



Appendix G
Heritage

The environs of Alignment West around Mole Station Road.

Aboriginal and Historic Heritage Assessment

Far North NSW (Dumaresq to Lismore 330kV Transmission Line) Project

June 2011

Report Prepared by

OzArk Environmental & Heritage Management Pty Ltd

for URS

on behalf of

TransGrid

Environmental and Heritage Management P/L

OzArk EHM
145 Wingewarra St
(PO Box 2069)
Dubbo NSW 2830

Phone: (02) 6882 0118
Fax: (02) 6882 0630
jodie@ozarkehm.com.au
phil@ozarkehm.com.au
www.ozarkehm.com.au

Document Controls

Proponent	TransGrid		
Client	URS		
Project No / Purchase order No			
Document Description	Indigenous and Historic Heritage Assessment: Dumaresq – Lismore 330kV Transmission Line NSW.		
	Name	Signed	Date
Clients Reviewing Officer			
Clients representative managing this document		OzArk Person(s) managing this document	
Will Barrett		Dr Jodie Benton	
Location		OzArk Job No.	
Document Status		**Date: 25/1/10**	
Draft V1.1 Author to Editor OzArk 1st Internal (Series V1.X = OzArk internal edits)		V1.0 BC to PJC 24.1.10	
Draft V2.0 Report Draft for release to client (Series V2.X = Client edits)		V2.0 OzArk to URS (WB) 25.1.10	
Draft V2.1 Report Draft from client to OzArk (Series V2.X = Client edits)		V2.0 OzArk to URS (WB) 2.2.10	
Final Draft V3.0 Report Draft for release to client (Series V3.X = OzArk and Client edits)		V3.0 OzArk to URS (WB)	
Draft 4.0: OzArk incorporate access track survey		V4.0 to JB: 10/11/10 V4.1 OzArk to URS 12.11.10	
Draft 5.0: Incorporate TransGrid comments		V5.1 to URS 9/12/10 V5.2 to URS 17/2/11 (figures added 22.2.11)	
FINAL once latest version of draft approved by client		V5.3 to URS 1/6/11 V5.4 to URS 15.6.11	
Prepared For		Prepared By	
William Barrett, Senior Associate Environmental Planning & Assessment URS Australia Pty Ltd Level 3, 116 Miller Street North Sydney, NSW 2060 Phone: +61 2 8925 5500 Direct: +61 2 8925 5694 Mobile: 0417 190170		Ben Churcher and Jodie Benton Senior Archaeologist OzArk Environmental & Heritage Management Pty. Limited P 02 6882 0118 F 02 6882 6030 M 0416009910 Email: ben@ozarkehm.com.au	

Executive Summary

TransGrid (The Proponent) is proposing to construct a 205km, 330kV transmission line between the Dumaresq Switching Station, south of Bonshaw, and the Lismore Substation in Far North NSW (The Project).

This report specifically relates to the Aboriginal and Historic heritage resource within and in proximity to the proposed 330kV easement, the existing 132kV easement and the on-easement and off-easement access tracks. This report provides background research, register search results and predictive modelling. This process led to the identification of preferred easement sections upon which to target the archaeological fieldwork.

In late 2009, four weeks of Aboriginal and Historic heritage assessment took place along the proposed easement for the proposed Dumaresq to Lismore 330kV transmission line. In all, the heritage assessment comprised of 80 person days and covered over 200km of terrain ranging from lowlands around Lismore to the steep mountains of the Great Dividing Range. In October and November of 2010 a further two field assessments took place to examine the location of access tracks that would be used during the construction and maintenance of the transmission line. The access tracks surveys comprised 39 person days.

The current survey that informs this assessment was confined to the proposed easement (60m width from Dumaresq to Casino and 90m width from Casino to Lismore). It includes assessment of selected access tracks with either potential high levels of disturbance or that would be in proximity to water courses and/or previously recorded Aboriginal or historic sites.

The survey methodology governing the easement assessment was based on a desk-top study of the proposed easement that identified areas of likely archaeological potential. The areas of archaeological potential that were assessed in the field comprised in excess of 55.9 percent of the total easement area. This methodology ensured that a representative sample of all landform types contained within the proposed easement was assessed, as well as all waterways.

The survey methodology governing the access tracks assessment took into account previously assessed areas from the easement survey, previously recorded sites from the easement survey and the likely level of impact to the ground surface from the construction of the access tracks. Thirty four percent of the total access track area was assessed under this methodology.

There were various constraints to the heritage assessment including low ground surface visibility (particularly in Study Area East), difficulties of access to certain properties and difficulties of navigation, particularly in the rugged areas to the west.

Although the constraints are recognised, the areas of the proposed easement that were designated for assessment by the survey methodology were adequately assessed.

As a result of the heritage assessment, 50 Aboriginal heritage sites were recorded[1], along with nine historic heritage sites and 11 sensitive archaeological landforms.

Of the 50 recorded Aboriginal sites:

- twelve are likely to be directly impacted by the proposed works;

1 This report contains description of 52 Aboriginal sites but two (TD-OS6 and TD-OS15) have been combined with larger sites bringing the total of recorded Aboriginal sites to 50.

- twelve require mitigative measures to ensure their protection;
- thirteen sites are outside project impacts and do not require mitigation against inadvertent disturbance; and
- thirteen sites are located in the vicinity of yet to be built access tracks and may be impacted depending on the precise location of the access track.

No historic sites would be directly impacted by The Project although six are located in close proximity to the areas of proposed impact.

Thirteen Aboriginal sites and three historic sites were recorded over 50m from the proposed easement and would not be impacted by the proposed works.

Management recommendations are provided in this report for sites within and in close proximity to the Project Area.

Further heritage field assessment would be required prior to the construction phase to assess the following:

- areas designated in the survey methodology as holding archaeological sensitivity that are located either on the proposed easement or on access tracks that lie within properties that were unable to be accessed during the current assessment; and
- ground-truthing of recorded sites when structure locations and access tracks are finalised in order to provide appropriate management recommendations. A qualified archaeologist would re-locate all sites contained in **Tables 6–3** to **6–5** and **Tables 6–6** and **6–8** and determine the likely impact from the final proposed works. The archaeologist would also check that the impacts accounted for in this report have not changed and that the management recommendations for these sites are still appropriate. This level of detail would be contained in the Aboriginal Heritage Management Plan (AHMP) following Project approval.

In conclusion, despite the constraints inherent in carrying out a comprehensive heritage assessment across a large area, it is considered that most major Aboriginal and historic sites were recorded within the areas directly surveyed and that these areas were those most likely to contain large and/or complex sites. Furthermore, all sites recorded during this assessment were representative of other sites recorded in the general vicinity and no site was assessed as holding high archaeological significance.

The incidence of recorded sites conforms to the basic assumption behind the survey methodology that major Aboriginal sites will be located within close proximity to water. Therefore there is confidence in the accuracy of the survey methodology and it is predicted that the areas of the proposed easement not designated for assessment by the survey methodology are not likely to contain sites or, if sites are present, they are likely to be low-density artefact scatters or isolated, modified trees.

If the management recommendations contained within this report are followed, the outcome would be a greater understanding of the Aboriginal and historic cultural heritage of the Study Area, the further retrieval of information from those sites that would be directly impacted and the protection of those sites that would not be directly impacted by The Project.

Contents

Appendices

Figures

Tables

Plates

1 Introduction and Description of The Project

1.1. Brief description of The Project

The Proponent is proposing to construct a 205km, 330kV transmission line between the Dumaresq Switching Station, south of Bonshaw, and the Lismore Substation in Far North NSW (**Figure 1–1**; The Project). The Project also includes the area of the proposed Tenterfield Substation and the transmission line access tracks. The new transmission line is required to improve the reliability of electricity supply to the Far North coast. A Feasibility Study and a series of route investigations have been undertaken and an alignment has been identified for the proposed transmission line and associated works.

The Project is considered to be a 'Major Project' as defined by Ministerial Order No.96. The order determines that if in the opinion of TransGrid, the development would require an environmental impact statement to be obtained under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), the proposal is declared to be a major infrastructure development to which Part 3A applies.

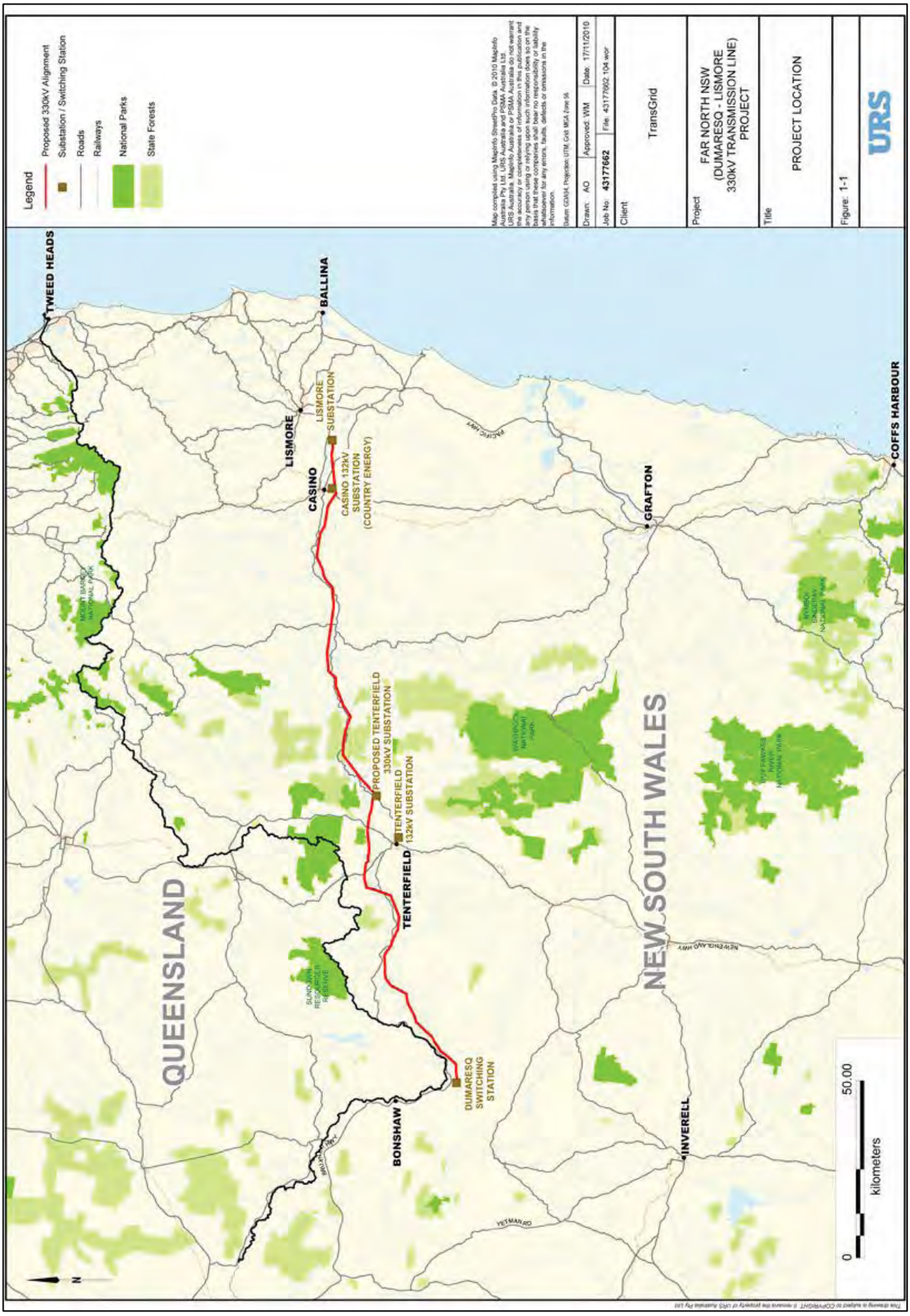
URS Australia Pty Ltd (URS) has been commissioned by TransGrid to manage and prepare an Environmental Assessment (EA) which accompanies the Proponent's application for project approval.

This heritage assessment was undertaken during 2009–2010 by OzArk Environmental and Heritage Management (OzArk) on behalf of URS and forms part of the EA. This report was written by Ben Churcher, OzArk EHM.

The Project comprises:

- the 205km, 330kV transmission line easement incorporating associated pole and tower structures. This would include:
    - Study Area West: the area between Dumaresq Switching Station and Tenterfield Substation in which environmental studies have been undertaken to assist in determining the preferred alignment of the 330kV transmission line. There is no existing transmission line within this Study Area. The assessed easement is 60m wide.
    - Study Area East: the area between Tenterfield Substation and Lismore Substation comprising the existing 132kV easement and adjacent areas to allow expansion to a 60m easement (90m from south of Casino to Lismore).
- upgrades to the Lismore Substation and the Dumaresq Switching Station. Upgrades would be within the existing substation footprints;
- establishment of a new substation, Tenterfield Substation, to maintain the existing 132kV connection to Tenterfield. The Project would include civil and electrical works at the proposed site, the preparation of a switchyard, and the supply and installation of required busbar and transformer bays; and
- establishment of on-easement and off-easement access tracks for the purposes of transmission line construction and operational maintenance.

Figure 1-1: The location of The Project within Northern NSW.



In order to accommodate the ongoing supply of electricity to Casino, TransGrid would maintain the 132kV Casino connection separately to the proposed 330kV transmission line. It is proposed that the new 330kV transmission line would be built in parallel alongside the existing 132kV transmission line for the 14km between Casino and Lismore. The current 45m easement would be extended to 90m.

The transmission line is divided into two sections for the purposes of this report:

Alignment West: this section of the transmission line is 96km in length and would extend eastward from the existing Dumaresq Switching Station to a point on the existing 132kV alignment approximately 15km north east of Tenterfield. To maintain the existing 132kV supply to Tenterfield, the Tenterfield Substation would be established at this point.

Alignment East: this section of the transmission line is 109 km in length and would extend eastward from the proposed Tenterfield Substation to the Lismore substation. The existing 132kV transmission line easement would be utilised in this section and would be widened from 45m to 60m for a distance of approximately 95km.

In order to accommodate the ongoing supply of electricity to Casino, TransGrid would maintain the 132kV Casino connection separately to the new 330kV transmission line. It is proposed that the new 330kV Dumaresq to Lismore transmission line would be built in parallel alongside the existing 132kV line for the 14km between Lismore to Casino. The current 45m easement would be extended to 90m.

1.2. Proposed Works

The proposed works involve construction of a new 330kV transmission line from Dumaresq to Tenterfield (Alignment West), construction of a new substation at Tenterfield (Tenterfield Substation), removal of the existing 132kV line from Tenterfield to the Casino Tee, and construction of a new 330kV transmission line from the new Tenterfield 330kV substation to Lismore Substation (Alignment East). The transmission line would be largely made up of concrete H Frame poles, however, at key locations, where the structure is under increased tension, larger steel lattice tower structures would be used.

For Alignment West, a new 60m easement would be created; for the Tenterfield to Casino section, the existing 45m easement would be extended to 60m; from Casino, the easement would be 90m wide and would incorporate both the existing 132kV line and the new 330kV line. Access tracks would be constructed for Alignment West, and would either be constructed or upgraded for Alignment East. Minor works to a section of 132kV transmission line between the proposed Tenterfield 330kV substation and the existing Tenterfield 132kV substation would be undertaken. This work involves replacing and restringing the existing earthwire with Optical Ground Wire (OPGW).

