Comments
SU35/H2	Avoid if feasible	This item does not warrant heritage listing. It is however a
		component of a broader cultural landscape that is of local and state
		significance, as such impacts should be kept to a minimum or if
		possible avoided altogether.

Table 12. Recommendations relating to Non-Indigenous heritage items.

13. RECOMMENDATIONS

The following recommendations are made on the basis of:

- A consideration of the Part 3A amendment to the Environmental Planning and Assessment Act (see Section 10 Statutory Information).
- The results of the investigation as documented in this report.
- Consideration of the type of development proposed and the nature of proposed impacts.

Management and mitigation strategies are outlined and justified in Section 12 of this report. The following recommendations are provided in summary form:

- 1. Management and mitigation recommendations are listed in respect of each Survey Unit, Aboriginal object locale and Non-Indigenous heritage item in Section 12 of this report. The tables in Section 12 should form the basis for implementing management and mitigation strategies prior to and during construction.
- 2. No Survey Units have been identified in the proposal area to warrant further archaeological investigation such as subsurface test excavation; the Effective Survey Coverage achieved during the field survey was relatively high and can be considered to have been generally adequate for the purposes of determining the archaeological status of the proposed impact areas.
- 3. None of the Survey Units, Aboriginal object locales or Non-Indigenous heritage items in the proposal area has been assessed to surpass archaeological significance thresholds which would act to entirely preclude proposed impacts.
- 4. It is recommended that ground disturbance impacts associated with the proposal be kept to a minimum and to defined areas so as to ensure as little impact as possible to the Aboriginal objects (stone artefacts) which can be expected to extend in a relatively continuous distribution across the broader landscape encompassed by the proposal.
- 5. The majority of the Aboriginal object locales recorded are very low or low density distributions of stone artefacts. The archaeological significance of these locales is assessed to be low; accordingly a management strategy of unmitigated impact is considered to be appropriate.
- 6. A small number of the Aboriginal object locales are assessed to be of low/moderate or moderate archaeological significance. Accordingly, in regard to these areas it is generally recommended that avoidance of impacts, or limiting the extent of impacts to these locales, if at all feasible, should be given consideration.

As a form of mitigation of overall construction impact to the archaeological resource within the proposal area it is proposed that a salvage program of archaeological excavation and analysis be undertaken prior to construction (see Table 11).

The development of an appropriate research project should be undertaken in consultation with an archaeologist, the relevant Aboriginal communities and the NSW Department of Conservation and Climate Change.

7. It is recommended that additional archaeological assessment is conducted in any areas which are proposed for impacts that have not been surveyed during the current assessment. It is predicted that significant Aboriginal objects can occur anywhere in the landscape and accordingly if present they need to be identified and impact mitigation strategies implemented prior to impacts.

- 8. Particular care to avoid impacts should be adopted with regard to the more intact stone fences such as SU14/H1, SU14/H2, SU16/H2 and SU20/H1.
- 9. It is recommended that an appropriate form of mitigation relating to impacts to the stone fences would entail a research program.
- 10. The proponent should, in consultation with an archaeologist, develop a Cultural Heritage Management Protocol, which documents the procedures to be followed for impact avoidance or mitigation. The development of an appropriate Cultural Heritage Management Protocol should be undertaken in consultation with an archaeologist, the relevant Aboriginal communities and the NSW Department of Conservation and Climate Change.
- 11. Personnel involved in the construction and management phases of the project should be trained in procedures to implement recommendations relating to cultural heritage where necessary.

14. REFERENCES

- Andrews, E. 1998 Earliest Monaro and Burragorang 1790 to 1840 with Wilson Bass Barrallier Caley Lhotsky Jauncey Lambie Ryrie. ACT: Tabletop Press.
- Batten, L. 1993 Nimmitybelle...then Nimmitabel...now, L. Batten, Nimmitabel.
- Blay, J. 2005 Report of the Bega Valley Shire Council Region Old Path Ways and Trails Mapping Project. Draft Report.
- Blyton, I. and R., and Weston, M. (eds.) 2006 The journey from Nimmitybelle to Nimmitabel, volumes 1 and 2, Nimmitabel, NSW.
- Boot, P. 1994 Recent Research into the Prehistory of the Hinterland of the South Coast of New South Wales. In Sullivan, M, Brockwell, S. and Webb, A. (eds) Archaeology in the North: Proceedings of the 1993 Australian Archaeological Association Conference. NARU: Darwin.
- Boot, P. 1996 Pleistocene Sites in the South Coast Hinterland of New South Wales. *Tempus* 6: 275-288.
- Boot, P. 2000 An archaeological assessment of proposed track upgrade, pit toilet construction and camping area construction at Denison, Lake Eucumbene, Kosciuszko National Park. A report to South West Slopes Region, NSW National Parks and Wildlife Service, Tumut.
- Bowdler, S. 1981 Hunters in the Highlands: Aboriginal Adaptation in the Eastern Australian uplands. Archaeology in Oceania 16: 99-111.
- Branagan, D. and G. Packham 2000 Field Geology of New South Wales. NSW Department of Mineral Resources: Sydney.
- Cannon, M. 1988 Life in the Country. Viking O'Neill: Melbourne.
- Carter, C. 1994 The Archaeology of the Robertson Land Acts. Unpublished BA Honours Thesis, Australian National University.
- Carter, C. 2003 Report to NSW National Parks & Wildlife Service on the Archaeological Survey & Assessment of Lot 4 DP 845442, North Cooma, NSW.
- Chapman, V. 1977 The Jindabyne Valley in Southern uplands prehistory: an archaeological investigation. Unpublished MA Thesis. Australian National University: Canberra.
- Cooke, H. 1988 An investigation into the prehistory of Blue Water Holes and Cooleman Plains, NSW. Unpublished BA Honours thesis. The Australian National University.
- Cooma Monaro Historical Society 1988 The Cooma-Monaro time walk: a mosaic record of the history of the Monaro from 1788-1988, Cooma Monaro Historical Society, Cooma.
- Costin, A. 1854 A study of the ecosystems of the Monaro region of New South Wales. Sydney: Australian Government Printer.
- Dawson, B. 1996 Sheep & Shepherds Sheepwashers & Shearers on Bibbenluke 1851-1867. No publishing details.
- Dawson, B. 2000 Striking Out for Independence: Move Towards Self-Determination and Self-Sufficiency on the Southern Monaro Property of Bibbenluke, 1861-84. Labour History. No. 79, pp 123-139.

- Dearling, C. 2004 Preliminary Aboriginal Cultural Heritage Study. Selected Nature Reserves, Monaro Region, NSW. Report to NSW NPWS, Snowy Mountains Region, Jindabyne, NSW.
- Department of Lands, Parish Map Preservation Project, retrieved 6th January 2009 from: http://parishmaps.lands.nsw.gov.au/pmap.html
- Dibden, J. 2004 Proposed Wind Farm Snowy Plains. Report to nghenvironmental.
- Dibden, J. 2005a Proposed Residential Subdivision at the Bermagui Country Club. Archaeological Subsurface Test Excavation. S87 Permit # 2144. Report to Paynter Dixon Golf Pty Ltd.
- Dibden, J. 2005b Proposed Wind Farm Snowy Plains Subsurface Test Excavation s87 Permit # 2199. A report to Taurus Energy.
- Dibden, J. 2005c Proposed Residential Subdivision Moruya Subsurface Test Excavation. A report to Patent Developments.
- Dibden, J. 2005d Kybeyan Fence Re-alignment Project, Lone Pine, Wadbilliga National Park. Aboriginal Archaeological Assessment. A report to nghenvironmental.
- Dibden, J. 2005e Roads and Traffic Authority Proposed Road Realignment Native Dog Creek, near Ando, NSW Aboriginal Archaeological Assessment. Report to nghenvironmental.
- Djekic, A. 1982 An Archaeological Survey of the Route of the Cooma-Jindabyne 66kV Transmission Line. Report to NSW NPWS and The Electricity Commission of NSW.
- Dorrough, J., A Yen, V. Turner, S. Clark, J. Crosthwaite and J. Hirth 2004 Livestock grazing management and biodiversity conservation in Australian temperate grassy landscapes. *Australian Journal of Agricultural Research*. Vol 55; pp 279 – 295.
- Dunnell, R. 1993 The Notion Site in J. Rossignol and L. Wandsnider eds Space, Time and Archaeological Landscapes. New York: Plenum, pgs 21-41.
- Ellis, N. 1997 Braidwood, Dear Braidwood A History of Braidwood and Districts. N. N. and N. M. Ellis: Braidwood, NSW.
- English, A. and Gay, L. 1994 Further Archaeological Investigation Severage Augmentation Programme, Cooma, NSW. Report to Rust PPK.
- Feary, S. and Pardoe, C. 1992 Seminar 5/6/1992 Department of Prehistory, Research School of Pacific Studies, Australian National University.
- Flood, J. 1973 The moth hunters investigations towards a prehistory of the south-eastern highlands of Australia. Unpublished PhD Thesis. Australian National University: Canberra.
- Flood, J. 1980 The Moth Hunters Aboriginal prehistory of the Australian Alps. Australian Institute of Aboriginal Studies: Canberra.
- Flood, J., David, B., Magee, J. & English, B. 1987 Birrigai: A Pleistocene Site in south-eastern highlands. Archaeology in Oceania. 22: 9-26.
- Geering, K. 1981 Lower Snowy River Archaeological Survey. A Report for Kosciusko National Park.
- Gibbney, H. J. 1989 Eurobodalla: History of the Moruya District. Council of the Shire of Eurobodalla and the Library of Australian History: Sydney.