1.2.1. Alignment West

A new 330kV transmission line and associated easement connecting TransGrid's Dumaresq Switching Station with the proposed Tenterfield Substation would be established. After an extended period of consultation and feedback from the community, aerial surveys, detailed constraint analyses, focus groups and environmental studies, an alignment was identified on the basis that it:

- avoids dense clusters of landholdings;
- minimises the number of affected properties;
- reduces visual impacts;
- has reasonable access from existing sealed roads; and

- avoids endangered ecological communities, threatened species and habitats and heritage items wherever feasible.

1.2.2. Alignment East

The existing 132kV transmission line easement between Tenterfield and Lismore provides TransGrid with an existing, cleared corridor. Although alternate routes were considered, constraints were identified which would restrict development of the line. These constraints included existing dense habitation and topography, as the line must cross the NSW Great Dividing Range. Therefore, a widening of the existing 45m wide easement to 60m (90m from Casino to Lismore), the decommissioning of the existing 132kV line and the construction of a new 330kV transmission line was considered the most feasible option for this section of the route.

1.2.3. Substation and Switching Station works

The Project would involve modifications to the existing Dumaresq Switching Station and the Lismore Substation which currently facilitate a 132kV supply. All upgrade works would occur within the existing substation boundaries and would involve the installation of an additional transformer and other associated electrical equipment such as a switchbay. Modifications are required to harness, transport and convert the electricity received along the proposed 330kV line to a lower voltage, making it compatible for distribution into the local community.

In order to maintain the existing 132kV supply to Tenterfield, a new substation located approximately 15km north east of the town would be established. The Tenterfield Substation configuration would be determined at the detailed design stage.

The proposed works at Tenterfield Substation would include civil and electrical works, the preparation of the switchyard, and the supply and installation of required busbar and transformer bays. Works would include the construction of internal access roads, primary and secondary oil containment systems, a services building, the construction and installation of appropriate switchyard drainage, and the installation of appropriate compound fencing, security and lighting.

1.2.4. Access tracks

Access tracks are required to access the easement for both construction and maintenance purposes. As there is an existing easement between Tenterfield and Lismore, access tracks through this transmission line section are predominantly established.

The access tracks have been split into three categories depending on the level and types of works each one requires. The three categories are:

- Category 1: Minimal or no works required. Works may include removal of surface obstacles. No works required where established track/road or paddock exists;
- Category 2: Earth works required. Construction of tracks through flat or undulating timbered/rocky areas. Works on these tracks may require cut and fill, removal and levelling of rock, importing of gravel and / or some drainage control; and
- Category 3: Earth works required in wet swampy areas. Construction/upgrading of tracks through swampy or unstable ground requiring fill, compacting, drainage works and/or grading.

For this assessment a "worst case" width of 6m has been assessed during construction for Category 2 and 3 access tracks. All other access tracks were assessed as 4m wide. The environmental considerations for the access tracks are summarised in **Table 1–1** below.

Table 1-1: Summery table of access track information.

	On-easement access tracks	Off-easement access tracks	Total
Length of Category 1 access tracks (m)	41,969	62,082	104,051
Area of Category 1 access tracks (assuming 4m width) (m^2)	136,750	280,370	417,120
Length of Category 2 access tracks (m)	57,854	94,646	152,500
Area of Category 2 access tracks (assuming 6m width) (m^2)	343,685	570,463	914,148
Length of Category 3 access tracks (m)	6,554	2,337	8,891
Area of Category 3 access tracks (assuming 6m width) (m^2)	39,553	13,846	53,399
Total length of new access tracks (m)	106,377	159,066	265,442
Total area of new access tracks (m^2)	519,988	864,679	1,384,667

1.2.5. Construction

Project construction works would require a number of successive stages comprising:

- pre-construction activities including site inspections, alignment and easement surveys, line pegging, and identification and marking out of existing underground services;
- access track upgrading and/or construction as required. Temporary access tracks would be established for construction phase purposes and permanent access tracts for ongoing maintenance operations;
- establishment of a temporary site office with toilets and sufficient room for storage of plant, equipment and waste materials;
- installation of temporary and permanent fences and gates as required and agreed upon between the proponent and affected landholders;
- dismantling of the existing 132kV transmission line from the Tenterfield Substation to Casino;
- upgrade works at Lismore Substation and the Dumaresq Switching Station. Construction of Tenterfield Substation;
- vegetation clearing along the new 60m and 90m wide easements as required for access and safety purposes. TransGrid must maintain adequate clearance between transmission line conductors and vegetation;

- site preparation for steel tower and concrete H-frame foundation work including any necessary benching, excavation and controlled blasting as required for establishing work pad sites;
- installation of steel tower and concrete H-frame structures;
- conductor and earthwire stringing between each of the supporting structures;
- installation of the OPGW between Tenterfield Substation and Tenterfield 132kV Substation; and
- rehabilitation including slope stabilisation works and revegetation at work site areas.

1.2.6. Plant and equipment

Plant and equipment to be used for construction of the 330kV transmission line and associated substation and access track works would likely comprise:

- 25–30 x four wheel drive vehicles;
- 12–14 x multi-wheel drive trucks;
- 2–4 x long articulated truck for steel structure delivery;
- 10 x concrete trucks;
- 2 x truck or 4WD mounted drill rig;
- 2 x boring machine;
- 2 x winches/brakers;
- 2 x cranes;
- 2 x roller compactor;
- 2 x bulldozer;
- 5 x excavators;
- 2 x bobcat/backhoe;
- 1 x telehandler;
- 2 x timber mulchers; and
- 4 x elevated work platforms.

Exact requirements for the number of each item would depend upon the finalised work program. Construction activities may proceed at multiple locations along the alignment during different construction stages.

1.3. Relevant Legislation: Aboriginal Heritage

Baseline principles for the conservation of heritage places and relics can be found in the Burra Charter[2], which recognizes that there are places worth keeping because they can enrich our lives on many levels. The significance of such places may be embodied in fabric (physical material), environmental setting, contents, use or its meaning to people, and should be assessed through methodical data collection. Since its adoption in 1979, The Burra Charter has become the standard of best practice in the conservation of heritage places in Australia, and heritage organisations and local government authorities have incorporated the inherent principles and logic into guidelines and other conservation planning documents. The Burra Charter generally advocates a cautious approach to changing places of heritage significance. This conservative notion embodies the basic premise behind legislation designed to protect our heritage, which operates primarily at a State level.

A number of Acts of parliament provide for the protection of Aboriginal heritage at various levels of government[3]. The three most important statutes in New South Wales are the:

- *Environmental Planning and Assessment Act 1979* (EP&A Act), amended by the *Environmental Planning and Assessment Amendment (Infrastructure and Other Planning Reform) Act 2005* (EP&AA Act);
- *National Parks and Wildlife Act 1974 as amended* (NPW Act); and
- *Heritage Act 1977*.

At Commonwealth level, the following statute is relevant:

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) amended by the *Environment and Heritage Legislation Amendment Act (no. 1) 2003*.

1.3.1. State legislation

The EP&A Act is founded on the *Environmental Planning and Assessment Act 1979* that requires environmental impacts, including cultural heritage, are considered at a land-use planning and decision making level.

Under this Act, Aboriginal heritage is protected in three different ways:

1. Through planning instruments such as State Environmental Planning Policies (SEPP) and Local Environmental Plans (LEPs). Such plans outline permissible land use as well as identifying potential constraints. Section 112 (1) of the EP&A Act delineates that no approval for either prescribed developments or developments likely significantly affect the environment, may be granted without prior appropriate environmental impact assessment.
2. Section 90 of the Act (Part 4, Division 5) lists impacts to the environmental resource, including cultural heritage, which must be considered before development approval is granted.

[2] The Burra Charter defines the basic principles and procedures to be followed in the conservation of all kinds of places such as monuments, buildings, Aboriginal sites, roads, archaeological sites, whole districts or even regions. It was first adopted in 1979, based on the Australian ICOMOS (International Council on Monuments and Sites) review (1977) of the 1966 Venice Charter (Australian ICOMOS Inc. 1998).

[3] NSW Heritage Office 1998: *Living with Aboriginal Culture*, p. 3.

3. All State government agencies acting as determining authorities on environmental issues must consider a range of community and cultural factors, including Aboriginal heritage, in their decision-making process. The factors to be considered in such assessments are set out in the EP&A Regulations (1980), Part VII.

Part 3A consolidates the assessment and approval regime for all major projects previously addressed under Part 4 (Development Assessment) or Part 5 (Environmental Assessment) of the *Act*. Part 3A applies to major State government infrastructure projects, development previously classified as State significant, and other projects, plans or programs of works declared by the Minister. Part 3A provides a streamlined assessment and approvals regime for major infrastructure and other projects of State or regional significance. They also improve the mechanisms available under the EP&A Act to enforce compliance with approval conditions or the *Act*.

Amended during 2010, the *National Parks and Wildlife Act 1974* provides for the protection of Aboriginal objects (sites, objects and cultural material) and Aboriginal places. Under the Act (s.5), an Aboriginal object is defined as; any deposit, object or material evidence (not being a handicraft for sale) relating to indigenous and non-European habitation of the area that comprises New South Wales, being habitation both prior to and concurrent with the occupation of that area by persons of European extraction, and includes Aboriginal remains.

An Aboriginal place is defined under the *National Parks and Wildlife Act 1974* as an area which has been declared by the Minister administering the Act as a place of special significance for Aboriginal culture. It may or may not contain physical Aboriginal objects.

As of 1 October 2010, it is an offence under Section 86 of the *National Parks and Wildlife Act 1974* to 'harm or desecrate an object the person knows is an Aboriginal object'. It is also a strict liability offence to 'harm an Aboriginal object' or to 'harm or desecrate an Aboriginal place', whether knowingly or unknowingly. Section 87 of the Act provides a series of defences against the offences listed in Section 86, viz:

- The harm was authorised by and conducted in accordance with the requirements of an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the Act;
- The defendant exercised 'due diligence' to determine whether the action would harm an Aboriginal object; or
- The harm to the Aboriginal object occurred during the undertaking of a 'low impact activity' (as defined in the regulations).

Under Section 89A of the Act, it is a requirement to notify the OEH Director-General of the location of an Aboriginal object. Identified Aboriginal items and sites are registered with the NSW OEH on the Aboriginal Heritage Information Management System (AHIMS).

The *Heritage Act 1977* (amended 1999) protects the State's natural and cultural heritage and contains measures to protect archaeological remains. Generally, Aboriginal sites are protected by the NPW Act, but if certain sites are deemed as having great significance, they can be further protected by a heritage order, issued by the Minister, on the advice of the Heritage Council.

Applicability to the Study Area

The current project is governed by Part 3A of the EP&AA Act. Consequently no permits are required under the NPW or Heritage Acts and all impacts and heritage management is undertaken through an approved Aboriginal Heritage Management Plan.

1.3.2. Commonwealth legislation

Environment Protection & Biodiversity Conservation Act 1999 (EPBC Act)

The EPBC Act protects the environment, particularly matters of national environmental significance. Under the EPBC Act, definitions of the 'environment' include the following:

- Ecosystems and their constituent parts, including people and their communities;
- Natural and physical resources;
- The qualities and characteristics of locations, places and areas;
- Heritage values of places; and
- The social, economic and cultural aspects of a thing mentioned in the above points.

The EPBC Act provides that any action assessed as likely to have a significant effect on listed matters of national environmental significance is to be known as a *controlled action*, and may only proceed with the Minister of the Environment's approval.

In January 2004 changes to the protection of national heritage came into effect through amendments to the EPBC Act (*Environment and Heritage Legislation Amendment Act (no. 1) 2003*).

Aboriginal and Torres Strait Islander Heritage Protection Amendment Act 1987

The Aboriginal and Torres Strait Islander Heritage Protection Amendment Act of 1987 is a Federal act administered by the Aboriginal and Torres Strait Islander Commission and provides protection for Aboriginal heritage in circumstances where such protection is not available at a state level. This Act comes under Commonwealth jurisdiction which means that it can override state and territory provisions.

Applicability to the Study Area

No heritage places or sites within the Study Area are listed under the EPBC Act.

All sites identified are protected under NSW State legislation and should not require implementation of the ATSIHPA Act.

1.4. Relevant Legislation: Historic Heritage

Cultural heritage is managed by a number of State and National Acts. The following sections summarise the legislative requirements in relation to heritage assets and development proposals.

1.4.1. State legislation

NSW Heritage Act 1977

This Act established the Heritage Council of NSW. The Heritage Council's role is to advise the government on the protection of heritage assets, make listing recommendations to the Minister in relation to the State Heritage Register, and assess/approve/decline proposals involving modification to heritage items or places listed on the Register.

Most proposals involving modification are assessed under Section 60 of the *NSW Heritage Act 1979*.

Developments classified as Major Projects or Critical infrastructure are assessed under Part 3A of the *Environmental Planning and Assessment Act 1979* and hence require no permits under the heritage Act.

Automatic protection is afforded to 'relics', defined as 'any deposit or material evidence relating to the settlement of the area that comprised New South Wales, not being Aboriginal settlement, and which holds State or Local significance' (note: formally the Act protected any 'relic' that was more than 50 years old. Now the age determination has been dropped from the Act and relics are protected according to their heritage significance assessment rather than purely on their age). Excavation of land on which it is known or where there is reasonable cause to suspect that 'relics' will be exposed, moved, destroyed, discovered or damaged is prohibited unless ordered under an excavation permit.

Environmental Planning and Assessment Act 1979 (EP&A Act)

This Act established requirements relating to land use and planning. The four areas controlled by the Act are:

- Part 3: environmental planning instruments, including cultural heritage;
- Part 3A: approvals process for Major Projects;
- Part 4: local government development assessments, including heritage. May include schedules of heritage items; and
- Part 5: environmental impact assessment requirements (for those developments not assessed under Part 3A or requiring consent under Part 4). State owned heritage items listed on LEPs are governed by Part 5.

1.4.2. Commonwealth legislation

Environmental Protection and Biodiversity Conservation Act 1999.

Amendments in 2003 established the National Heritage List and the Commonwealth Heritage List, both administered by the Commonwealth Department of the Environment, Water, Heritage and the Arts (DEWHA). Ministerial approval is required for proposals involving significant impacts to National/Commonwealth heritage places. Additionally, the Australian Heritage Council maintains the Register of the National Estate (RNE).

Australian Heritage Council Act 2003

This Act established the Australian Heritage Council as an independent advisory body regarding National/Commonwealth heritage places. The Council conducts assessments of listing nominations, advises the Minister for Environment and Heritage, maintains the RNE, and promotes the assessment and conservation of heritage items.

Applicability to the Study Area

State legislation

No State listed items are to be impacted by The Project.

The Project is governed by Part 3A of the EP&A Act. Consequently no permits are required and all minor heritage issues are managed through the Statement of Commitments and a heritage management plan.

Commonwealth legislation

No heritage places or sites within the Study Area are governed by the EPBC Act.

1.5. OzArk EHM involvement

This assessment was undertaken by OzArk archaeologists Dr Jodie Benton, Ben Churcher (BA Hons) and Pauline Hams. Phillip Cameron was Project Manager. Ben Churcher is the author this report and it was reviewed by Dr Jodie Benton.

1.6. Date of Aboriginal heritage assessment

The heritage assessment was carried out over six separate field assessments:

- **Easement Survey week 1**: 14 September–18 September 2009
- **Easement Survey week 2**: 28 September–2 October 2009
- **Easement Survey week 3**: 31 November–4 December 2009
- **Easement Survey week 4**: 7 December–11 December 2009
- **Access tracks survey 1**: 18 October–23 October 2010
- **Access tracks survey 2**: 2 November–5 November 2010

1.7. Aboriginal community involvement

The Project falls within the boundaries of the Casino, Jubullum and Moombahlene Local Aboriginal Land Councils (LALCs).

Consultation was initiated for The Project according to the *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (DEC for Department of Planning, 2005 Draft) which refers back to the *Interim Community Consultation Requirements for Applicants* (ICCRs, DEC 2005). These guidelines define a three stage process for the identification of potential Aboriginal community stakeholders and for ongoing consultation. It is these stages that are referred to throughout the remainder of this section.

In accordance with Stage 1 of the guidelines, advertisements seeking expressions of interest from Aboriginal community organisations or individuals were placed in the Tenterfield, Casino and Lismore local papers. Stage 1 notification letters were also sent to Aboriginal groups or individuals known to have an interest in Aboriginal heritage within the study area and to all government agencies, councils etc. as required. As a result of the Stage 1 notification phase, eleven groups and two individuals (total 13) were identified, forming the Registered Stakeholder group. Eight additional registrations were received after Stage 1 had closed, bringing the number of Registered Stakeholders to nineteen (19). The Stage 1 letters also provided a basic introduction to the project and general community meetings about the project have been held by The Proponent in the Tenterfield area.

Stage 2 letters describing the methods to be employed for the archaeological assessment and asking for any project specific cultural information were then issued to all Registered Stakeholders with a 21 day response time. The Stage 2 letters asked for any knowledge of cultural heritage within the project area that the stakeholders may have and would like considered in the assessment. If so, the letter noted that OzArk would arrange meetings on an 'as need' basis. The only responses to the Stage 2 letters, however, revolved around service provision for the archaeological assessment (issues to do with insurance, being fit for work and daily rates).

On 1st March 2011, an earlier draft of this report was sent out to all stakeholders who had participated in the field assessments for Stage 3 review, while notifications of the availability of the draft report

were also sent to all other Registered Stakeholders. A three week time period was given for response, and it was noted in the accompanying letter that no response was considered to mean that stakeholders were satisfied with the draft report.

Both Ashford LALC and Murray Roberts, representing the Widajabul Aboriginal People, contacted the office to obtain a hard copy, while Jubullum LALC were sent an electronic version at their request. In total nine (9) copies of the report were distributed.

Since no feedback was received within the allocated time period, OzArk subsequently contacted all Registered Stakeholders who had a copy of the report by phone or email to follow up on the report's distribution and seek comment. In summary, concerns raised by the organisations included;

1. The need to revisit (some) of the recorded sites to assist them in their management recommendations (Maree Aboriginal Corp Qld and Kambuwal Aboriginal Corp.); and
2. The importance of having experienced Indigenous Site Officers involved in any collection or monitoring works which may take place in the future (Edgerton-Kwiembal People); and
3. The need for more survey outside the project impact area as potentially the project area may expand and re-survey of additional areas will be required (Widajabul Aboriginal People).

In response to the first of these points, OzArk notes that both Maree Aboriginal Corp. and Kambuwal Aboriginal Corp. had significant representation within the survey team. The site officers who participated were very experienced, and as such it was considered that they were able to contribute their cultural heritage knowledge to the Project as well as feed back to their respective organisations in relation to recorded sites and results of the field assessments. Both Elders from these organisations, Robert Brown and Barry Brown, have discussed the sites and the survey with their representatives (Leroy Brown and Andrew Tom Brown) and received copies of the draft report that documented these findings.

In relation to point 2 above, it is further noted in that management options proposed in this report include the development of an Aboriginal Heritage Management Plan (AHMP), in consultation with the Aboriginal Registered Stakeholders. Any post-approval fieldwork in relation to the AHMP activities will be carried with full participation of experienced Registered Stakeholder representatives.

Finally, referencing point 3, there are currently no plans to expand the Project Area. If expansion was required, any changes would be managed in accordance with the managing change process detailed in **Chapter 19**, **Volume 1 of the EA**, including consultation with appropriate stakeholders.

Appendix 2 contains the detailed Aboriginal community communication log for this Project, while **Appendix 3** contains the Aboriginal community correspondence. **Table 1–2** records all Registered Stakeholder parties and briefly summarises their participation to date.

Table 1-2: Registered Stakeholders and their participation in the heritage assessment process.

Organisation	Area	Involvement in the heritage assessment process.
Casino LALC	Casino	A representative of the CLALC accompanied the survey team during easement survey week 1 and access tracks survey 2. Draft report was provided for review, no comments were received.
Moombahlene LALC	Tenterfield	The MLALC did not provide a representative to participate in the field survey due to issues surrounding their Workers Compensation insurance. Moombahlene LALC sent a representative to participate in access tracks survey 2. Draft report was provided for review, no comments were received.
Kwiembal Elders Indigenous Group	Ashford/Tenterfield	Representatives of Kwiembal Elders Indigenous Group participated during easement survey 3 and access tracks survey 1. Draft report was provided for review, no comments were received.
Edgerton-Kwiembal People (Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corporation)	Ashford/Tenterfield	Representatives of the Edgerton-Kwiembal People (Edgerton-Kwiembal Environmental, Heritage & Cultural Ab.Corp) participated during easement survey 3, easement survey week 4 and access tracks survey 1. Draft report was provided for review, comments received, see Section 1.7 and Appendices 2 and 3.
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	Bonshaw NSW to New England Highway	Andrew Brown, representative of the Kambuwal Aboriginal Corporation for Culture, Heritage & Land participated during easement survey 3, easement survey week 4 and access tracks survey 1. Draft report was provided for review, comments received, see Section 1.7 and Appendices 2 and 3.
Maree Aboriginal Corporation	Stanthorpe/Tenterfield	Representatives of the Maree Aboriginal Corporation participated during easement survey 3, easement survey week 4 and access tracks survey 1. Draft report was provided for review, comments received, see Section 1.7 and Appendices 2 and 3.
Aboriginal Elder Lilly Bartholomew	Tenterfield	Unable to participate in the field survey due to issues surrounding Workers Compensation insurance. Notified of the availability of draft report for review, however no comments were received.
Aboriginal Elder Bertha Daley	Tenterfield	Unable to participate in the field survey due to issues surrounding their Workers Compensation insurance. Notified of the availability of draft report for review, however no comments were received.
Widajabul Aboriginal People	Lismore/Casino	Representatives of Widajabul Aboriginal People did not participate in the heritage assessment as WP boundaries are outside the Study Area. Draft report was provided for review, comments received, see Section 1.7 and Appendices 2 and 3.
Ashford LALC	Ashford/Tenterfield	Representatives of the ALALC did not participate in the heritage assessment as their boundaries are outside the Study Area. Draft report was provided for review, no comments were received.
Ngulingah LALC	Lismore	Representatives of the NLALC did not participate in the heritage assessment as their boundaries are outside the Study Area. Notified of the availability of draft report for review, however no comments were received.

Organisation	Area	Involvement in the heritage assessment process.
Jubullum LALC	Tabulam	The JLALC were not able to provide representatives for either the easement survey or access tracks survey 2 as none were available. Draft report was provided for review, no comments were received.
Bandjalang People	Lismore/Casino	Did not participate on the survey as no response to any OzArk communication was received from this group, however notification was sent of the availability of the draft report for review, no comments were received.
Ron Connors (Aboriginal Individual)	Ashford/Tenterfield	Due to late registration, notified of the availability of the draft report for review, however no comments were received.
Ivan Connors (Aboriginal Individual)	Ashford/Tenterfield	Due to late registration, notified of the availability of the draft report for review, however no comments were received
Hilda Connors	Ashford/Tenterfield	Due to late registration, notified of the availability of the draft report for review, however no comments were received
Olivia Connors	Ashford/Tenterfield	Due to late registration, notified of the availability of the draft report for review, however no comments were received
Bill Glover	Ashford/Tenterfield	Due to late registration, notified of the availability of the draft report for review, however no comments were received
Keith Connors	Ashford/Tenterfield	Due to late registration, notified of the availability of the draft report for review, however no comments were received

1.8. Glossary of terms used in this report

Archaeological terms

- **Site**: Specifically used to identify a place where archaeological deposits, potential archaeological deposits and/or artefacts have been recorded.
- **Historic site**: Otherwise called a non-Indigenous site, a historic site refers to an archaeological site created by non-Indigenous people in the period following 1770.
- **Indigenous historic site**: A site created in the post-contact period but primarily used by Aboriginal people. A mission site is a good example, as are sites that contain artefacts belying contact with non-Indigenous people (such as tools fashioned from tin cans or glass).
- **Archaeological deposit**: Refers to sub-surface deposits, such as identifiable stratification of soil layers, created by human occupation. Can refer to Aboriginal and historic sites.
- **Disturbed site/deposit**: Refers to a site or deposit that has been disturbed from its original state by later actions such as erosion or farming activity.
- **Open site**: otherwise called an 'artefact scatter' is used to designate a discrete area where there is a surface exposure of two or more artefacts of Aboriginal origin.
- **Isolated find**: A single occurrence of an artefact within the landscape. In the context of this report, isolated finds are of Aboriginal origin.
- **Modified tree**: Includes scarred trees and carved trees, most often of Aboriginal origin, but can also be of historic origin such as trees containing surveyor's marks.
- **Resource gathering site**: Refers to Aboriginal sites such as toe holds in trees for honey gathering or rock-built fish traps.
- **Shelter site**: In suitable topography where the conditions allow a natural shelter to be formed in cliffs or escarpments, sites can be located within the shelter. Site types are either with or without art (i.e. rock art of any style) and to be classified as a 'site' there must be either evidence of artefacts or the suggestion that deposits exist that may yield artefacts. Primarily of Aboriginal origin, but not exclusively.
- **Ground Surface Visibility**: This term refers to the amount of actual ground surface that can be viewed by the surveyor. In areas where there is dense ground vegetation, dense leaf litter or imported materials, such as gravels brought in for tracks or bitumen road surfaces, the true surface of the ground cannot be viewed or is at minimum, obscured. As artefacts relating to heritage sites may be visible on an exposed ground surface, these will be obscured from view if the ground surface is partially or wholly covered and hence ground surface visibility is a factor that can relate to the successfulness of site detection.
- **PAD**: Acronym for Potential Archaeological Deposit. PADs are designated on the basis that the archaeologist has reasonable grounds to suspect that an archaeological site exists in a certain area but is prevented from a full investigation by poor ground surface visibility. In some instances there may be an open site with PAD. This means that in one area erosion, for example, has uncovered an artefact scatter (the open site) but, in the archaeologist's

opinion, the site extends beneath areas that may be unobservable due to grass cover (the PAD). A PAD will satisfy all of the following criteria:

- is contained in a discrete landform (i.e. is not part of a broad landform feature but is an identifiable feature such as a raised terrace at the junction of two watercourses);
- occupies a suitable landform (often adjacent to a watercourse, but not exclusively);
- displays evidence of soil depth;
- displays the possibility of undisturbed *in situ* deposits; and
- has low ground surface visibility.

PADs are treated with the same legislative protection as sites and are registered with OEH.

- **SAL**: Acronym for Sensitive Archaeological Landform. SALs are used as management tools in areas where the archaeologist believes there is a possibility of a disturbed site or isolated finds being present but is prevented from a full investigation by poor ground surface visibility. A SAL will satisfy all of the following criteria:
  - occupies a suitable landform (often adjacent to a watercourse, but not exclusively);
  - is not part of a discrete landform (i.e. the area of the landform within a particular Study Area is identical to a broad landform feature that extends beyond the Study Area. An example may be the bank of a river that is identical to bank areas beyond the Study Area);
  - has low ground surface visibility; and
  - has evidence of disturbance/lack of soil depth.

  SALs are not treated with the same legislative protection as sites and are not registered with OEH. SALs will be managed with particular recommendations but, in the archaeologist's opinion, do not display enough features to designate and manage the area as a site or PAD.

References to Study Area

- **Study Area** = The Project area = transmission line easement, Tenterfield Substation and access tracks.
- **Study Area West** = Alignment West = area of The Project between the Dumaresq Switching Station and the proposed Tenterfield Substation.
- **Study Area East** = Alignment East = area of The Project between the proposed Tenterfield Substation and Lismore Substation.
- **Easement survey** = heritage assessment undertaken across the entire transmission line easement including the proposed Tenterfield Substation area.
- **Access tracks survey** = heritage assessment of the transmission line access tracks.

2 The Study Area

2.1. Location

The Project extends eastwards from the Dumaresq Switching Station to the Lismore Substation in Far North NSW. In total, the proposed easement of The Project covers 205km (**Figure 1–1**).

2.2. Topography of the Study Area

2.2.1. Study Area West

Study Area West falls into the New England and Nandewar Bioregions. These regions comprise a stepped plateau of hills and plains with elevations between 600m and 1500m on Permian sedimentary rocks, intrusive granites and extensive Tertiary basalts.

Figure 2–1 (sourced from Google Earth) displays the major topographical and hydrological features of Study Area West. The hydrological features of the Dumaresq and Mole River systems are shown and the map is divided into four zones:

- Zone A: Largely cleared of native vegetation. Riverine environment. On transition between flat and steeply rising land;
- Zone B: Largely cleared of native vegetation. Very steep hills;
- Zone C: Largely cleared of native vegetation. Gentle to steep undulating hills; and
- Zone D: Largely cleared of native vegetation, although pockets of regenerating woodland present. Gentle undulating hills to reasonably flat (although elevated) terrain.

An indication of these landforms can be seen on the aerials provided in **Appendix 4**.

2.2.2. Study Area East

Study Area East largely falls into the North Coast Bioregion. The North Coast Bioregion covers northern NSW from the shoreline to the Great Escarpment. Typically, there is a sequence from coastal sand barrier, through low foothills and ranges, to the steep slopes and gorges of the Escarpment itself, with rainfall increasing inland along this transect.

Figure 2–2 (sourced from Google Earth) displays the major topographical and hydrological features crossed by the easement through the Study Area East (aerials giving topographic indications are provided in **Appendix 4**). The hydrological features of the Richmond and Clarence River systems are shown and the map is divided into three zones:

- Zone E: Largely cleared of native vegetation, gentle to steeply undulating hills;
- Zone F: Native vegetation largely intact, steep hills/mountains; and
- Zone G: Largely cleared of native vegetation, flat in the east, gentle to steeply undulating hills in the west.

Figure 2-1: Aerial view of Study Area West showing the major topographical/hydrological features.