- Gott, B. 1982 Ecology of root use by the Aboriginal of southern Australia. Archaeology in Oceania 17: 59-67.
- Grinbergs, A. 1992 The Myth Hunters. Investigations Towards a Revised Prehistory of the South Eastern Highlands of Australia. Unpublished B.A. (Hons) Thesis. Department of Archaeology and Anthropology, Australian National University, Canberra.
- Hancock, W. K. 1972 Discovering Monaro: a study of man's impact on his environment, Cambridge University Press, London.
- Heffernan, K. and Boot, P. 2000 Draft Report of the SEFRAC Archaeological Project: Aboriginal Archaeological Surveys, Conservation and Management of Aboriginal Sites and Cultural Landscapes in the SFNSW Eden Management Area, South Eastern New South Wales. New South Wales National Parks & Wildlife Service, Cultural Heritage Division, Southern Aboriginal Heritage Unit
- Helms, R. 1890 Report on a collecting trip to Mt Kosciusko. Rec. Aust. Mus. 1(1): 11-16.
- Heritage Council of New South Wales 2008 Levels of Heritage Significance, Heritage Office, NSW Department of Planning, Sydney.
- Heritage Office and Department of Urban Affairs and Planning 1996 Regional histories: regional histories of New South Wales, Department of Urban Affairs and Planning, Sydney.
- Hiscock, P. & Mitchell, S. 1993 Stone Artefact Quarries and Reduction Sites in Australia: Towards a Type Profile. AGPS: Canberra.
- Howitt, A. 1904 The Native Tribes of South East Australia. London: Macmillan & Co Limited.
- Jeans, D. N. 1966 A Historical Geography of New South Wales. Reed Education: Sydney.
- Jennings, J. and J. Mabbutt 1977 Physiographic outlines and regions. In: Jeans, D. (ed): Australia: a Geography. Sydney University Press; Sydney: PP 38 – 52.
- Kamminga, J. 1992 Aboriginal Settlement and Prehistory of the Snowy Mountains. In Scougall,
 B. (ed) Cultural Heritage of the Australian Alps: Proceedings of the symposium held at Jindabyne, New South Wales, 16-18 October 1991, Australian Alps Liaison Committee.
 CPN Publications: Canberra pp 101-124.
- Kamminga, J., R. Paton and I. McFarlane 1989 Archaeological Investigations in the Thredbo Valley, Snowy Mountains. Report to Farada Pty Ltd. Anutech: Canberra.
- Kuskie, P., K. Navin & K. Officer 1995 Aboriginal Archaeological and Anthropological Assessment: Eastern Gas Pipeline Longford, Victoria to Wilton, New South Wales. Report to BHP Petroleum and West Coast Energy Australia.
- Lampert, R. 1971 Burrill Lake and Currarong: Coastal Sites in Southern New South Wales. Terra Australia 1 Department of Prehistory. ANU: Canberra.
- Lance, A. and Hughes P. 1983 An Archaeological Survey of the Proposed Snowy Mountains Hydro-Electric Authority Head Office Complex, Cooma, NSW. A Report to the Snowy Mountains Hydro-Electric Authority, Cooma.
- Lewis, D. 1976 Aboriginal Sites Survey in the Snowy River Valley. 1974-75. Unpublished Report.
- Lewis, D. 1985 Proposed Tourist Development, Dalgety Portion 72, Parish of Bobundara, County of Wallace Archaeological Sites Survey. Report to David Hogg Pty Ltd Environmental Consultants, Macquarie, ACT.
- Molony, J. 1988 The Penguin History of Australia. Penguin: Melbourne.

- McDonald, R. Isbell, R, Speight, J. Walker, J. and M. Hopkins 1998 Australian Soil and Land Survey Field Handbook. CSIRO Australia.
- Mulvaney, J. and J. Kamminga 1999 Prehistory of Australia. Allen and Unwin: St Leonards.
- Navin, K. 1990 Archaeological Survey of Four Proposed Radio Communication Installation Sites in the Snowy Mountains Region of NSW. Report to David Hogg Pty Ltd on behalf of the Snowy Mountains Hydro-Electric Authority.
- Navin, K. 1991 Archaeological survey of sections of two existing transmission line easements Kosciusko National park, NSW Tooma River to yellow Bog 330kV, Scammels Ridge to Dargals Fire Trail 132kV. Report to David Hogg Pty Ltd.
- Navin, K. 1994 Aboriginal Archaeological Survey, Cooma Sewerage Augmentation Works, Cooma, NSW. Report to Rust PPK.
- Neal, L. 1976 Cooma Country, Cooma-Monaro Historical Society, Cooma.
- New South Wales Heritage Office and Department of Urban Affairs 1996 Heritage Assessments, NSW Heritage Manual, HO/DUAP, Sydney.
- New South Wales Heritage Office 2001 Assessing Heritage Significance, HO/DUAP, Sydney.
- New South Wales National Parks and Wildlife Service 1997 DRAFT Aboriginal cultural heritage standards and guidelines kit.
- New South Wales Department of Environment and Conservation 2004 Interim Guidelines for Aboriginal Community Consultation - Requirements for Applicants.
- New South Wales Department of Environment and Conservation 2005 Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation.
- Ossa, P., Marshall, B. & Webb, C. 1995 New Guinea 2 cave: A Pleistocene site on the Snowy River, Victoria. Archaeology in Oceania 30(1):22-35.
- Oakley, B. 1994 Archaeological Investigation of Four Optus Snowy Mountains Tower Sites Snowy Mountains NSW. A Report to Optus Communications.
- Paton, R. 1985 An Archaeological Survey of the Proposed No2 Cooma to Royalla 132kV Transmission Line Route. Report to Elcom.
- Payten, R.F. 1949 The Festival of the Bogong Moth, Letter to A.S. Le Soeuf, 15 June 1949, in Young, M. (ed.), 2000 The Aboriginal People of the Monaro, NSW NPWS.
- Perry, T. M. 1965 Australia's First Frontier. Melbourne University Press: Melbourne.
- Plowman, S. 2007 Thematic History 1823 1945: Cooma-Monaro Shire, New South Wales, A Victoria Design & Management Pty Ltd report to the Cooma-Monaro Shire Council.
- Plowman, S., Dixon, T. and Rushton, B. 1999 Cooma 150 years on, Cooma-Monaro 150 Years On Committee, Cooma.
- Saunders, P. 2003 Aboriginal Archaeological Assessment of Part of Lots 2 and 3 of Proposed Subdivision of Lot 727473 Mittagang Road, Cooma, NSW. Report to P. Swain.
- Shaw, A. 1970 The Economic Development of Australia. Longman: London.
- Shott, M. 1995 Reliability of Archaeological Records on Cultivated Surfaces: A Michigan Case Study. Journal of Archaeological Field Archaeology. Vol 22; pgs 475 490.