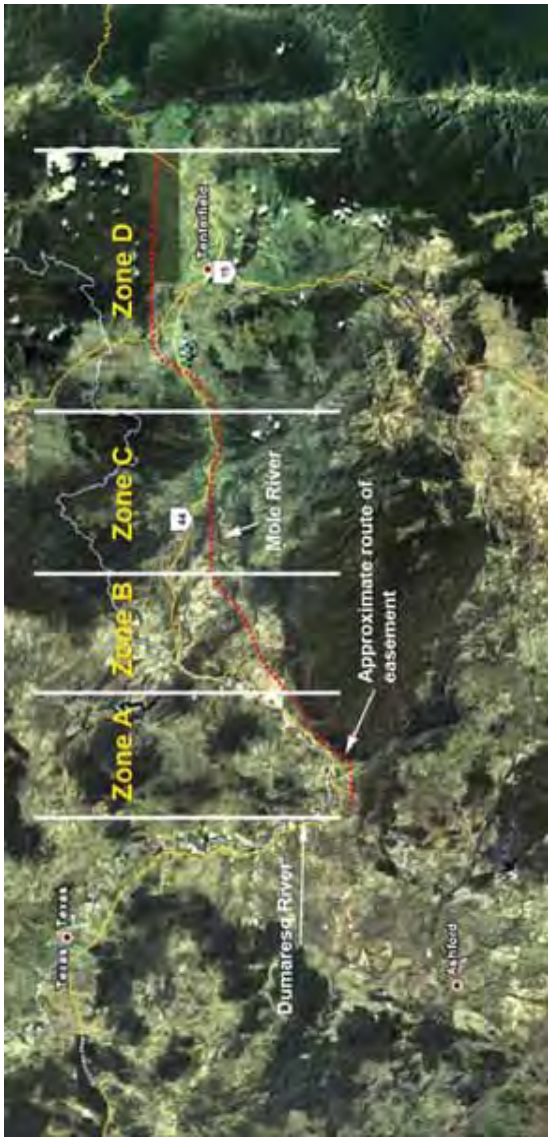
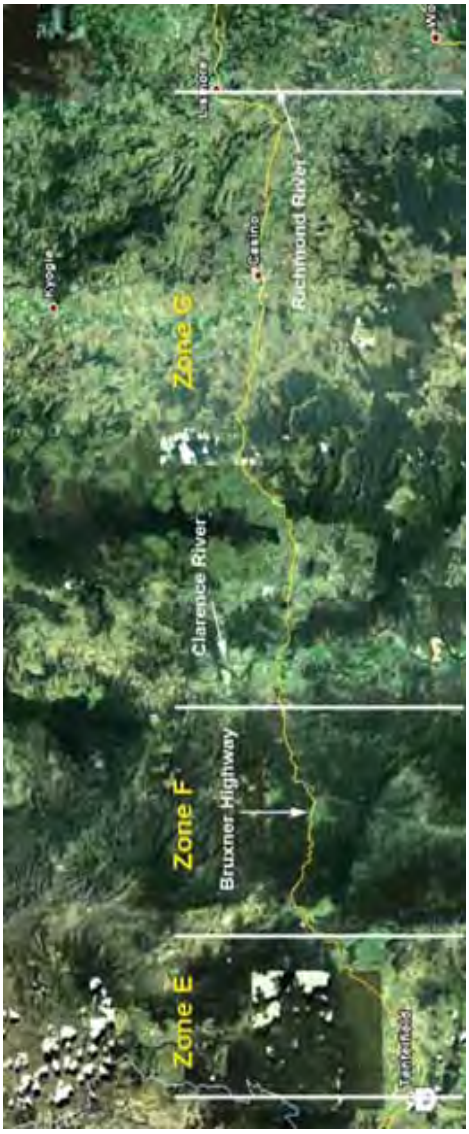


Figure 2-2: Aerial view of Study Area East showing the major topographical and hydrological features.



2.3. Hydrology of the Study Area

Alignment West would intersect 24 named and 45 unnamed first/second order streams, intermittent or ephemeral creeks, or visible drainage lines, including Reedy Creek, the Mole River and Tenterfield Creek.

Alignment East would intersect 16 named and more than 50 unnamed first order streams, intermittent or ephemeral creeks, or visible drainage lines. Major rivers intersected include the Clarence and Richmond rivers. Note that the current 132kV line currently traverses these surface water features.

A greater percentage of Alignment West is in proximity to water courses when compared to Alignment East. The transmission line in Alignment West somewhat parallels the Dumaresq River for approximately 40km and, while away from the river, the transmission line bisects many of the tributaries flowing north to the Dumaresq River. Further east, Alignment West bisects the Mole River,

an area where previous archaeological recordings demonstrate Aboriginal occupation. In the east of Alignment West, the transmission line somewhat parallels Tenterfield Creek for much of its length between structure W114 and structure W222.

In Alignment East the Study Area intersects several large water courses including the Clarence and Richmond Rivers. However, the Study Area does not parallel these river systems. Instead the Study Area only includes a limited portion of river bank in areas that are intensively used for agriculture and often offer no ground surface visibility. As a consequence, the probability of locating Aboriginal sites in Study Area East is diminished when compared to Study Area West.

2.4. Vegetation of the Study Area

2.4.1. Study Area West

Granitic soils derived from the prominent New England batholith support a variety of open forests and woodlands.

Two vegetation communities characterise much of Study Area West: New England Dry Sclerophyll Forests and the Grassy Woodlands.

In the New England Dry Sclerophyll Forests the common species are *Eucalyptus acaciiformis* (wattle-leaved peppermint), *E. caliginosa* (broad-leaved stringybark), *E. dalrympleana* subsp. *heptantha* (mountain gum) and *E. radiata* subsp. *sejuncta* (narrow-leaved peppermint), with smaller trees of *Banksia integrifolia* var. *montana* in the lower canopy. On flatter areas *Eucalyptus nobilis* (ribbon gum) may occur, while frost hollows are dominated by *E. nova-anglica* (New England peppermint) and *E. pauciflora* (white sally).

New England Dry Sclerophyll Forests intergrades with Grassy Woodlands, Grassy Wet Sclerophyll Forests and Shrubby Dry Sclerophyll Forests in mosaic governed by regional variation in soils and rainfall.

The Grassy Woodlands are a widespread and quintessential feature of rural Australia. Dominated by eucalypts, typically boxes and red gums, grassy woodlands have a relatively open canopy with sparsely distributed shrubs and a conspicuous and diverse ground cover of tussock grasses and herbs. Ephemeral grasses and herbs appear from seed banks following rain, while ground orchids and lilies emerge after fires.

Originally distributed as an extensive band, ‘the sheep-wheat belt’, running from southern Queensland to central Victoria, grassy woodlands has been extensively modified for agriculture. Remnants now occur as small patches in varying states of degradation, the most botanically valuable occurring in areas that have escaped land clearing, pasture improvement and overgrazing such as travelling-stock reserves, cemeteries and churchyards.

2.4.2. Study Area East

Prior to European settlement, much of Study Area East was covered with a diverse range of forest types, including Dry and Subtropical Rainforest, Wet and Dry Sclerophyll (eucalypt) Forests and the Big Scrub Lowland Subtropical Rainforest. These forest types can still be found in this region, although much reduced in extent.

The typical habitat of the subtropical rainforest consisted of the warmer areas from sea level to 900m elevation, high rainfall (>1300mm), suitable soils and appropriate shelter.

Major occurrences of subtropical rainforest in the Lismore area can be found in sheltered gullies, along the Wilson River, in the Nightcap Range and within basaltic lowlands of the Richmond River.

Typical tree species are very diverse, however the most common species often include: Boojongs *(Argyrodendron spp.)*, Yellow Carrabeen *(Sloanea woollsii)*, Rosewood *(Dysoxylum fraseranum)*, Figs *(Ficus spp.)*, Lilly Pillies *(Acmena and Syzygium spp.)*

Study Area East (particularly the very eastern portions) is within what was once Australia's largest area of tall subtropical rainforest which once covered about 75,000 hectares; its valuable cabinet timber species, in particular red cedar, were the mainstay of the economy in the region during early years of European occupation. It came to be known as 'the Big Scrub'

Following European settlement, which began in the 1840s, 99.86% of the Big Scrub was cleared for agricultural use, particularly dairying, although there remain some remnants (totalling less than 100 hectares in area) of these communities, which contain many rare and endangered species. However, all of the eleven remnant patches of Big Scrub vegetation left are isolated, most are less than 20 hectares in size and are under threat from weed encroachment, pollution, wind, drought, stock, clearing and residential expansion.

The Big Scrub would have provided extensive food and material resources for the traditional Aboriginal groups of the area.

To date, there has been little evidence to indicate that Aboriginal groups habitually camped within the Big Scrub. In contrast, areas on the coastal plain appear to have been preferred as occupation sites and areas of focussed Aboriginal activity (Piper 1997: 19).

2.5. Climate of the Study Area

2.5.1. Study Area West

Study Area west falls into the New England and Nandewar Bioregions. These bioregions lie mainly in the temperate to cool temperate climate zone of NSW, which is characterised by warm summers, with uniform rainfall generally occurring in summer. A warmer, sub-humid climate is present in the north eastern edge of the bioregion on the boundary of the North Coast Bioregion. Patches of montane climate occur at higher elevations, and these are characterised by mild summers and no dry season.

2.5.2. Study Area East

Study Area East largely falls into the North Coast Bioregion. The general trend in this bioregion from east to west is from a sub-tropical climate on the coast with hot summers, through sub-humid climate on the slopes to a temperate climate in the uplands in the western part of the Study Area, characterised by warm summers and no dry season.

2.6. Existing levels of disturbance

There are varying levels of disturbance to the ground surface that may affect the integrity of Aboriginal sites and objects across the Study Area.

In Study Area East large scale clearing of native vegetation has occurred and the land has been intensively utilised for grazing and cropping purposes. In the east of Study Area East much of the land has been ploughed and sown (**Plate 2–1**) while further west the land is devoted to grazing (**Plate 2–2**). The easement, in places, cuts through woodland (**Plate 2–2**) but, in the main, this is regenerating woodland.

In the west of Study Area East, the terrain is steeper with many areas cleared of native vegetation and now used for grazing (**Plate 2–3**). Surrounding the town of Drake the easement crosses State Forest that has been recently logged and now consists (in the environs of the easement) of regrowth woodland (**Plate 2–4**).

In Study Area West the land has also been extensively cleared (**Plate 2–5**) and is predominantly used for grazing. In places, such as to the west of Mt Lindsay Rd, the proposed easement traverses areas of woodland that appear to be in their natural state, but from information given by the local landowner, even this has largely regenerated over the past 50–60 years (**Plate 2–6**).

In the western portion of Study Area West, the terrain again becomes steeper with intermittent patches of regrowth/mature woodland and paddocks cleared for grazing (**Plate 2–7**). In the very west of Study Area West, the terrain again flattens out but it has been extensively cleared and grazed (**Plate 2–8**).

As well as clearing, roads, fences, dams and farm tracks have been constructed across the easement in both study areas.

As a result, the easement in Study Area East and the proposed easement in Study Area West has undergone moderate prior disturbance that would have affected certain site types.

Due to the large scale clearing of trees, sites such as modified trees would have been removed from the landscape and other sites, such as open sites, stone arrangements and Bora Grounds may have been destroyed or altered through the actions of tree clearing, stock trampling and erosion.

2.7. Conclusion

The fertile soils of Study Area East supported a greater diversity of vegetation than the more sandy soils that predominate in Study Area West. Additionally the terrain is flatter in Study Area East than in Study Area West, particularly in the eastern portions of Study Area East. In these areas ground surface disturbance by agricultural activity is the greater.

In terms of traditional Aboriginal occupation patterns, the food resources of Study Area East would have been greater than the resources located in Study Area West. However, the dense nature of the native vegetation in Study Area East would have limited the spread of Aboriginal occupation concentrating it to coastal areas and along rivers. While the topography and soils in Study Area West were less conducive to the production of food resources, the more open nature of the native vegetation would have allowed access to more areas by traditional Aboriginal groups. Further, the topography of the Study Area, in both the east and west portions, does not lend itself to the presence of certain site types, such as shelter sites/art sites, as suitable rock escarpments are not located within the Study Area.

3 Database Searches, Archaeological Background and Survey Methodology

3.1. Desktop database searches undertaken: Aboriginal Heritage

Before the detailed heritage assessment was undertaken, OzArk prepared an *Indigenous & Non-Indigenous Heritage Review* that identified possible heritage constraints in the preferred easement corridor (OzArk 2009b). This desktop study undertook the following searches of databases to identify any potential issues (**Table 3–1**).

Table 3-1: Desktop-database search results.

Name and date of database searches	Type of search	Search Results	Applicability to the Study Area
Australian Heritage Database http://www.environment.gov.au/heritage/ahdb/ September 2009	Inverell LGA Tenterfield LGA Kyogle LGA Richmond Valley LGA Lismore LGA	16 places are listed within the Inverell LGA. 34 places are listed within the Tenterfield LGA. 18 places are listed within the Kyogle LGA. 30 places are listed within the Richmond Valley LGA. 46 places are listed within the Lismore LGA.	None of the listed places appear within the Study Area. However, some places (such as: 1/01/119/0004 - Indigenous Place: Casino and 1/02/158/0016 - Indigenous Place: Tabulam) may be close to the Study Area although the Australian Heritage Database gives no location details.
NSW Heritage Office State Heritage Register and State Heritage Inventory http://www.heritage.nsw.gov.au/ September 2009	Inverell LGA Tenterfield LGA Kyogle LGA Richmond Valley LGA Lismore LGA	Two places are listed under the Heritage Act, 168 places listed under local government or State agencies within the Inverell LGA. Six places are listed under the Heritage Act, 65 places listed under local government or State agencies within the Tenterfield LGA. Three places are listed under the Heritage Act, three places listed under local government or State agencies within the Kyogle LGA. Seven places are listed under the Heritage Act, 71 places listed under local government or State agencies within the Richmond Valley LGA. Five places are listed under the Heritage Act, 163 places listed under local government or State agencies within the Lismore LGA.	No places listed by the Heritage Office NSW appear within the Study Area
National Native Title Claims Search http://www.nntt.gov.au/Applications-And-Determinations/Search-Applications/Pages/Search.aspx September 2009	Inverell LGA Tenterfield LGA Kyogle LGA Richmond Valley LGA Lismore LGA	No active Native Title Claims exist in the Inverell LGA. One active Native Title Claim (NC97/31) exists in the Tenterfield LGA. One active Native Title Claim (NC01/7) exists in the Kyogle LGA. Five active Native Title Claims (NC 08/2, NC01/7, NC98/19, NC96/16, NC96/8) exist in the Richmond Valley LGA. Three active Native Title Claims (NC08/2, NC01/7, NC98/19) exist in the Richmond Valley LGA.	NC01/7 and NC98/19 are located within Study Area East.

Name and date of database searches	Type of search	Search Results	Applicability to the Study Area
Department of Environment, Water Resources, Heritage and the Arts (DEWHA) Protected Matters (EPBC Act) Database; http://www.environment.gov.au/erin/ert/epbc/index.html September 2009	Inverell LGA Tenterfield LGA Kyogle LGA Richmond Valley LGA Lismore LGA	Two historic sites and four Indigenous sites are protected by the EPBC Act within Inverell LGA. Eight historic sites and two Indigenous sites are protected by the EPBC Act within Tenterfield LGA. One historic site and three Indigenous sites are protected by the EPBC Act within Kyogle LGA. Five historic sites and three Indigenous sites are protected by the EPBC Act within Richmond River LGA. Nine historic sites and two Indigenous sites are protected by the EPBC Act within Lismore LGA.	None of the historic or Indigenous places on the RNE occur near the Study Area.
Department of Environment, Climate Change and Water (OEH) Aboriginal Heritage Information Management System (AHIMS); April 2009	5km north & south of Study Area East. Approximately 30km north and south of Study Area West.	93 Aboriginal sites have been previously recorded within the search area.	No previously recorded sites are located within the Study Area (see **Section 4.4**)
Local Environment Plans	Inverell Council LEP of 1998 Tenterfield Council LEP 1996 Kyogle Council LEP (in prep) Richmond Valley Council LEP 1992 Lismore Council LEP of 2000		None of the Indigenous or historic places recorded in the LEPs occurs near the Study Area. Kyogle Council LEP not yet available.
S170 RTA Heritage and Conservation Register http://www.rta.nsw.gov.au/environment/heritage/heritageconservreg/index.html?elid=2	Northern Region		No places within the search are within the Study Area.