- Stone, T. 1998 Archaeological Survey of a Proposed Pine Plantation Area at Ando Near Bombala, N.S.W. A Report to Willmott Forests.
- Stone, T. 2000 An Archaeological Survey of the Proposed Ando 3 Pine Plantation Area Near Bombala, Southern N.S.W. A Report to SEMF Holdings Pty Ltd.
- Stone, T. 2001 An Archaeological Survey of the Proposed Site of a Sawmill Complex Near Bombala, Southern N.S.W. A Report to Willmott Forests.
- Stone, T. and Duncan, J. 1999 An Archaeological Survey of the Proposed Ando 2 Pine Plantation Area Near Bombala, N.S.W. A Report to Willmott Forests.
- Tindale, N. 1974 Aboriginal Tribes of Australia. ANU Press, Canberra.
- Walkington, M. 1986 An Archaeological Survey of Selected Small Lakes on the Monaro Tablelands, NSW. Unpublished BA Honours Thesis: Australian National University, Canberra.
- Wandsnider, L and E. Camilli 1992 The Character of Surface Archaeological Deposits and Its Influence on Survey Accuracy. *Journal of Field Archaeology*. Vol. 19 pgs 169 - 188.

Young, M. (ed.) 2000 The Aboriginal People of the Monaro, NSW NPWS.