3.2. Desktop database searches undertaken: Historic Heritage

Searches were made of the Australian Heritage Database, the NSW Heritage Office State Heritage Register and State Heritage Inventory, the Department of Environment, Water Resources, Heritage and the Arts (DEWHA) Protected Matters (EPBC Act) Database; Local Environment Plans (for Inverell, Tenterfield, Kyogle, Richmond Valley, Lismore LGAs) and the S170 RTA Heritage and Conservation Register (see **Table 3–1**).

Obtaining location co-ordinates for these historic sites is challenging as detailed location information is rarely presented with listings. The majority of items listed, however, are located within townships. Of those in rural areas, none appear to be within the Study Area. This is to some extent confirmed by the plotting of some historic sites by Connell Wagner (2006, Figure 4.4) and it was also noted in text that the original selection of potential corridors was undertaken to avoid such known sites (Connell Wagner 2006).

Also of note is that some Natural Heritage listings are within the searched heritage databases, some covering broad areas. These areas will be managed according to ecological constraints rather than as heritage considerations.

Full lists of historic heritage items within the search criteria can be found in OzArk 2009b.

3.3. Archaeological Background: Aboriginal Heritage

3.3.1. Ethno-historic sources of past Aboriginal culture

In prehistoric times The Project area was occupied by peoples belonging to several tribal/linguistic groups. Mapping of the territory of these groups has been undertaken by both Tindale (1974) and Horton (1996), with that of Horton appearing to condense the smaller tribal groups into broader linguistic classifications. The eastern part of Study Area east, in the Lismore area and as far west as Casino, was occupied by the *Arakwal*. To the south and west were the *Badjalang* or *Bundjalung* who occupied a territory of around 2,300 km^2 south of Casino and as far west as Tabulam/Baryugil. It is noted in Tindale's catalogue, that Rankin records a strong break in language between this tribe and the *Arakwal*. West again is the *Jukambal* which are seen to occupy the land around Tenterfield, with the *Kambuwal* group further to the west in Study Area West.

The Bundjalung people are known to have had their own travel routes in the region, usually along defined pathways linked by rivers from the coast to the plateau. On occasion they would navigate up to 500 kilometres to the Bunya Mountains to cut the bunya nut cones which flowered every three years. They camped and ate the nuts and held corroborees at night, providing opportunities to trade both goods and culture with neighbouring tribes. Low-gradient ridgelines provide natural topographic access routes inland from the coast and both ethnographic and archaeological evidence testifies to use of such ridgelines by Gumbaingirr (an adjacent tribal language group) and other transit groups (Collins 1994, 2002). Movement beyond local territories was undertaken by pre-arrangement with adjoining groups in order to meet widespread social and ceremonial obligations (Chevally 1946; Belshaw 1978). McBryde refers to literature describing the use of stone axes to catch possums and Wyndham (1889: 37) recalls a ceremonial gathering on the western fall of the Tablelands where four tribes were present.

Oxley (1818) and Cunningham (1827) were the first explorers who documented contact between Aboriginal tribes and Europeans in the New England Region (McBryde 1974: 1). The information on Aboriginal life and culture is often fragmentary, sometimes contradictory and requires critical sifting, as it often reveals more about the thoughts of nineteenth century Europeans than of Aboriginal culture.

Early relations were described as friendly and the 'natives' were reported to be shy, but generally willing to guide the newcomers and assist with the collection of food, water and firewood (Campbell 1978: 7). Although in the early 1800s European penetration into the northeast coastal area remained limited to explorers, escaped convicts and wood-getters, this situation changed rapidly from the 1830s with the northern push of the pastoral industry (Navin Officer 1998: 7–1). An early settler, Perry, describes the Indigenous landscape as he perceived it in 1839, recording observed material culture including nets and bags of plant and animal fibre; tools made from bone, stone and wood and including wooden spears, clubs, paddy-melon sticks, boomerangs and shields; stone axes and flint knives, as well as scrapers and knives of shell and glass (McBryde 1974: 10).

Variations in the interpretation of population numbers were significant from the available ethnohistoric reports. During exploration of the Clarence/Richmond district in 1843, Oliver Fry estimated the number of Aboriginals in the area to be about 2000, whilst the area between Tenterfield and the coast, could support 1–2 people km^2 along the river systems (McBryde 1974). While Aboriginal people were certainly present in the coastal hinterland, historical accounts suggest low population

numbers in comparison to the coast. At Karangi, 100 km south of Lismore, for example, there were few Aborigines (Kelly 1987), although many passed through "on their way to somewhere else" (Secomb 1986: 46).

Aboriginal land use patterns were substantially modified in the decades following European settlement, as traditional lands were alienated and freedom to move through the country was progressively restricted. A ten year period of violent clashes resulted but by 1841, those Aboriginals who had not been captivated by the white man's way, had retreated into the gorge districts on the edges of the New England Tableland (Campbell 1978:10) or to gazetted reserves such as the Bora Ridge Aboriginal Reserve in the Richmond Valley (Gardiner 2007).

Despite a serious decline in population numbers caused by introduced diseases (England 1976: 47) and the massive changes brought about by European settlement, many local Aborigines were able to maintain traditional knowledge of and associations with the area.

Mathews (1896: 135) records that ceremonies were of great importance, providing the forum for the connection between groups – *Daingatti* Keeparra (sic) and *Gamilaroi* Bora (sic) ceremonies. Wyndham (1889: 37) states that the last Boora (sic), an initiation of young men, was held on the western fall of the New England. Both men and women attended the ceremony but each had their own special areas after the initial meeting of the groups.

Specifically relating to the current Study Area, ethnographic accounts of the importance of Woolool Wooloolni, Wellington's Lookout were recorded by J.R. Sommerland in 1968 and its significance documented by Creamer in 1978. Dick Donnelly, an Aboriginal living on Rocky River was recorded as saying (Creamer 1978):

> *A whole big mob of them used to sing, old timers...That's the rock, wujun (cleaver?) – they were sitting on top of one another (the rocks). Well that's my father's worship place, jurraveel see. Well them two rocks, we named them wujun and my father worshipped there and no-one could go there because he owned that property. If you did go there you were breaking the Aborigine's law by doing things you shouldn't do. You mustn't go to other peoples' jurraveel - worship places you see?*

Other than this piece of ethnographic evidence, no other ethnographic sources available have related to specific locations within or adjacent to the Study Area.

3.3.2. General archaeological studies

Coastal Aborigines would have had a broad utilisation of the marine environment and exploited marine resources for jewellery, food and tools such as using shell and bone to barb their spears (Collins 1798: 586 in McDonald 1999). Shell was also used on spear throwers, an implement also used for digging and cutting. Stone was used by the coastal Aborigines primarily to make adzes and axes.

The logical expected bias towards fish and shellfish for the protein portion of their diet is not, however, evidenced at all coastal sites. Excavations at Angophora Reserve (Sydney Basin) indicate that fish and shell fish contributed only 8% of the calorific content as represented by the site's food remains (McDonald 1990: 11). Dietary data available for many other coastal sites, on the other hand, has been summarised by Lampert (1971: 118) and reinforces their reliance on these resources:

- many coastal tribes were seemingly completely dependent on seafood for the protein portion of their diet;

- they used specialised equipment for fishing, such as multi-pronged barbed fishing spears and shell fish hooks; and
- had an apparent strict sexual division of labour. Women fished with a hook and line and men always[4] used spears.

Results of previous research do indicate, however, that all the available environments (rocky shore, estuarine, beach and swamp) were exploited by Aboriginal populations, thus it is viable that Aboriginals utilised the coastal headlands, the coastal plains, the forested hinterland and parts of the escarpment to hunt and gather food (DEC 2005).

Lampert (1971a) classified these coastal occupation sites into three main groups:

- specialised foreshore sites which centre on the utilisation of coastal resources such as shellfish, fish and aquatic birds (e.g. Durra North, Wollumboola and Wattamolla) where specialised fishing equipment was used, including shell fish and hooks and spears tipped with bone points;
- specialised estuarine sites which focussed on exploiting inland, terrestrial resources; and
- sites located next to creeks or rivers opening onto the sea where a broader range of resources were utilised, including coastal and terrestrial.

Studies by Pearson (1981)[5] and Koettig (1985), despite being primarily focussed on inland areas, are also relevant in giving a broad understanding of the distribution of Aboriginal archaeological sites within the landscape.

According to Pearson archaeological sites could be divided into two main categories, occupation sites and non-occupation sites (which included grinding grooves, scarred or carved trees, ceremonial and burial sites etc.). An analysis of the location of these sites led him to build a model for site prediction along the following lines (Pearson 1981: 101 as quoted in Koettig 1985: 47):

- site distance to water varied from 10m to 500m, but in general larger sites are found closer to water;
- good soil drainage and views over watercourses are important site location criteria;
- most sites were located in contexts which would originally have supported open woodlands;
- burial sites and grinding grooves were situated as close to habitation areas as geological constraints would allow;
- ceremonial sites such as earth rings ('Bora Grounds') were located away from campsites;
- stone arrangements were also located away from campsites in isolated places and tended to be associated with small hills or knolls or were on flat land;
- quarry sites were located where stone outcrops with desirable working qualities were recognised and were reasonably accessible;

[4] 'always' is subjective: men are believed to have undertaken spear fishing whilst women fished with line and hook.

[5] M. Pearson's 1981 study is an unpublished PhD thesis from the ANU. The authors have been unable to directly access this work and rely heavily on summaries presented in Koettig (1985).

- based on ethnohistoric information, Pearson suggests that Aboriginal campsites were seldom used for longer than three nights and that large archaeological sites probably represent accumulations of material over a series of short visits. It is considered that this evidence is definitely more related to the inland areas than the coast, where occupation by the time of European colonisation was possibly semi-sedentary; and
- the location of non-occupation sites was dependent on various factors relating to site function. For example, grinding grooves only occur where there is appropriate outcropping sandstone, but as close to the occupation site as possible. Scarred trees were variably located with no obvious patterning, other than proximity to watercourses, where occupation sites were more frequently located.

3.3.3. Regional archaeological context

While general studies of the New England Region are relatively common (due largely to the presence of students and teachers from the University of New England), specific heritage assessments along the coastal hinterland are restricted to those provided by surface surveys conducted in response to various development proposals.

Although in general the archaeological background for the Northern NSW coast is derived from survey instigated as a result of development proposals, one significant early research study of the Clarence valley was undertaken by researcher Isabel McBryde in 1974. During her work, McBryde investigated a range of site types including middens, quarry sites and rock shelters along the Clarence River and its associated tributaries. Excavations in one rockshelter at Seelands dated the basal deposits at 6,400±300 BP (before present), which remains the oldest date for occupation of the northern NSW coast. Here, stone tools relating to the "core and flake artefact tradition, dominated by unifacial pebble tools" were recorded, being succeeded by ground edge artefacts and a variety of smaller artefacts types, including backed blades (Haglund 1985: 2).

Also focussed along the Mid-North NSW coast are a series of surveys completed in the mid 1990s for the Coffs Harbour/Grafton regional water supply. Over 150 sites were recorded as a result of these assessments including open sites, modified trees, a large axe quarry and authenticated mythological sites (Navin Officer 1994, 1996, 1997 as reported in Navin Officer 1998).

A study by Bowdler (1983), undertaken in the State forests of northern coastal NSW, noted that there were relatively few Aboriginal sites recorded in these environments, a result interpreted as being related to survey effort/effectiveness and not providing a true picture of Aboriginal site distribution in prehistory. This interpretation was borne out by a later survey by Navin Officer (1990).

Focussed more on the hinterland, several projects have been undertaken that are related to transmission line and road infrastructure. These include the assessments for the Armidale to Koolkhan transmission line maintenance (OzArk 2006), proposed south Boambee 132kV transmission line (OzArk 2007), the upgrading of the Armidale to Coffs Harbour transmission line (OzArk 2009a) and Coffs Harbour to Koolkhan transmission line extending from Coffs Harbour to near Grafton (Navin Officer 1990). This last survey recorded 56 sites (49 open sites, four modified (scarred) trees, four rock shelters and three quarry sites) and five Potential Archaeological Deposits (PADs). Conclusions of the report noted the low number of sites on landforms adjoining the riparian corridors, i.e. along creek lines, and a higher frequency of sites on low ridgelines, spurs and slopes.

An archaeological investigation of a proposed transmission line between Armidale and Queensland was undertaken by Paton in 1995, which recorded sites in proximity to the Study Area. This assessment and the recorded sites are discussed in **Section 3.3.4**.

Further inland, the sandstone cliffs of the Clarence-Moreton Basin, and the granites of the New England Tablelands have given rise to numerous rock shelter sites, some with art and others with deposits, and grinding grooves being recorded along the cliff area. Creamer and Kelly (1973–1974) undertook preliminary archaeological assessment of sites in the Tabulam area and several of these site recordings, mainly open sites and rock shelters/caves, are located in proximity to Study Area East.

Wellington's Lookout (OEH # 03-5-0009), located north east of Tenterfield (also discussed above in **Section 3.3.1**) is a well known landmark important to the Bundjalung Aborigines that has been discussed in several previous studies that are summarised in the investigation of the proposal to declare the site an Aboriginal Place (Creamer 1978). The Boorook stone arrangements (OEH #3-5-0013) provide evidence of the breadth of site types known for the region. This stone arrangement was recorded by E. Quilan in 1985 after it was discovered by forestry staff is now located north east of Study Area West within Boonoo Boonoo National Park. A study of the significance of the area revealed a series of stone arrangements and a Bora Ground.

McBryde reports specifically on four Bora Grounds on the property of G. Baguley, 5km north of Sandy Flat on the Speribo Road and one initiation site near Wheatley's Creek, (a branch of the Cataract River). There is also a Bora Ground known near Rocky River and Demon Creek, 48km west of Tenterfield. In the Green Gully area (a tributary of the Mole River), there are rock paintings on the cliff face at nearby Devil's Cave (McBryde 1974: 60). Although outside the Study Area, the recording of these site types on the New England tablelands indicates their presence and preservation despite the impacts of European activity in the region.

According to Halliday (2004: 12), anthropologist Rollie Paine believed that the Jukembal ceremonies were common to clans within the Tenterfield region and that Bora Grounds all conformed to a standard pattern from Boorook to Sandy flat and around the Cataract, Ruby and Rocky Rivers.