Appendix 1. Lithic database

SU1/L1flaked piecesilerete6grey; 45% terrestrial cortexSU2/L1flaked piecequartz3whiteSU3/L1flakenuccetain11pebble: 108 x 70 x 2.5 mm; pitting on 1 end consisteSU3/L1flakesilerete4brown: large clastsSU3/L1flakesilerete4brown: large clastsSU10/L1flakesilerete3greySU10/L1flakesilerete3greySU10/L1flake optionsilerete4grey; proximalSU10/L1flake optionsilerete3greySU10/L2flake optionsilerete3grey; stabular piece: 135 x 80 x 35 mm; flaked from 1SU10/L3flaked piecequartzite1grey; tabular piece: 135 x 80 x 35 mm; flaked from 1SU10/L3flaked piecequartz3whiteSU10/L3flake optionquartz2whiteSU12/L2flake portionquartz3whiteSU12/L2flake portionquartz4whiteSU12/L3flaked piecequartz3whiteSU12/L4flake portionquartz4whiteSU12/L3flake portionquartz3whiteSU12/L4flake portionquartz3whiteSU12/L4flake portionquartz4whiteSU12/L5flakequartz3whiteSU12/L4flake portionquartz4	
SU8/L1hammerstoneuncertain11pebble: $108 \ge 70 \ge 2.5 \text{ mm}$; pitting on 1 end consiste hammer wear; flake scars on otherSU9/L1flakequartz5white; compression flakeSU9/L1flakesilcerete4brown: large clastsSU10/L1flakesilcerete3grey; fine grained; all 4 items in locale possibly part knapping eventSU10/L1flake origonic silcerete3greygrey: grey: proximalSU10/L1flake origonic silcerete4grey: grey: proximalSU10/L2flakequartz3whiteSU10/L3flaked piecequartz3whiteSU10/L3flaked piecequartz3grey: flag grainedSU10/L3core fragmentsilcerete3grey: flag grainedSU12/L1flakequartz3whiteSU12/L2flake portionquartz2white: proximalSU12/L2flake origonic quartz2whiteSU12/L3flake optionquartz3whiteSU12/L4flake optionquartz3whiteSU12/L4flake optionquartz3whiteSU12/L4flake quartz3whiteSU12/L5flakequartz4whiteSU12/L4flake quartz4whiteSU12/L5flakequartz3whiteSU12/L4flake optionquartz3whiteSU12/L4flake dpiecequa	
SUP/L1 flammerstone unertan 11 jnammer wear; flake sears on other SUP/L1 flake guartz 5 white; compression flake SUP/L1 flake silcrete 4 grey; fine grained; all 4 items in locale possibly part knapping event SU10/L1 flake silcrete 3 grey; The grained; all 4 items in locale possibly part knapping event SU10/L1 flake option silcrete 3 grey; Troxinal SU10/L1 flake option silcrete 3 grey; SU10/L3 flake dpiece quartzite 14 leurved margin; edge of flake scars smooth consisted usewear; ??chopper" SU10/L3 core fragment silcrete 3 grey; fine grained SU12/L1 flake quartz 3 white: SU12/L2 flake quartz 2 white: proximal SU12/L3 flake quartz 3 white: SU12/L3 flake quartz 3 white SU12/L3 flake SU12/L3 flake quartz 3 white SU12/L3 flake quartz 4	
SU9/L1flakesilcrete4brown: large clastsSU10/L1flakesilcrete4grey: fine grained; all 4 items in locale possibly partSU10/L1flake portionsilcrete3greySU10/L2flake portionsilcrete4greySU10/L2flakequartz3whiteSU10/L3flaked piecequartz3whiteSU10/L3flaked piecequartz3grey; the grained;SU10/L3flakequartz3grey; fine grainedSU10/L3flakesilcrete3grey; fine grainedSU10/L3flakequartz3whiteSU10/L3flakequartz3whiteSU12/L2flakequartz3whiteSU12/L1flakequartz3whiteSU12/L2flakequartz4whiteSU12/L2flakequartz3whiteSU12/L3flake portionquartz3whiteSU12/L4flake portionquartz4whiteSU12/L4flake portionquartz4whiteSU12/L3flakequartz4whiteSU12/L4flake portionquartz4whiteSU12/L5flakequartz4whiteSU12/L4flake portionquartz4whiteSU12/L5flakequartz2whiteSU13/L5flake portionquartz2<	tent with
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	
SU10/11 flake silcrete 4 inapping event SU10/11 flake portion silcrete 3 grey SU10/11 flake portion silcrete 3 grey: proximal SU10/11 flake option silcrete 4 grey: proximal SU10/12 flake option quartz 3 white SU10/13 flake option quartz 3 grey: fine grained SU10/13 flake option quartz 3 white SU10/13 flake option quartz 3 white SU12/12 flake option quartz 3 white SU12/12 flake option quartz 4 white SU12/12 flake option quartz 3 white SU12/12 flake option quartz 4 white SU12/13 flake option quartz 3 white SU12/14 flake option quartz 3 white SU12/14 flake option quartz 3 white	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	rt of single
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	
SU10/L3flaked piecequartzite14I curved margin; edge of flake scars smooth consiste usewear: ??chopper"SU10/L3core fragmentsilcrete3grey; fine grainedSU10/L3flakesilcrete3grey; fine grainedSU12/L1flakequartz3whiteSU12/L2flake portionquartz2white; bipolarSU12/L2flake dpiecequartz3whiteSU12/L3flake piecequartz3whiteSU12/L3flake piecequartz3whiteSU12/L3flake portionquartz3whiteSU12/L4flake portionquartz3whiteSU12/L4flake portionquartz3whiteSU12/L4flake quartz3whiteSU12/L5flakequartz4whiteSU13/L6flakequartz2whiteSU13/L2flake dpiecequartz7whiteSU13/L3flake piecequartz7white; 90% pebble cortexSU13/L3flake dpiecequartz2whiteSU13/L3flake piecesilcrete3brown/red mottledSU13/L3flake portionquartz2whiteSU13/L4flake piecequartz2whiteSU13/L3flake portionquartz2whiteSU13/L3flake portionquartz2whiteSU13/L4flake portionquartz	
SU10/L3flakesilcrete3grey: fine grainedSU12/L1flakequartz3whiteSU12/L2flake portionquartz2white; bipolarSU12/L2flaked piecequartz3white; bipolarSU12/L3flaked piecequartz4whiteSU12/L3flaked piecequartz3whiteSU12/L3flake optionquartz3whiteSU12/L3flake portionquartz3whiteSU12/L4flake portionquartz3whiteSU12/L4flake portionquartz4whiteSU12/L5flakequartz4whiteSU12/L4flake dpiecequartz2whiteSU13/L1flakequartz3whiteSU13/L2flaked piecequartz7white; 90% pebble cortexSU13/L3flaked pieceguartz2whiteSU13/L3flake portionquartz2whiteSU13/L3flake piecesilcrete4brown/grey mottled and fine grained (similar to mat found in assemblages in Jindabyne)SU13/L4flake dpiecequartz2whiteSU13/L3flake portionquartz2whiteSU13/L4flake dpiecequartz2whiteSU13/L4flake dpiecequartz2whiteSU13/L4flake dpiecequartz2whiteSU13/L4flake portionquartz	
SU12/L1flakequartz3whiteSU12/L2flake portionquartz2white; proximalSU12/L2flake diecequartz3white; bipolarSU12/L2flake diecequartz4whiteSU12/L3flake diecequartz2whiteSU12/L3flake portionquartz3whiteSU12/L3flake portionquartz3whiteSU12/L4flake portionquartz3whiteSU12/L4flake portionquartz4whiteSU12/L4flake portionquartz2whiteSU12/L4flake portionquartz2whiteSU12/L4flake portecquartz3whiteSU12/L4flakequartz1whiteSU12/L4flakequartz2whiteSU12/L4flakequartz1whiteSU12/L4flakequartz3whiteSU12/L4flakequartz3whiteSU13/L4flakequartz1whiteSU13/L3flaked pieceguartz2whiteSU13/L3flaked piecequartz2whiteSU13/L4flake diecequartz2whiteSU13/L4flake diecequartz2whiteSU13/L4flake portionquartz2whiteSU13/L4flake portionquartz1whiteSU13/L4	
SU12/L2flake portionquartz2white; proximalSU12/L2flaked piecequartz3white; bipolarSU12/L3flaked piecequartz4whiteSU12/L3flaked piecequartz2whiteSU12/L3flake portionquartz3whiteSU12/L3flake portionquartz3whiteSU12/L4flake portionquartz3whiteSU12/L4flake portionquartz2whiteSU12/L5flakequartz2whiteSU12/L6flakequartz3whiteSU13/L2flakequartz7whiteSU13/L2flaked pieceguartz7whiteSU13/L3flake dpieceguartz2whiteSU13/L3flake portionquartz2whiteSU13/L3flake dpiecesilcrete3brown/grey mottled and fine grained (similar to mat found in assemblages in Jindabyne)SU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz2whiteSU13/L4flake portionquartz2whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz3transl	
SU12/L2flakequartz3white; bipolarSU12/L2flaked piecequartz4whiteSU12/L3flaked piecequartz2whiteSU12/L3flake portionquartz3white; distalSU12/L4flake portionquartz3whiteSU12/L4flake portionquartz3whiteSU12/L4flake portionquartz4whiteSU12/L4flake portionquartz2whiteSU12/L4flake quartz2whiteSU12/L6flakequartz3whiteSU13/L1flakesilcrete3whiteSU13/L2flaked piecequartz7white; 90% pebble cortexSU13/L3flaked pieceguartz2whiteSU13/L3flaked piecesilcrete3brown/grey mottled and fine grained (similar to mat found in assemblages in Jindabyne)SU13/L3flaked piecequartz2whiteSU13/L3flaked piecequartz2whiteSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flake portionquartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz3 <t< td=""><td></td></t<>	
SU12/L2flaked piecequartz4whiteSU12/L3flake diecequartz2whiteSU12/L3flake portionquartz3whiteSU12/L4flake portionquartz3whiteSU12/L4flake portionquartz3whiteSU12/L4flake portionquartz4whiteSU12/L4flake portionquartz2whiteSU12/L5flakequartz2whiteSU13/L1flakequartz3whiteSU13/L2flaked piecequartz7white; 90% pebble cortexSU13/L3flaked piecesilcrete3brown/grey mottled and fine grained (similar to mat found in assemblages in Jindabyne)SU13/L3flaked piecesilcrete4brown/red mottledSU13/L3flaked piecequartz2whiteSU13/L3flaked piecequartz2whiteSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz3translucentSU13/L5flake portion <td< td=""><td></td></td<>	
SU12/L3flaked piecequartz2whiteSU12/L3flakequartz3whiteSU12/L3flake portionquartz3white; distalSU12/L4flake portionquartz3whiteSU12/L5flakequartz2whiteSU12/L5flakequartz2whiteSU12/L6flakequartz3whiteSU12/L6flakequartz3whiteSU13/L1flakesilcrete3whiteSU13/L2flaked piecequartz7white; 90% pebble cortexSU13/L3flaked piecesilcrete3brown/grey mottled and fine grained (similar to mat found in assemblages in Jindabyne)SU13/L3flaked piecequartz2whiteSU13/L3flaked piecequartz2whiteSU13/L3flaked piecequartz2whiteSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz2white	
SU12/L3flakequartz3whiteSU12/L4flake portionquartz3white; distalSU12/L4flake portionquartz3whiteSU12/L4flake portionquartz3whiteSU12/L5flakequartz2whiteSU12/L6flakequartz3whiteSU12/L6flakequartz3whiteSU13/L6flakequartz3whiteSU13/L2flaked piecequartz7white; 90% pebble cortexSU13/L3flaked pieceguartz7white; 90% pebble cortexSU13/L3flaked piecesilcrete3brown/grey mottled and fine grained (similar to mat found in assemblages in Jindabyne)SU13/L3flaked pieceguartz2whiteSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flake portionquartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz1whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz </td <td></td>	
SU12/L3flake portionquartz3white; distalSU12/L4flake portionquartz3whiteSU12/L4flake piecequartz6whiteSU12/L5flakequartz2whiteSU12/L6flakequartz3whiteSU12/L6flakequartz3whiteSU13/L1flakeguartz3whiteSU13/L2flaked piecequartz7white; 90% pebble cortexSU13/L3flaked pieceguartz2whiteSU13/L3flaked piecesilcrete3brown/grey mottled and fine grained (similar to mat found in assemblages in Jindabyne)SU13/L3flaked piecesilcrete4brown/red mottledSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flake portionquartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz3translucentSU13/L4flake portionquartz4whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionquartz4whiteSU13/L5flake portion	
SU12/L4flake portionquartz3whiteSU12/L5flaked piecequartz6whiteSU12/L6flakequartz2whiteSU12/L6flakequartz3whiteSU13/L1flakequartz3whiteSU13/L1flaked piecequartz7white; 90% pebble cortexSU13/L2flaked piecequartz7white; 90% pebble cortexSU13/L3flaked piecesilcrete3brown/grey mottled and fine grained (similar to mather found in assemblages in Jindabyne)SU13/L3flaked piecesilcrete4brown/red mottledSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionquartz1whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz1whiteSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz3translucentSU13/L5flak	
SU12/L4flaked piecequartz6white $SU12/L5$ flakequartz2white $SU12/L6$ flakequartz3white $SU13/L1$ flakesilcrete3white $SU13/L2$ flaked piecequartz7white; 90% pebble cortex $SU13/L3$ flaked piecesilcrete3brown/grey mottled and fine grained (similar to mather found in assemblages in Jindabyne) $SU13/L3$ flake portionquartz2white $SU13/L3$ flaked piecesilcrete4brown/red mottled $SU13/L3$ flaked piecequartz2white $SU13/L3$ flaked piecequartz2white $SU13/L4$ flaked piecequartz2white $SU13/L4$ flaked piecequartz2white $SU13/L4$ flake portionquartz1white $SU13/L4$ flake portionquartz1white $SU13/L4$ flake portionquartz1white $SU13/L4$ flake portionquartz1white $SU13/L5$ flake portionquartz3translucent $SU13/L5$ flake portionquartz4white $SU13/L5$ flake portionquartz1white $SU13/L5$ flake portionquartz2white $SU13/L5$ flake portionquartz2white $SU13/L5$ flake portionquartz3white <t< td=""><td></td></t<>	
SU12/L5flakequartz2whiteSU12/L6flakequartz3whiteSU13/L1flakesilcrete3whiteSU13/L2flaked piecequartz7white; 90% pebble cortexSU13/L3flaked piecesilcrete3brown/grey mottled and fine grained (similar to mat found in assemblages in Jindabyne)SU13/L3flaked piecesilcrete4brown/red mottledSU13/L3flaked piecequartz2whiteSU13/L3flaked piecequartz2whiteSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz1whiteSU13/L5flake portionquartz1whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionguartz3translucentSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz4whiteSU13/L5flake portion <t< td=""><td></td></t<>	
SU12/L6flakequartz3whiteSU13/L1flakesilcrete3whiteSU13/L2flaked piecequartz7white; 90% pebble cortexSU13/L3flaked piecesilcrete3brown/grey mottled and fine grained (similar to mat found in assemblages in Jindabyne)SU13/L3flake portionquartz2whiteSU13/L3flaked piecesilcrete4brown/red mottledSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionquartz3whiteSU13/L5flak	
SU13/L1flakesilcrete3whiteSU13/L2flaked piecequartz7white; 90% pebble cortexSU13/L3flaked piecesilcrete3brown/grey mottled and fine grained (similar to mather found in assemblages in Jindabyne)SU13/L3flake portionquartz2whiteSU13/L3flaked piecesilcrete4brown/red mottledSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flake portionquartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz1whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flakequartz3whiteSU13/L5flakequar	
SU13/L2flaked piecequartz7white; 90% pebble cortexSU13/L3flaked piecesilcrete3brown/grey mottled and fine grained (similar to mat found in assemblages in Jindabyne)SU13/L3flake portionquartz2whiteSU13/L3flaked piecesilcrete4brown/red mottledSU13/L3flaked piecequartz2whiteSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionguartz2whiteSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionquartz3whiteSU13/L5flakequartz3whiteSU13/L5flakequartz3whiteSU13/L5flakequartz3whiteSU13/L5flakesilcret	
SU13/L3flaked piecesilcrete3brown/grey mottled and fine grained (similar to mather found in assemblages in Jindabyne)SU13/L3flake portionquartz2whiteSU13/L3flaked piecesilcrete4brown/red mottledSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flake portionquartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz1whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionquartz3translucentSU13/L5flake portionguartz2whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionguartz2whiteSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz3translucentSU13/L5flakequartz3whiteSU13/L5flakeguartz3whiteSU13/L5flakeguartz3whiteSU13/L5flakeguartz3whiteSU13/L5flakesilcrete5 <td></td>	
SU13/L3flaked piecesilcrete3brown/grey mottled and fine grained (similar to mather found in assemblages in Jindabyne)SU13/L3flake portionquartz2whiteSU13/L3flaked piecesilcrete4brown/red mottledSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flake portionquartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz1whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionquartz3translucentSU13/L5flake portionguartz2whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionguartz2whiteSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz3translucentSU13/L5flakequartz3whiteSU13/L5flakeguartz3whiteSU13/L5flakeguartz3whiteSU13/L5flakeguartz3whiteSU13/L5flakesilcrete5 <td></td>	
SU13/L3flake portionquartz2whiteSU13/L3flaked piecesilcrete4brown/red mottledSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flakequartz2whiteSU13/L4flakequartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionguartz2whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flakeguartz3whiteSU13/L5flakeguartz4whiteSU13/L5flakesilcrete5redSU13/L5flakequartz4white	aterial
SU13/L3flaked piecesilcrete4brown/red mottledSU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionguartz2whiteSU13/L5flake portionguartz4whiteSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flakequartz3whiteSU13/L5flakequartz3whiteSU13/L5flakequartz3whiteSU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L3flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flakequartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionguartz2whiteSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flakequartz3whiteSU13/L5flakequartz3whiteSU13/L5flakeguartz4whiteSU13/L5flakesilcrete5redSU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L4flaked piecequartz2whiteSU13/L4flaked piecequartz2whiteSU13/L4flakequartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionsilcrete4brownSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flakequartz3whiteSU13/L5flakequartz3whiteSU13/L5flakesilcrete5redSU13/L5flakeguartz4white	
SU13/L4flaked piecequartz2whiteSU13/L4flakequartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionsilcrete4brownSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flakequartz3whiteSU13/L5flakequartz4whiteSU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L4flakequartz2whiteSU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionsilcrete4brownSU13/L5flake portionguartz2whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz4whiteSU13/L5flakequartz3whiteSU13/L5flakequartz3whiteSU13/L5flakequartz4whiteSU13/L5flakeguartz4whiteSU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L4flake portionquartz1whiteSU13/L4flake portionquartz1whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3translucentSU13/L5flake portionsilcrete4brownSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz4whiteSU13/L5flakeguartz4whiteSU13/L5flakeguartz4white	
SU13/L4flake portionquartz1whiteSU13/L5flake portionquartz4whiteSU13/L5flaked piecequartz3translucentSU13/L5flake portionsilcrete4brownSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3whiteSU13/L5flakequartz3whiteSU13/L5flake portionquartz4whiteSU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L5flake portionquartz4whiteSU13/L5flaked piecequartz3translucentSU13/L5flake portionsilcrete4brownSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz4whiteSU13/L5flake portionquartz3whiteSU13/L5flakequartz3whiteSU13/L5flakequartz3whiteSU13/L5flakeguartz3whiteSU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L5flaked piecequartz3translucentSU13/L5flake portionsilcrete4brownSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz4whiteSU13/L5flakequartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flakeguartz3whiteSU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L5flake portionsilcrete4brownSU13/L5flake portionquartz2whiteSU13/L5flake portionquartz4whiteSU13/L5flakequartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flake portionquartz4whiteSU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L5flake portionquartz2whiteSU13/L5flake portionquartz4whiteSU13/L5flakequartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L5flake portionquartz4whiteSU13/L5flakequartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L5flakequartz3whiteSU13/L5flake portionquartz3whiteSU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L5flake portionquartz3whiteSU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L5flakesilcrete5redSU13/L5flakequartz4white	
SU13/L5 flake quartz 4 white	
I DUID/LO I COLCIANTI I DUIDINA I DO I WHILE: AMORDIONS	
SU13/L5 flake silcrete 4 brown	
SU13/L5 flake portion silcrete 2 brown	
SU13/L5 flake portion silcrete 2 brown	
SU13/L5 flake portion silcrete 5 brown SU13/L5 flake portion silcrete 2 brown	
SU13/L5 flaked piece quartz 4 white	
SU13/L5 flake portion quartz 2 white New South Wales Archaeology Pty Ltd April 2009 page 11	