By distinguishing certain features of stone tools common to many sites, broad dating of the Aboriginal occupation within the New England region can be postulated. The heavy core and flake scrapers (40,000–10,000 years ago) of the 'Australian Core Tool and Scraper Tradition' have been associated with making wooden tools such as boomerangs, spears, clubs and throwing sticks. Tools of the newer industries (10,000–5,000 years ago) are relatively small in size and are defined by points, adzes and backed (blunted) blades, collectively known as the 'Small Tool and Scraper Tradition'. These smaller tools are found in conjunction with chisels and axes. The oldest examples of these stone tools come from the New England region (Binns and McBryde 1972, McBryde 1974). Binns and McBryde traced the trade of raw materials for axe manufacture over considerable distances. There was a further change in technology (1,000–400 years ago) with a loss of some items from the range (backed blades and finely retouched [re-sharpened] blades), which were replaced with simple flakes, bipolar pieces and ground edge axes accompanied by a greater use of shell and bone for tool making. An extensive range of ground-edge stone axes manufactured from a variety of raw materials and, in some cases, sourced to their original quarries have been recorded dating to this more recent period.

3.3.4. Local archaeological context

A search of the OEH Aboriginal Heritage Information Management System (AHIMS) database was undertaken in April 2009, encompassing the Study Area in its entirety. The search included Alignment East (Study Area East) and Alignment West (Study Area West) with a buffer of 5km either side for Study Area East and approximately 30km either side for Study Area West. The search revealed that 93 Aboriginal sites have been recorded within the parameters of the search.

The data used to generate **Table 3-2** below only includes sites within 5km of Study Area East and within 7km of Study Area west. In this reduced search area, 59 previously recorded Aboriginal sites are located including shelters, burial grounds, open sites and modified trees. Whilst reviewing the site data that comprises this search, it has come to light that at least two of the 59 sites are likely to have been entered onto the AHIMS database twice and thus the total number of sites for the searched area should really have been 57[6].

Although the AHIMS is an important tool for understanding the types of sites recorded for the local area, it is important to remember that the distribution of recorded sites across this landscape reflects as much the pattern of development, the ad-hoc nature of incidental recordings and factors of visibility and cannot be interpreted as providing a true picture of Aboriginal settlement patterns.

Table 3-2: Previously recorded sites within close proximity to the Study Area.

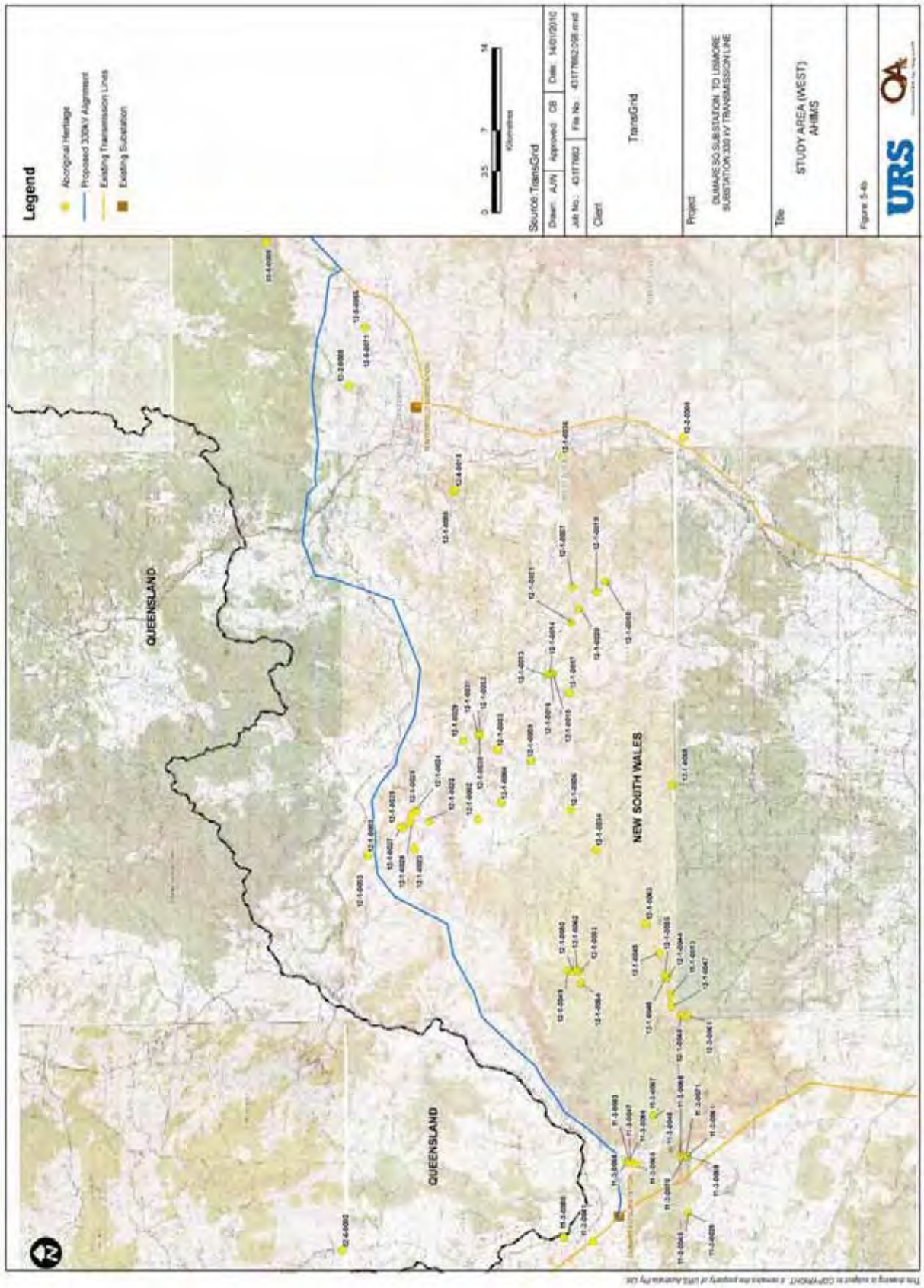
Site Type	Number	% Frequency
Open Site	29	49.2
Modified Tree	9	15.2
Aboriginal Ceremonial and Dreaming	7	11.8
Rock shelter with Art	3	5.1
Aboriginal Resource Gathering Site	3	5.1
Burial ground	3	5.1
Rock shelter / Caves	1	1.7
Rock shelter with Deposit	1	1.7
Stone Arrangement	1	1.7
Quarry and open site	1	1.7
Ochre Quarry	1	1.7
Total	***59***	***100***

Study Area West

The AHIMS database search identified 68 previously recorded Aboriginal sites within a 30km radius of Study Area West. **Figure 3–1** gives the location of these sites. As can be noted in **Figure 3–1**, no previously recorded sites are within the proposed corridor for Alignment West.

[6] Sites 12-5-0071 and 12-5-0055 are both called House Creek 1 and have identical co-ordinates; as do sites 11-3-0026 and 11-3-0045 which are both called Round Hill camp site.

Figure 3-1: Location of previously recorded sites in proximity to the Study Area West.



Review of these sites from east to west shows something of the range of sites recorded and their landform associations (where the information is available).

Three sites are located north of Tenterfield and slightly to the east. Although no detailed information about these sites is available, what is clear from the search results is that open artefact sites OEH # 12-5-0071 and 12-5-0055 are the same site, with identical co-ordinates and the same name: House Creek 1. Leach's Gully site (OEH # 12-5-0005) is a scarred tree located about 4–5km north of Tenterfield.

Outlying several kilometres south of the proposed easement is site DECC #12-1-0029, Mole Station 1, which is recorded as an artefact site and was part of the Mole River dam assessment that is discussed in greater detail below. A further three kilometres to the west is site DECC #12-1-0002, called Kaloola Bondonga, which is recorded as a Bora Ground.

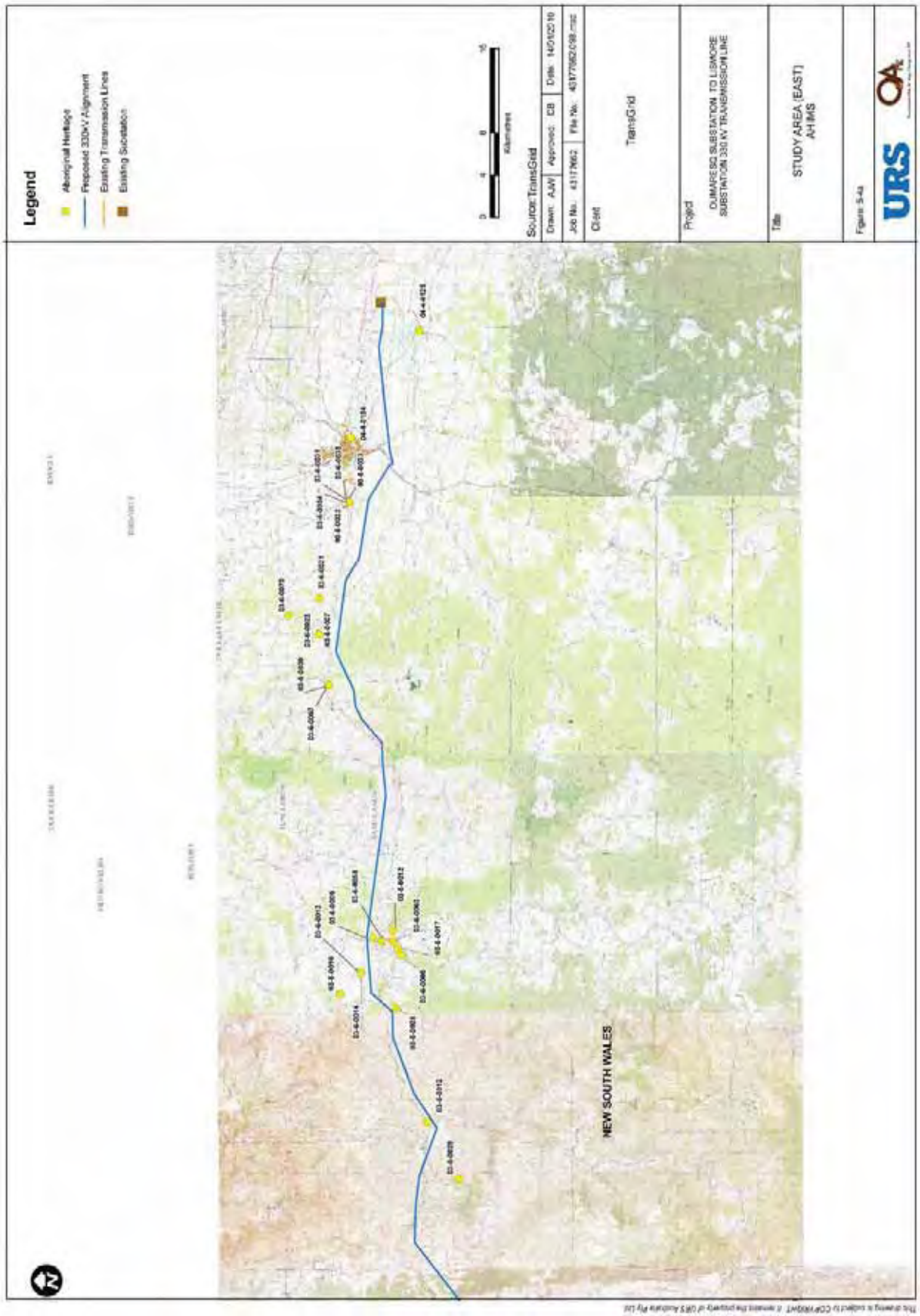
A series of sites (DECC #12-1-0022—#12-1-0032) were recorded by Rich and Rosen (1991) who undertook preliminary historical and archaeological survey for the Mole River dam options. All the sites recorded were open sites, although one (#12-1-0022) was designated as a shelter with PAD. Sites of this group were in general located on low gentle spurs adjacent to watercourses: either tributaries into Mole River or near Mole River itself. Several sites were small open sites characterised by less than 10 artefacts although visibility was an issue. Artefacts were of quartz, grey siliceous material, dark indurated mudstone and rhyolite. The largest site (#12-1-0025) is located over a large area of interconnected low spurs with minor gullies transecting them and situated between 30m and 300m of the Mole River.

Nearby and slightly south west of the Mole River sites and well away from the Study Area is a burial site: Silent Grove, Springfield (DECC #12-1-0004). To the south of the Mole River sites and located well beyond the Study Area is a stone quarry also bearing artefacts (DECC #12-1-0004).

Moving to the west towards Bonshaw, there is a considerable gap (c. 25km) before a group of twelve sites (DECC #11-3-0046 & 47 and #11-3-0061 and 0063-0071). These sites all appear to have been recorded by Paton in 1995 during an assessment of the TransGrid Queensland Interconnection transmission line and located beyond the southern boundary of Study Area West. These are all open sites recorded on the Glenoke property and from review of the site cards there is definitely some misreporting of site coordinates. This had led to sites EL33 and EL36 being provided the same co-ordinates when plans of the site locations (from site cards) show them to be several kilometres from one another. The same is true for EL37 and EL38, although these do appear to plot very close together. All these sites consist of surface scatters of stone artefacts located on the track to 'Glenoke station'. The sites are all recorded as being situated on elevated low knolls in the foothills of a range and are comprised of small exposures along tracks that reveal low numbers of artefacts (mostly flakes) of fine-grained volcanic materials, some quartzite and one of chert. An additional site from this assessment (#11-3-0041) is shown north of the Dumaresq Switching Station.

The last site requiring mention is that of #11-3-0080, which is an open site on the Dumaresq River. This site was recorded in a Travelling Stock Route (TSR) along the river, within an exposed track used by fisherman to access the river. This site is several kilometres north and slightly west of the Dumaresq Switching Station and not within Study Area West.

Figure 3-2: Location of previously recorded sites in proximity to the Study Area East.



Study Area East

The AHIMS database identified 25 registered Aboriginal sites of different types surrounding Study Area East. These have been plotted in **Figure 3–2** and shows that no sites have been recorded within the proposed 60m wide easement of Alignment East.

Looking from east to west, it is interesting to note that despite the significant amount of development in the Lismore–Casino area, few sites have been recorded on the AHIMS database. This may reflect the early period of development of the area when sites were not recorded or protected. The site closest to Lismore Substation, Tatham Camp (OEH # 04-4-0125) is recorded as an Aboriginal resource gathering site and is located a considerable distance south of Study Area East. Just east of Casino is Grays Lane Camp, also an Aboriginal resource gathering site (OEH # 04-4-0124), likely to have been recorded as part of the same project and located about 5km north of Study Area East. A suite of five sites recorded due west of Casino (OEH # 03-6-0031–35) are all modified trees (called the Wooroowoolgen scarred trees) that were provided identical GPS co-ordinates on AHIMS. These sites were apparently investigated as a result of a possible felling of a modified tree on a neighbouring property and are located several kilometres to the north of Study Area East.

Around 10km west of the Wooroowoolgen scarred trees is a group of six sites, the eastern of which is Dyraaba Arm Piora (OEH # 03-6-0021), a rock shelter with art and deposit recorded in 1965 and located at least 1–2km north of Study Area East. A further 2km north is a site recorded as Southhampton1 (OEH # 03-6-0070): a modified tree.

Dyraaba Arm (OEH # 03-6-0007) consists of rock engravings in two caves which form part of a small north/south sandstone escarpment on the western side of a creek. Dyraaba Arm Dyraaba (OEH #03-6-0023) is a large rock engraving located about 400m southeast of the caves. These sites were recorded by Creamer and Kelly (1973–1974) during investigations into Aboriginal sites in the Tabulam area, a project which resulted in the recording of many sites, mainly shelter/cave sites with engravings or paintings, burial and ceremonial grounds. At the time of their investigation, Creamer and Kelly reported no Aboriginals in the area who had any information on the actual significance or meaning of the rock engravings.