Locale	Туре	Material	Size	Comments
SU13/L5	flake portion	quartz	3	white; 20% pebble cortex
SU13/L5	flake	silcrete	3	brown
SU13/L5	flaked piece	quartz	2	white
SU13/L5	flake portion	silcrete	1	brown
SU13/L5	flake	quartz	2	white
SU13/L5	flake	silcrete	2	grey
SU13/L5	flake portion	chert	2	black
SU13/L5	flake portion	silcrete	2	brown
SU13/L5	flake portion	chert	1	black
SU13/L5	flake portion	silcrete	3	grey
SU13/L5	flake portion	silcrete	2	brown
SU13/L5	flake portion	quartz	3	white
SU13/L5	flake	silcrete	4	white
SU13/L5	core fragment	quartz	4	white
SU13/L5	flake portion		2	white
	<u>+</u>	quartz		
SU13/L5	flake portion	quartz	3	white
SU13/L5	flake portion	quartz	3	white
SU13/L5	flaked piece	silcrete	2	grey; 5% pebble cortex
SU13/L5	flake portion	quartz	2	white
SU13/L5	flake portion	quartz	2	white
SU13/L5	core	quartz	5	white; amorphous
SU13/L5	flaked piece	quartz	2	white
SU13/L5	flake	quartz	3	white
SU13/L5	flake portion	quartz	2	white
SU13/L5	flaked piece	quartz	3	white
SU13/L5	flake portion	quartz	3	white
SU13/L5	flake	quartz	2	white
SU13/L6	flake portion	quartz	3	white
SU13/L6	flaked piece	quartz	2	white
SU13/L6	flake portion	quartz	2	white
SU13/L6	flake portion	quartz	2	white
SU13/L6	flake	quartz	2	white
SU13/L7	flake portion	quartz	2	white
SU13/L7	flake portion	quartz	3	white
SU13/L8	flake portion	quartz	3	white
SU13/L8	flaked piece	quartz	3	white
SU13/L8	flaked piece	quartz	3	white
SU13/L8	flake portion	-		
	1	quartz	2	white
SU13/L8	flake	silcrete	3	brown
SU13/L8	flake	silcrete	3	red
SU14/L1	flaked piece	quartz	4	white
SU14/L2	flake	quartz	3	white
SU15/L1	flake	silcrete	3	grey
SU15/L1	flake	silcrete	4	grey
SU15/L2	flake	quartz	3	white
SU15/L2	flaked piece	quartz	3	white; 5% pebble cortex
SU15/L2	flake portion	quartz	2	white
SU15/L2	flake portion	silcrete	2	grey; proximal
SU15/L2	flake portion	silcrete	2	grey; proximal
SU15/L2	flake	silcrete	3	grey
SU15/L2	retouched artefact	silcrete	2	brown; small geometric microlith
SU15/L2	flake portion	silcrete	3	grey
SU15/L3	flake	silcrete	3	grey/brown mottled; fine grained
SU15/L3	flake portion	quartz	3	white
SU15/L4	flake	silcrete	4	grey
SU15/L5	flake portion	silcrete	2	grey
SU16/L1	flake	silcrete	2	grey
SU16/L1	flake	quartz	3	white
	TIANC	1	2000	witte

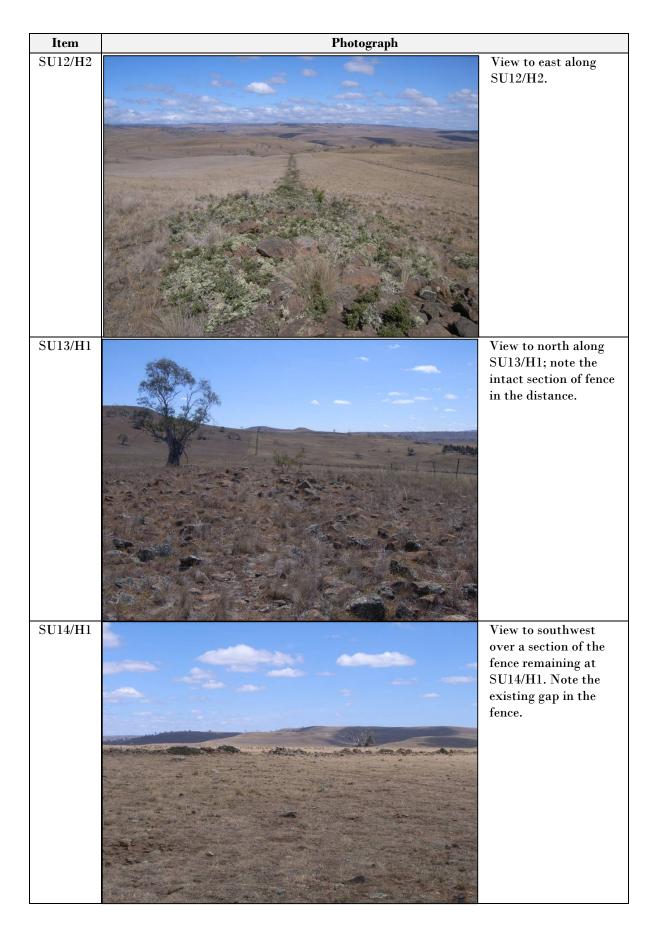
Locale	Туре	Material	Size	Comments
SU16/L1	flake	quartz	3	white
SU16/L1	flake	silcrete	4	grey
SU16/L1	core	quartz	6	white; amorphous
SU16/L2	flake	quartzite	4	brown
SU16/L3	flake	silcrete	3	grey/brown mottled
SU16/L4	flaked piece	quartz	3	white
SU16/L5	flake	silcrete	3	grey
SU16/L6	flake portion	quartz	3	white; proximal
SU16/L7	flake portion	quartz	2	white
SU16/L8	core	quartz	7	white; single platform
SU16/L8	flake portion	quartz	2	white
SU16/L8	flaked piece	quartz	3	white
SU16/L8	flaked piece	1	3	white
SU16/L8		quartz	3 4	white
SU16/L8	flaked piece flaked piece	quartz		
	1	quartz	4	white
SU16/L8	core fragment	quartz	4	white
SU17/L1	flake portion	quartz	3	white
SU17/L1	flake portion	quartz	3	white
SU17/L1	flaked piece	quartz	2	white
SU17/L1	core	quartz	3	white; bipolar
SU17/L2	flaked piece	fine grained volcanic	5	grey; with usewear (15mm step scarring 1 end) measuring 48 x 38 x 15 mm: ?"scraper"; 40% terrestrial cortex
SU19/L1	flake	quartz	2	white
SU19/L1	flake	quartz	3	white
SU19/L1	flake	quartzite	4	brown
SU19/L2	flaked piece	quartz	2	white
	retouched	1		grey; coarse grained; amorphous flake: "scraper"; with
SU19/L2	flake	volcanic	3	usewear
SU19/L2	flake	silcrete	4	grey
SU19/L2	flaked piece	volcanic	4	grey
SU19/L2	flake	silcrete	3	grey
SU19/L2	manuport	uncertain	3	flat pebble fragment; no obvious usewear
SU19/L2	flake portion	quartz	2	white; longitudinal split
SU19/L2	flake	1	2	white
		quartz porphyry	7	
		****		grey
SU19/L2	flake	volcanic	5	grey
SU19/L2	flake	volcanic	4	grey
SU19/L2	flake	quartz	1	white
SU19/L2	flake	volcanic	5	grey
SU19/L2	flake portion	volcanic	6	grey; proximal
SU19/L2	flaked piece	quartz	4	white
SU19/L2	core	volcanic	10	grey; 3 platforms; 5 scars
SU19/L2	flake	volcanic	4	grey
SU19/L2	flake portion	quartzite	4	brown; proximal
SU19/L2	flake	volcanic	4	grey
SU19/L2	core	quartz	6	white; 2 platforms; 5 scars
SU19/L2	flaked piece	volcanic	8	grey
SU19/L2	core	chert	5	grey; 1 platform; 6 scars
SU19/L3	flake	quartzite	4	red
SU19/L3	flaked piece	porphyry	3	grey
SU19/L3	flake	volcanic	4	grey
SU19/L3	flake portion	chert	3	grey; "scraper" usewear
SU19/L3	flake	quartz	3	white
SU19/L3	flaked piece	quartz	4	white
SU19/L3	flake	quartz	2	white
SU19/L9	flake	volcanic	3	grey
SU19/L4	flaked piece	volcanic	3	grey
SU19/L6	core	quartzite	3	grey; 3 platforms; 15 scars
SU19/L0 SU19/L7	hammerstone	uncertain	3 12	broken pebble; 2 scars 1 end; minor pitting consistent with
	Valos Archaeology Pt		2000	bioken pebble, 2 scars i end, innior pitting consistent with

Locale	Туре	Material	Size	Comments
				hammer use on opposing end
SU21/L1	flaked piece	quartz	4	white
SU21/L2	flake	quartz	3	white
SU21/L2	flake	quartzite	4	grey
SU21/L2	flake	volcanic	3	brown
SU21/L2	flake portion	silcrete	4	white/pink
SU21/L2	flake	volcanic	5	brown
SU21/L2	flake portion	volcanic	5	brown
SU21/L2	flake	silcrete	1	red
SU23/L1	flake portion	quartz	3	white
SU35/L1	flaked piece	quartz	3	white
SU35/L2	flake portion	chert	2	grey
SU35/L2	core fragment	silcrete	4	grey
SU35/L2	flake portion	quartz	3	white
SU35/L2	flake portion	quartz	4	white
SU35/L2	flake	quartz	4	white
SU35/L2	flake	chert	4	grey
SU35/L2	flake portion	quartz	3	white
SU35/L2	flake	quartz	3	white
SU35/L2	flake	quartz	2	white
SU35/L2	flake portion	quartz	3	white
SU35/L2	flake portion	quartz	2	white
SU35/L3	flaked piece	silcrete	3	grey
SU35/L3	flaked piece	quartz	4	white
SU35/L3	flaked piece	quartz	3	white
SU35/L3	flake portion	quartz	2	white
SU35/L3	flake portion	quartz	1	white
SU35/L3	flake portion	quartz	2	white
SU35/L3	flake portion	chert	2	grey
SU35/L3	flake	quartz	4	white
SU35/L3	flake	quartz	3	white
SU35/L3	flake	chert	3	grey
SU35/L3	flake	silcrete	3	grey
SU35/L3	flake portion	quartzite	4	grey
SU35/L3	flake	silcrete	3	red
SU35/L3	flake	chert	4	grey
SU35/L3	flaked piece	quartz	4	white
SU35/L3	flaked piece	quartz	4	white
SU35/L3	flake	silcrete	5	brown
SU35/L3	flaked piece	quartz	4	white
SU35/L3	flaked piece	quartz	3	white
SU35/L3	flaked piece	quartz	3	white
SU35/L3	flaked piece	quartz	3	white
SU35/L3	flake portion	silcrete	3	brown
SU35/L3	flake portion	quartz	1	white
SU35/L3	flake portion	quartz	2	white
SU35/L3	flake	silcrete	2	brown
SU35/L3	flake	quartz	3	white
SU35/L3	flake	quartz	2	white
SU36/L1	flake portion	quartz	3	white
SU36/L1	flake portion	quartz	4	white
SU36/L1	flake	silcrete	5	grey
SU36/L1	flake	chert	2	red
SU36/L1	flake portion	quartz	2	white
SU36/L1	flake portion	quartz	2	white
SU38/L1	flake	quartz	2	white
SU38/L1	flake	quartz	3	white
SU38/L1	core	quartz	10	white; 1 platform; 5 scars
SU38/L2	flake Vales Archaeology Pt	quartz v Ltd April	3	white name 119