A further 4km west of the Dyraaba sites is located Theresa Creek 1 (OEH # 03-6-0057) and Mummulgum Rock Shelter (OEH # 03-6-0030). These sites have the same co-ordinates on AHIMS and it is likely that they are manifestations of different aspects of the same site. Theresa Creek 1 (which appears to be a later registration) is said to be a stone arrangement, while Mummulgum rock shelter is noted as being recorded by Robert Lane (the same individual who recorded the Wooroowoolgen scarred trees).

A gap of over 20km lies between the previously discussed sites and a group of ten sites located on the border of the Tenterfield and Kyogle LGAs. Tabulam Njimbun Cave (OEH # 03-6-0008) is a shelter/cave with spiritual inferences[7] while Tabulam 1 (OEH # 03-6-0009) is noted as a burial site, recorded in 1933 at which time the burials were exhumed (for reasons unknown). It was noted that the burials were those of two men and a women and that they were situated on the northeast slope of

[7] According to Malcolm Calley, in *Mankind* 1958, who wrote on "Three Bandjalang Legends" In the 1st legend 'Bogar-bogarni' the word Njimbun has the primary meaning of 'goblin', a diminutive and sometimes malicious spirit which inhabited the mountain (Creamer and Kelly 1973–1974).

a ridge overlooking the township. Another burial ground is recorded nearby—Tabulam Rivulet Burial Ground (OEH # 03-6-0058)—a site only c. 500m south of Study Area East.

Tabulum 2 (OEH # 03-6-0017) is recorded on the register as an ochre quarry and Yellow Creek Tabulum (OEH # 03-6-0028) has been noted as a Bora Ground, located close to Study Area East along its southern boundary. Emu Creek Dingo Mob (OEH # 03-6-0010) is also part of the group of sites recorded by Creamer and Kelly and is also recorded as a ceremonial/Bora Ground.

Old Mission Cave (OEH # 03-6-0012) is reported to be the site of several cave paintings whilst Three Hills 1 (OEH # 03-6-0013) and Three Hills 2 (OEH # 03-6-0014) (both noted as bearing the same co-ordinates) are both described as the site of Bora Grounds. Information from this recording notes that a Bora Ground can be found on each hill at Tabulam, all of which are significant to the locals. The final Tabulam site of this group comprises a series of modified trees (number unknown) (OEH # 03-6-0036), located farthest from Study Area East to the south.

Another 12km to the west from this group is a single modified tree (OEH # 03-5-0012, Drake Tabulam). This appears to be one of the closest of all previously recorded sites to Study Area East, being less than 200m to the north. South of Study Area East in this area is a site (OEH # 03-5-0029) called Girard SF (presumably State Forest) and described as an open artefact and resource gathering site.

Nearing Tenterfield is Wellington Rock Woolool Wooloolni (OEH # 03-5-0009) which has also been listed as an Aboriginal Place (1990). The significance of this site was discussed in **Section 4.1** and it is noteworthy that this site and its surrounds are located over 2km north of Study Area East (03-5-0009 is shown in **Figure 3–1**.

3.3.5. Predictive model for site location

The following predictive model is based on the predominant patterns of Aboriginal site distribution that have their roots in theoretical archaeological models and on the more localised results of the regional and local contexts described above.

Proximity to a permanent water supply is the primary factor appearing to determine the location of Aboriginal campsites. In the Sydney basin, which has received much archaeological assessment due to its rapid development, results of an integrated series of studies including a significant excavation component, suggests a high correlation between the permanence of a water source and the permanence and/or complexity of the areas' Aboriginal occupation (McDonald 1997). This was further reflected in the lithic assemblages from sites close to permanent water, which suggested that a greater range of activities are represented (e.g. tool use, manufacture and maintenance, food processing and quarrying). Sites near ephemeral water sources had evidence for one-off occupation (e.g. isolated knapping floors or tool discard) and creek junctions were also proven to be foci for site activity with sites frequently occurring on well-drained elevated flats adjacent to alluvial flats. It is true that patterns have been noted as varying when topographic and climactic conditions are different to those of the Sydney basin, for example in the Wagga–Yass region or in the Central West of NSW. Here water is still noted as a pre-determining factor for occupation sites, but issues such as cold drafts in the valleys of the southeast meant that occupation sites were often off the valleys floors and located on spur tops near to watercourses.

In the rises along either side of the Great Dividing Range, ridgelines are suggested to provide access tracks through the rugged hinterland and from the escarpment country down to the west of the mountains where flats and saddles were favoured as site locations.

In discussing the current Study Area, the 205km length of the proposed easement is acknowledged to traverse the entire gamut of landform types from the well watered undulating hinterland of Lismore to the steep slopes of the foothills of the Great Dividing Range to the plateaux landforms around Tenterfield and finally the steep terrain of the tablelands adjacent to the riverine corridors of the Dumaresq/Macintyre river system and Tenterfield Creek. This landform variability means that a variety of models have to be developed that acknowledge differences in site patterning based on available landforms.

Using the concept of stream ordering[8], the following general predictions can be made regarding the nature of sites and their location in the Study Area:

Open Sites

- the area surrounding first order streams and headwaters is most likely to contain evidence of sporadic occupation and may consist of little more than a background scatter of artefacts;
- in the vicinity of second order creeks, archaeological evidence may be sparse, but may indicate focussed activity (one-off camp sites and knapping events);
- in the lower reaches of tributary creeks (third order), archaeological evidence will be more frequent and intense, indicating more permanent or repeated occupation by small groups and may show evidence of concentrated activities;
- on major creek lines and rivers (fourth order) more permanent and repeated occupation may be evidenced by a more diverse stone tool assemblage indicating greater range of lithic activities. Sites in this location may even be stratified;
- creek junctions also provide a popular location for occupation and the size of the confluence (in terms of stream ranking nodes) may influence the size of the site; and
- spur top locations between drainage lines are also likely to contain archaeological evidence in the form of one-off activities, although can be home to stone arrangements or ceremonial sites.

As open sites comprise around 50% of previously recorded sites, this site type may be expected to be the most common present and the location of such sites will bear relationship to elevated well-drained landforms near water. These sites are likely to have been impacted by European agricultural practices as landforms favoured for prehistoric occupation were also often favoured for the European occupation or agriculture.

Isolated Finds

Isolated finds may occur anywhere, especially in disturbed locations near water sources or on travel routes.

Modified Trees

Modified trees comprise approximately 15% of previously recorded sites and are likely to occur close to creeks and rivers but may also be found further afield.

Few mature trees of an age to bear cultural scars are likely to remain in the cleared easement of Study Area East, although some remnant individuals may be present in the proposed increased

[8] See note 7.

easement width. Commercial logging in the west of Study Area East would also diminish the possibility of locating this site type. The largely cleared nature of the accessible flats appropriate for Aboriginal occupation of Study Area West would also diminish the possibility of locating this site type in this area, although remnant trees may well be present.

Carved trees may also be present and may be associated with either Bora Ground sites or burials or as boundary markers, although it is noteworthy that carved trees as burial markers, as opposed to marking Bora Grounds, is considered fairly particular to the Kamilaroi and Wiradjuri tribal areas west and south west of the New England Tableland (Black 1941: 13, 17).

Resource Gathering Sites

Resource gathering sites may occur anywhere but would be more common in areas displaying greater possibility of food resources such as near waterways and swamps.

Ceremonial sites/Bora Grounds

Although sites of this category of sites are generally difficult to model (reconstruction of prehistoric Aboriginal cultural needs is more challenging to reconstruct than those related to everyday living and resource procurement), the AHIMS local context for the Study Area does demonstrate a high number of Bora Grounds which comprise around 12% of the total sites. Based on Creamer's assessment and recordings, it would appear that these sites are likely to occur on ridge/hill top locations and can be associated with stone arrangements or ceremonial sites (especially in the Tabulam area). Such sites may be expected to be away from occupation sites although are less likely on significant slopes.

Burials

Human burials are usually located away from occupation sites but in areas accessible from occupation sites. If they comprise interments then deposits are usually required to be soft or sandy for easy digging. Around 5% of previously recorded sites are burials sites (n=3).

One of the two burial sites is noted as being on a sloping hillside overlooking the town. This is considered to be a somewhat unusual burial location and it is not noted if these are prehistoric burials or burials of the contact era which was a time in which previous customs were sometimes abandoned. The landform of the second burial site at Tabulam Rivulet is not described in the data available.

Rock Shelter Sites

3.4% of recorded sites in the vicinity of the Study Area are rock shelter sites. These sites may occur wherever there are suitable overhangs/caves. The quality and extent of such features will determine the nature and type of potential occupation. The geomorphology of the New England region including the area to the east over the Great Dividing Ranges lends itself to the occurrence of rock shelters along deeply incised gullies or near creek lines where sandstone is exposed.

Rock shelters, however, are considered unlikely in the Study Area because the easement does not traverse landforms in which shelter sites are likely to occur.

Grinding Grooves

Grinding grooves may be recorded in areas where appropriate sandstone is present, particularly near water and are known to occur in mountain escarpment areas, close to creeks and along sandstone creek margins. None have been previously recorded in the Study Area and there is a reduced

possibility of locating such site types within the Study Area due to the lack of suitable sandstone outcrops.

Quarries

Quarries are only located where appropriate stone or ochre resources are present. Only two quarry sites are located near the Study Area and predicting the occurrence of this site type within the Study Area is not possible at the desktop level.

For the purposes of the current study, the site type definitions are presented in **Appendix 1**.

3.4. Archaeological Background: Historic Heritage

3.4.1. Historic settlement in the New England region

Cunningham and Oxley are attributed as being the first to cross the New England region, with subsequent explorations undertaken by Sturt in 1828–9 and Hume and Mitchell in 1831–2. Cunningham journeyed through the rugged western area of New England from his exploration of the Darling Downs in 1827, whilst Oxley traversed the narrow southern end in 1818 before descending into the Hastings Valley from Mount Seaview (Atchison 1977: 142). Mitchell later explored the region between the Castlereagh and Gwydir Rivers, surveying the land between Oxley, Sturt and Cunningham's earlier routes. Henry Dangar, a surveyor under John Oxley, dominated exploration of the north and assessed every major mountain fold of the Liverpool, Mount Royal and New England junction of the Great Divide.

The slopes between the high plateau and tablelands and the wide riverine plains were traversed by Cunningham (Atchison 1977: 142) who directly travelled between Tenterfield Creek and Mole River and then followed down the south-eastern bank of the Sovereign or Dumaresq Rivers (Halliday 2004).

The extensive well–watered flat plains attracted early settlers and squatting pastoralists alike; all seeking open plain grazing resources. In an effort to control settlement, the government declared that the Liverpool Ranges marked the official Limits of Location in 1829. However, settlement in the area subsequent to the exploration forays of Cunningham, Sturt and Mitchell was largely driven by the establishment of the Australian Agricultural Company (AAC) (Atchison 1977: 140). The AAC was a chartered corporation that took on the role of a development agency. They invested capital and introduced new breeds of stock and agricultural practices into the colony in return for a crown grant of one million acres. Dangar also worked under the ACC in an attempt to find suitable land for company acquisition. On the advice of Oxley and Cunningham, then Dangar on behalf of the AAC, the soils pastures and streams of the Liverpool Plains were recommended and by 1832 the company had displaced many squatters and controlled land along the Liverpool Plains, forcing many people to seek land further north.

European settlers first arrived in the area encompassing the Study Area during the late 1830s. John Duval and William Chandler were two of the first European settlers, whose long facial beards became synonymous with the Glenn Innes area and 'Beardy' namesakes in the region. Squatters, Frederick and Edward Ogilvie, also explored within the Tenterfield Shire travelling from southern New England to Tenterfield across Mole River (Halliday 2004). In 1837 Campbell had taken up Inverell, Boyd William Mitchell occupied Glenn Innes, bound by the Dividing Ranges and Beardy Creek (Maitland Mercury: 4). Deepwater Station (south of Tenterfield) was taken up in 1839, with the run later known as Tenterfield occupied by Robert McKenzie also in 1839. Darling Downs and Tenterfield denoted the 'The Limits of Squattation' by 1840. Tenterfield was gazetted as a town in 1854 and the first sale of lands was held in 1854 (Tenterfield 2005).

With the wheat and flour industries expanding northward as a result of the opening up of land and the drier climate, new transport networks, machines and infrastructure emerged, including mills and equipment suppliers. According to Halliday (2004: 16) only archaeological evidence remains of the Tenterfield Station steam-powered flour mill (1854) and of Irby's water powered flour mill on the Bluff River (1872). Peberby's flour mill (1871) was, however, converted to a private residence.

In the 1950s mining began in the ranges east of Tenterfield. Gold was found at Fairfield (now Drake) and at Timbarra, McLeod's Creek and Gough's Gully. Silver was mined at the "Golden Age" mine at Boorook, between Drake and Tenterfield. Tin was successfully taken from the "Nuggety Mine" at Maids Valley and Reedy Creek. Another venture began in March 1872 at Vegetable Creek (now Emmaville) and there are tin fields also at Tent Hill, Torrington (the Dutchman Lode) and Nine Mile (now Stannum). There was a Copper mine at Red Rock near the Cataract River and molybdenite was also found a little further west at the "Hidden Treasure" mine. Silica was also discovered between Bungulla and The Scrub, 11km south of Tenterfield. Lime was taken out near Limestone Creek, west of Tenterfield and also at Pretty Gully, east of Tenterfield. Arsenic was discovered in the 1920s at Mole River Arsenic Mine and used in arsenic pentoxide to kill prickly pear (Starr 1978: 34–40).

Tenterfield Railway Station remains as one of the town's finest heritage structures. It was opened in 1884 and the line was extended in 1886 to nearby Wallangarra on the Queensland border. The Sydney to Brisbane bypass eventually voided this passage to Queensland and train operations ceased in the 1980s. Wheat and flour milling succeeded pastoralism in the district, however, perishables were difficult to transport to Sydney (Halliday 2004: 16). The discovery of gold consolidated the town's economic position. From this, the township grew and prospered and became a centre for business and service for the township and surrounding rural properties, with the establishment of banks, churches, schools, public halls, a picture theatre and sporting facilities.

Sir Henry Parkes travelled from Brisbane to Sydney via the new Main North railway to deliver his Federation Speech in the Tenterfield School of Arts on 24 October 1889. The speech is credited with re-igniting the debate that ultimately led to Federation on 1 January 1901.

3.4.2. Historic settlement in the Lismore/Casino area

Although Captain Cook had seen and named Cape Byron in 1770 (HO and DUAP 1996: 66), it was not until 1823 that Lismore was canvassed as a potential penal colony site by Oxley. Several years later in 1828 a search to find suitable arable land led Captain Henry Rous in the "Rainbow" to the Richmond Valley, who quickly established the area for timber getting with a port to ship out the region's 'red gold': the magnificent cedar.

As the timber-getters moved west into the more inaccessible rugged terrain, the Lismore area was opened up for pastoral runs and by 1825, 21 licenses for pastoral runs had been granted in the Richmond Valley (Lismore 2009).