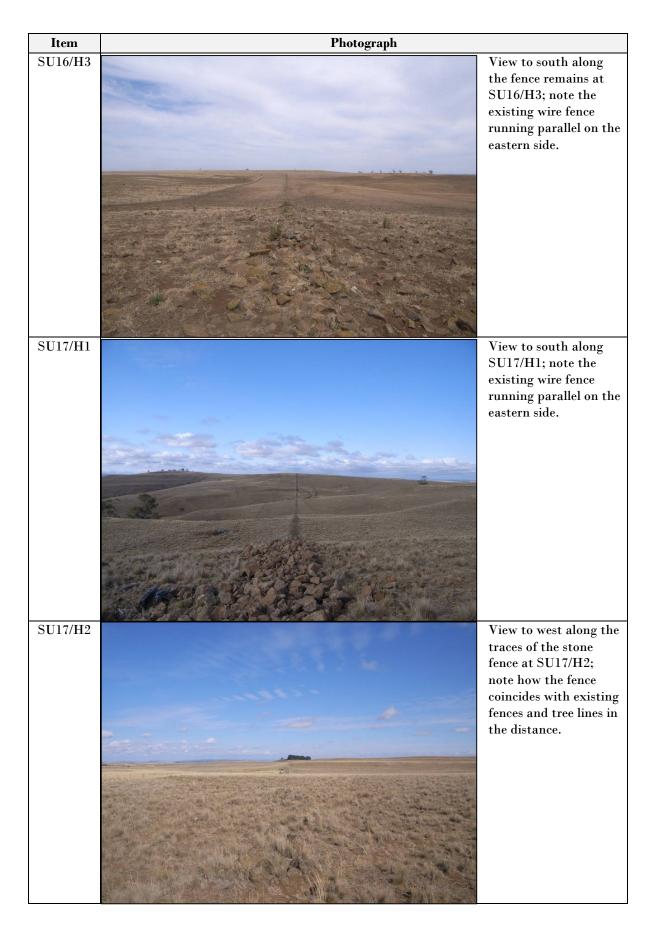
Locale	Туре	Material	Size	Comments
SU38/L2	flake	quartz	3	white
SU38/L2	flake	quartz	2	white
SU38/L2	flake	quartz	4	white
SU38/L2	flake	quartz	3	white
SU38/L2	flaked piece	quartz	3	white
SU38/L2	flake portion	chert	5	grey; proximal
SU38/L2	flaked piece	chert	2	grey
SU38/L2	anvil	uncertain	15	pebble measuring 150 x 100 x 50 mm with pitting in centre on 1 face consistent with anvil use
SU38/L2	flake	quartz	3	white
SU40/L1	flake	quartz	3	white
SU40/L2	flake	quartz	4	white

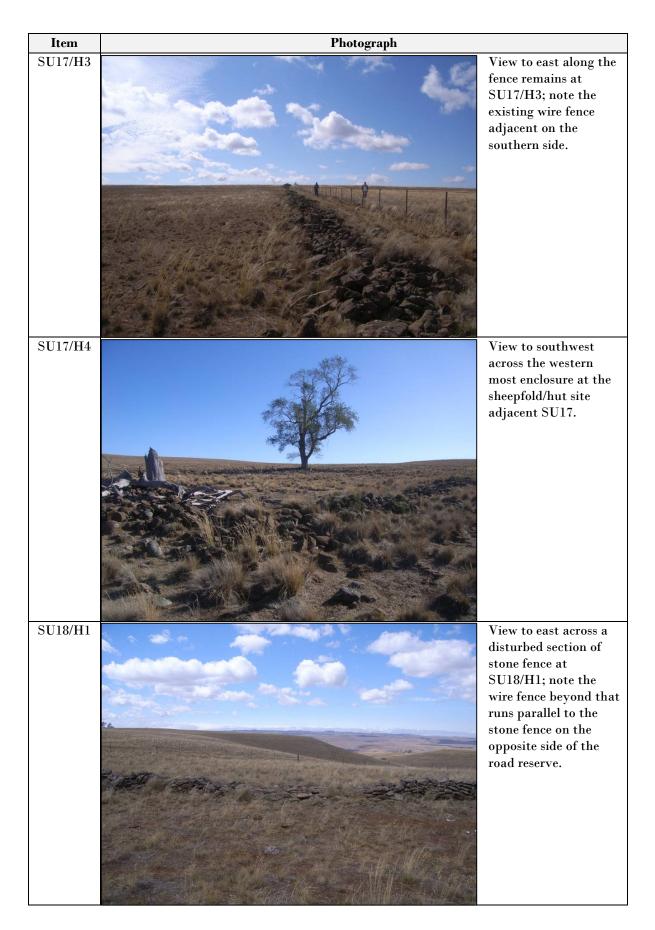
Item	Photographs – Non-Indigenous Heritage Items Photograph	
SU10/H1		View to south across the ephemeral camp site at SU10/H1.
SU10/H2		View to north along the eastern section of fence at SU0/HS2.
SU12/H1		View to west along remains of fence at SU12/H1.

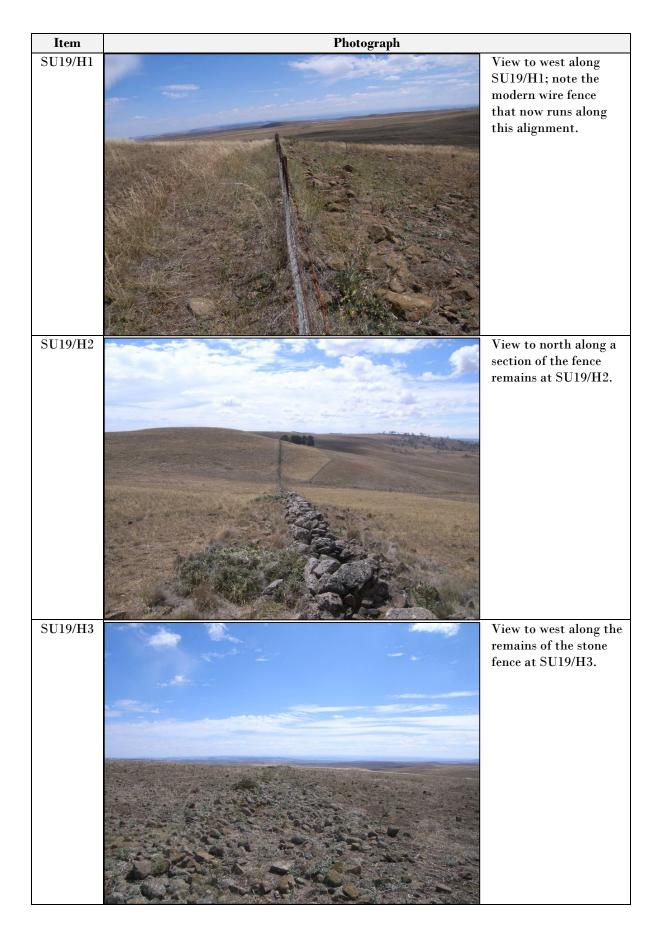
Appendix 2. Photographs - Non-Indigenous Heritage Items

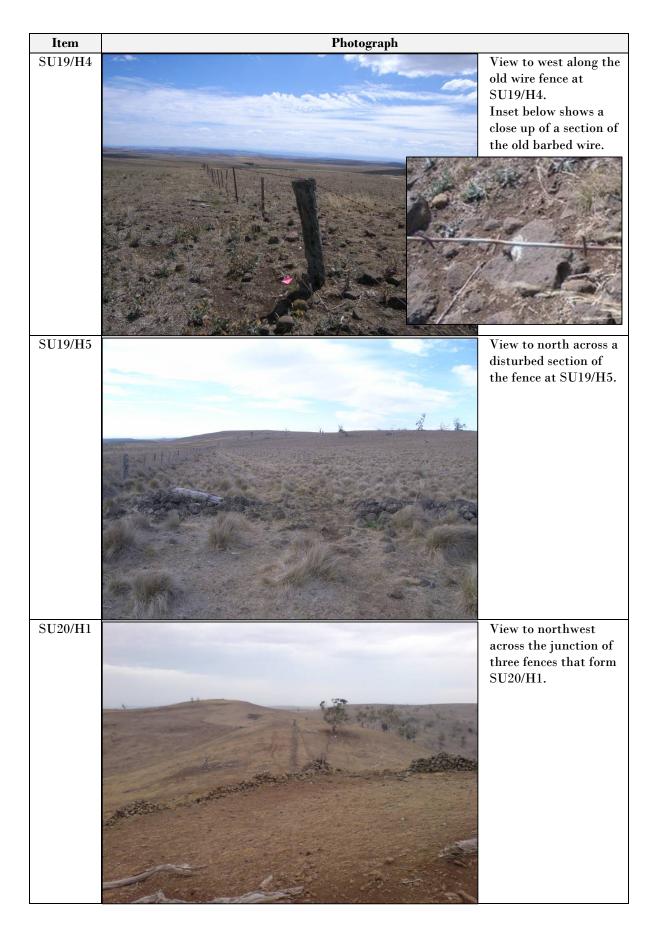


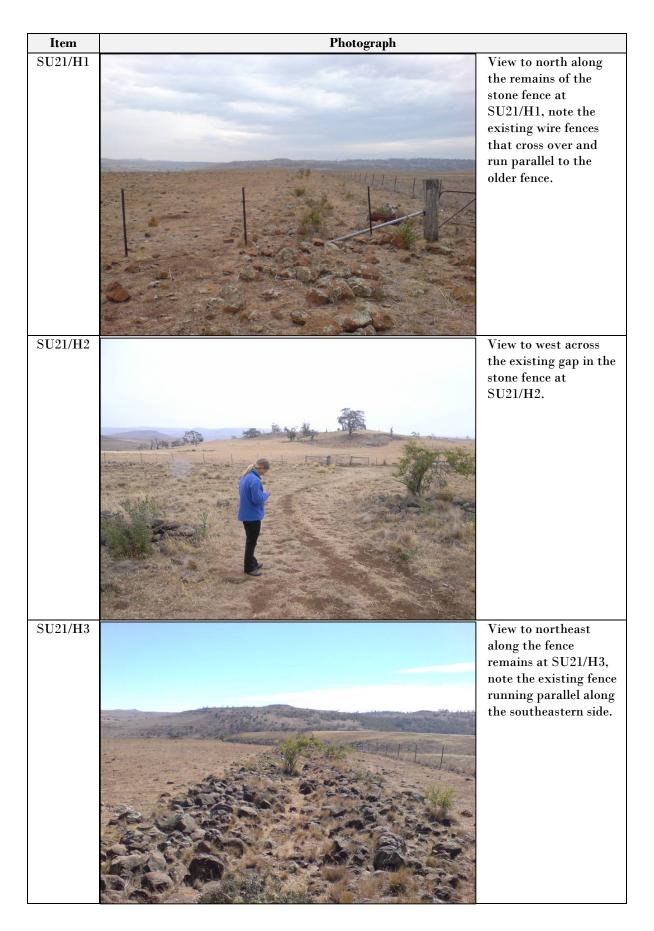




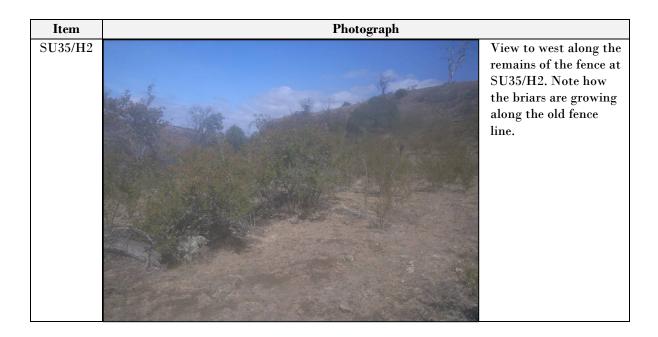


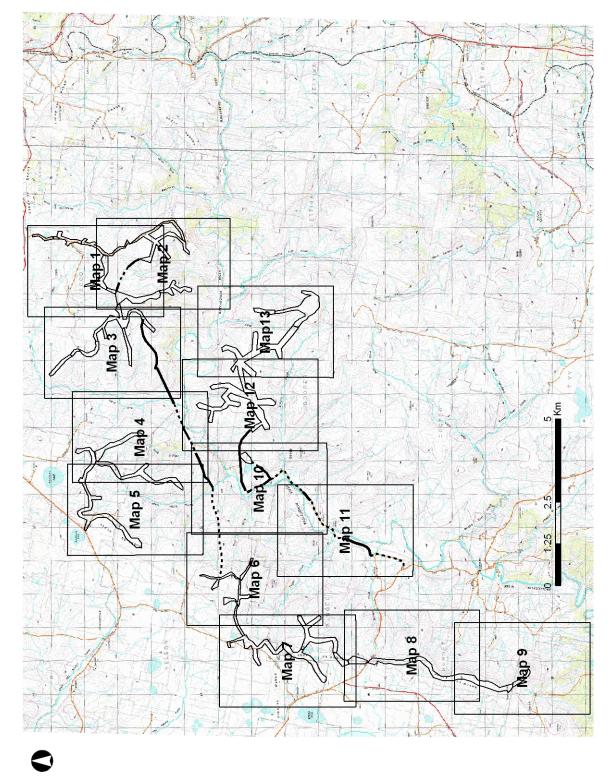






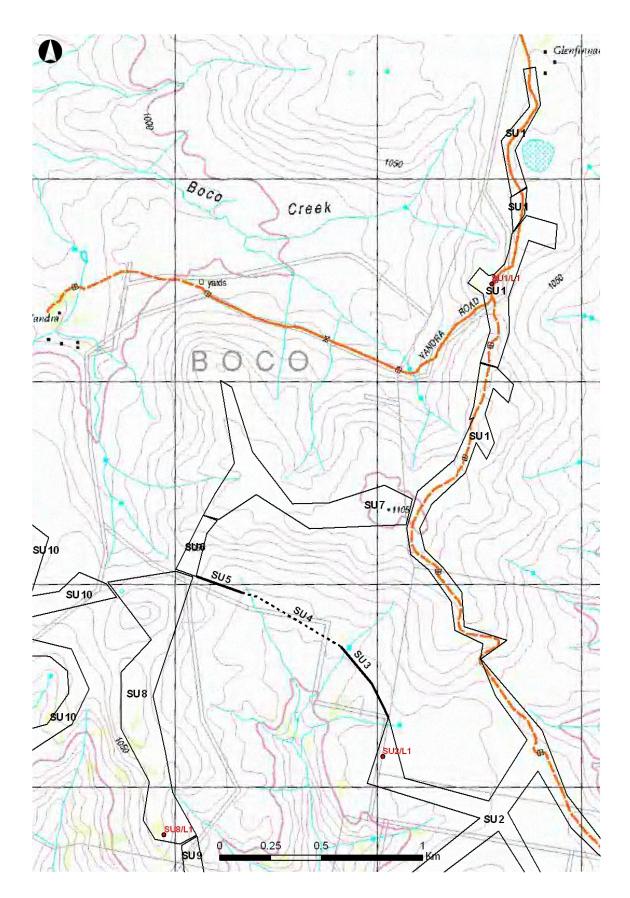
Item	Photograph	
SU21/H4		View to northwest across the western half of the sheepfold remains at SU21/H4.
SU29/H1		View to northwest along the remnants of the stone fence at SU29/H1.
SU35/H1		View to northwest along the remains of the fence at SU35/H1.





Appendix 3. Mapping of Survey Units, Aboriginal Object locales and Non-Indigenous Heritage Items





Map 1