In 1843, the original sheep run (in what is now the Lismore area) was taken up by Captain Dumaresq located on the north arm of the Richmond River and covering 23,000 acres. However the run was abandoned after the sheep which were herded down from New England tablelands succumbed to diseases from the wetter sub-tropical climate (Lismore 2009). William and Jane Wilson took over the run in January 1845, and re named it Lismore. They built a house at the far northern corner of the run and a second house by 1851 near the corner of the present Ballina and Molesworth Streets, of which neither house survives (Lismore 2009).

The town of Lismore was established in Wilson's homestead paddock at the confluence of the Richmond and Wilson Rivers and was gazetted in 1856. The town was based on the convenience of river transport, however flooding (which remains a problem today), led to the investigation of new modes of transport.

The Old Tenterfield Road (established by the end of 1842) was an important transport route connecting the tablelands to the coast. The route was used for stock and gold miners in the early days of settlement in the Clarence region. The road continued east from Tabulam, crossed the Richmond Range, then proceeded though Busby's Flat and Wyan to the Travellers Rest and then to Grafton. Despite the completion of the Grafton—Glen Innes Road in 1876 this remained an important transport route until the 1880s (Lismore 2009).

Moving further west from Lismore, the Old Casino railway site is significant as the first railway station in the area opening in 1903 with a main line opened to Brisbane in 1930.

3.5. Heritage assessment methodology: Aboriginal Heritage

3.5.1. Transmission line and Substation survey

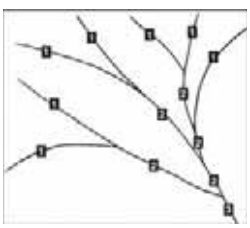
The easement survey area, including the both the 330kV and 132kV easements and the area of the proposed Tenterfield Substation, is approximately 12,300 km^2. A survey to assess such a large study area necessitated that a methodology be devised that did not involve a full pedestrian survey; particularly as the terrain, the physical capabilities of some survey team members and the large distances involved precluded the entire Study Area being walked. OzArk therefore designed a survey methodology that would sample the archaeological and heritage potential of the entire Study Area.

Mindful of the conclusions reached through desktop predictive modelling (**Section 3.3.5**) for the location of Aboriginal sites, aerial photographs of the Study Area were examined to detect landscape features, waterways and areas of potential food resources. The Study Area was then graded into zones of high, medium and low archaeological potential. One of the major factors used in determining archaeological potential was the presence or absence of water with higher-order waterways being designated as holding greater potential than lower-order waterways[9]. Areas at a distance from any type of waterway were designated as holding low archaeological potential.

Maps of the entire Study Area were then drawn up indicating areas of high potential (coloured pink on the maps) and medium potential (coloured yellow), with lower than moderate potential comprising the remaining uncoloured portions of the easement. An example of one of the maps is provided below

[9] Using the Strahler system of stream ordering: starting at the top of a catchment, any watercourse that has no other watercourses flowing into it is classed as a first order watercourse. Where two first order watercourses join, the watercourse becomes a second order watercourse. If a second order watercourse is joined by a first order watercourse - it remains a second order watercourse. When two or more second order watercourses join they form a third order watercourse. A third order watercourse does not become a fourth order watercourse until it is joined by another third order watercourse and so on.

(Source: NSW Department of Water and Energy 2008).

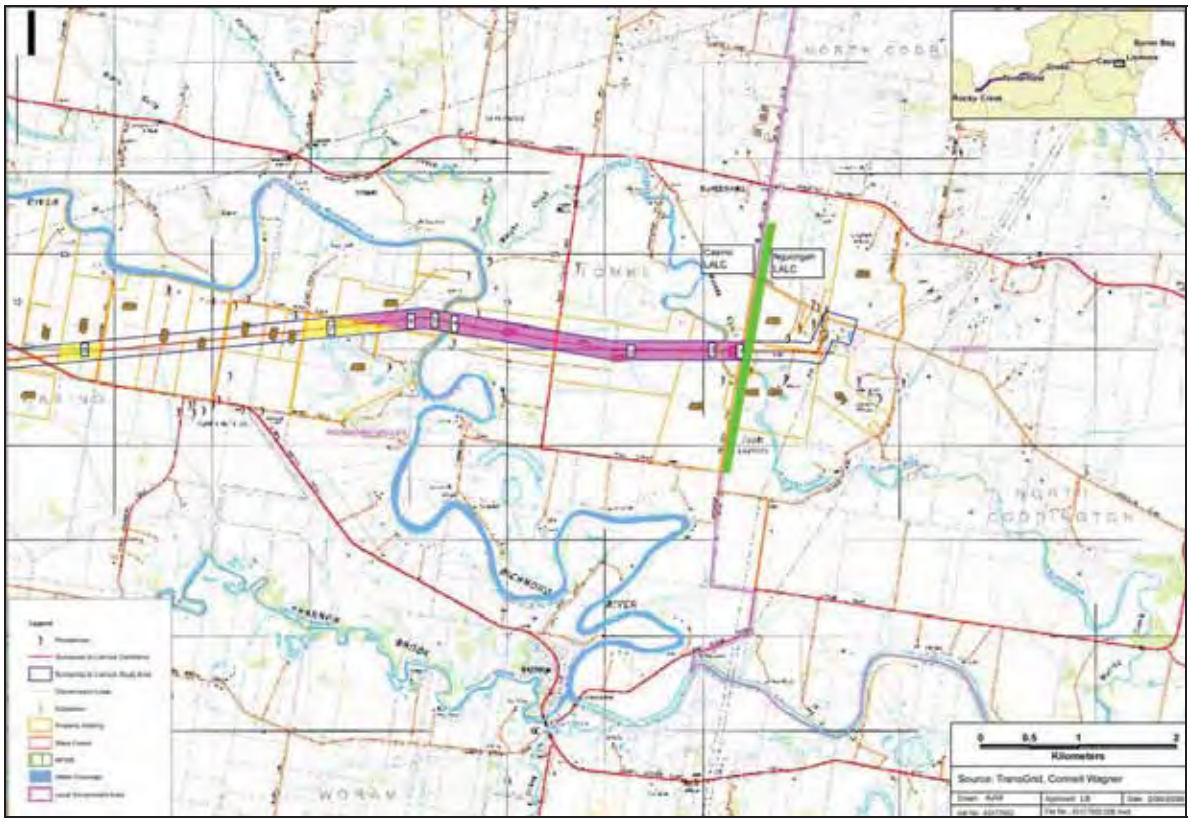


in **Figure 3–3**. The full set of maps used to model the archaeological sensitivity of the transmission line (**Appendix 5**) are available on request but are not reproduced here to protect landholder privacy.

As shown by the predictive modelling for site location (**Section 3.3.5**), not all sites are expected to be located adjacent to watercourses as ridge-tops and other landform features may contain sites, albeit of certain types with often lower-complexity than those located beside permanent water. To make sure that a sample of all landform features within the Study Area were assessed, the survey methodology held that if a portion of a particular property contained areas of high or medium archaeological potential, then the entire easement within that particular property would be surveyed. In this way, many ridges, hills and steep slopes across the Study Area were also assessed. For example in **Figure 3–3**, a property to the east of the Richmond River had two areas of high archaeological potential: Area 4 on the east bank of the Richmond River and Area 3 on an unnamed waterway in the centre of the property. As the property had designated areas of high archaeological potential, the entire property was then surveyed meaning that the landforms between the waterways were also assessed.

While a full pedestrian survey of the entire Study Area was not completed, OzArk believes that the methodology used ensured that all areas adjacent to high risk waterways were assessed and that a range of other landforms were also surveyed giving confidence that a representative sample of all landforms in the Study Area were included in this survey. 61.7% of the combined Study Area West and Study Area East was designated for assessment under this methodology.

Figure 3-3: Example of one map showing the zoning of archaeological potential used to inform the heritage survey.



To this end, it is instructive to review the NSW National Parks and Wildlife Service (NPWS) *Aboriginal Cultural Heritage Standards and Guidelines Kit* (1997) which is the current guiding document for Aboriginal cultural heritage assessment. Within the kit are the 'Standards for Archaeological Practice in Aboriginal Heritage Management' (SAPAHM), which contains a chapter on 'Survey'[10].

The guiding document does not stipulate that a full archaeological survey must be carried out over an entire project area. Rather it acknowledges that total survey is not feasible even if the scale of the project (i.e. a small project area) may enable it from a physical perspective, because to achieve full survey *per se* would require 100% ground surface visibility. 'It follows that almost all EIA archaeological surveys employ some form of sampling' (NPWS 1997 SAPAHM, Survey: 1). Additional data is then presented about sample size and sampling strategies and the fact that these should be related to the scale of the project. At the time of writing (1997) it was noted that for large projects (considered to be over 1 km^2) it was quite normal for a total of 5% or less of the project area to undergo survey. This is acknowledged as being problematic due to the difficulty in mitigating against potential impact to sites that remain unrecorded. However, the approach then advocated, which encompasses varied survey levels e.g.—low intensity assessment of project area (detects obvious sites, i.e. culturally modified trees) and sample areas for more intensive assessment (to detect artefact sites)—is acknowledged as still leaving undetected sites as likely to be present within a project area.

Sampling strategies are then described (NPWS 1997 SAPAHM, Survey: 1):

> *Sampling strategy may be based on environmental criteria (e.g.bioregions, landforms), landuse history and visibility factors (e.g. intensively farmed/disturbed areas may be excluded), or on the nature of the projected impact. In most large surveys the sampling strategy will be based on a mixture of these considerations.*

Increased rigour was noted (NPWS 1997 SAPAHM) as the trend in regards to survey sample size particularly if the project involved a total or near total impact footprint. A common and valid practice is also noted as focussing survey on strictly definable areas of impact should these be known.

Therefore, given that all survey is a sample of a particular area (given problems with ground surface visibility and distance between surveyors) OzArk feels that the survey methodology adopted for this assessment ensured that all landforms likely to contain large and/or complex sites were assessed and that a good representative sample of other areas were also included in this assessment.

In the field, the survey team also altered this methodology to include further areas that were designated as holding low archaeological potential. For example, on property 1066, north west of Tenterfield, the proposed easement crosses a series of steep, wooded hills. This property was designated as holding low archaeological potential for Aboriginal sites and was not included in the properties to be surveyed. However, in the field, the survey team learned from the TransGrid representative that the property owner had told him that these hills may contain historical relics dating to the period of the Second World War. On the strength of this information, the proposed easement across property 1066 was fully assessed to locate these relics and to sample this landform for

[10] In referencing this document it is noteworthy that each chapter's pagination starts at 1, so pages are referred to under their chapter headings.

Aboriginal sites (as it turned out, no Aboriginal sites were recorded, but two historical sites, TD HS07–HS08, were located and recorded).

In the field, survey methods varied somewhat between Study Area East and Study Area West. In Study Area East there is an existing easement and generally there was lower ground surface visibility due to the thick grass cover promoted by the farmers who predominantly graze stock across this well-watered region. While the landforms varied between flat plains to steep-sided hills, the nature of the ground surface visibility meant that the assessment took the form of driving along the easement (where possible) and making spot checks at all existing structures and along all watercourses. In Study Area West, the lack of an easement to allow the surveyors' access, greater ground surface visibility and the need to stay within property boundaries for which access had been granted by property owners (see **Section 4.3**) meant that the survey took the form of a full pedestrian survey where the whole extent of the property was walked with three or more team members walking 20m apart to cover the proposed 60m easement.

3.5.2. Access tracks survey

At the stage when OzArk was able to complete the heritage assessment of the access tracks, the easement survey had been completed for 12 months. This allowed the results of the easement survey to inform the access track survey methodology.

As will be seen in the Aboriginal sites discussion in this report (**Section 5.1**) two broad conclusions concerning Aboriginal heritage were able to be reached about the easement survey as a whole. First that Study Area West appeared to contain sites of larger size and complexity when compared to Study Area East and, second, that sites along the transmission line were most-commonly located within 100m of permanent water. Further, it was noted that ground surface visibility was better in Study Area West when compared with Study Area East and that more of the Study Area was located closer to water in Study Area West than in Study Area East.

As Study Area West appeared more archaeologically sensitive the access track survey methodology focussed more on Study Area West when compared to Study Area East. In Study Area East there is an existing transmission line and the access tracks in this section would be more often an upgrade rather than a new construction. The potential for impact is therefore lower in Study Area East and supports the methodology to focus more on Study Area West.

The survey methodology therefore concentrated five days survey time to Study Area West with the remaining four days being spent in Study Area East. Similar to the methodology for the easement survey, a representative sample of access tracks was surveyed. Unlike the easement survey, however, the access tracks selected for survey were based on more information than was available at the time of the easement survey.

In the case of the access tracks, maps showing the location of the access tracks as well as the level of ground surface modification required on each track were available. Therefore the level of impact arising from the construction of the access tracks could be built into the assessment methodology. Further, OzArk had already completed the easement survey so many portions of access tracks, where they utilised the easement, had already been assessed. Additionally, Aboriginal sites recorded by the easement survey gave another level of information that was able to be incorporated into the survey methodology. In summary the following factors were used to grade the access tracks to determine if they traversed areas of archaeological sensitivity:

- **proximity to water**: Following the results of the easement survey and the observation that most sites were located adjacent to water, if a proposed access track went within 100m of waterways it was assessed as archaeologically sensitive.
- **proximity to known Aboriginal sites**: Following the results of the easement survey, if a proposed access track was planned in the vicinity of a recorded site it was assessed as archaeologically sensitive.
- **type of impact**: As noted in **Section 1.2.4**, access tracks have been categorised into three types based on their level of impact. Primarily only access tracks of grade 2 or 3 were assessed – these are the grades having a greater impact. If two access tracks traversed archaeologically sensitive areas, then the access track with the higher level of impact to the ground surface was given prominence over an access track with more limited impacts.

Using these criteria, the access tracks to be surveyed were selected at a desk-top level and then ground-truthed in the field. Maps showing the access tracks selected for survey by this methodology (**Appendix 6)** have not been provided here due to issues of landholder privacy. They are available on request.

It is assessed that this methodology had the greatest chance to not only intersect with the greatest number of Aboriginal sites, but would also assess a variety of landscapes as the entire access track was surveyed if any portion of it was assessed as holding archaeological potential.

3.6. Heritage assessment methodology: Historic Heritage

The field assessment for historic heritage items took place at the same time as the Aboriginal heritage assessment. Therefore the same methodology was adopted as has been set out in **Section 3.5**. Additionally, the same constraints to the effective survey coverage applied to the Historic assessment as they did to the Aboriginal heritage assessment (**Section 4.3**).

While the survey methodology was devised to identify areas along the easement that had potential to contain Aboriginal heritage items, this survey methodology was augmented in the field to investigate areas with potential historic heritage items.

Maps provided in **Appendix 4** show the area of the proposed easement actually surveyed.

4 Survey Results

4.1. Survey Results: Aboriginal Heritage

4.1.1. Aboriginal sites recorded: Easement survey

Forty Aboriginal sites were recorded as a result of this assessment component that includes the entire transmission line easement and the area of the proposed Tenterfield Substation. This comprises 16 open sites (OS), 11 isolated finds (IF), eight modified trees (ST), five Potential Archaeological Deposits (PAD) and one Aboriginal resource gathering site (ARG). **Table 4–1** gives the location details for the recorded sites. In **Table 4–1** the site designation 'LT' refers to sites recorded in Study Area East and 'TD' refers to sites recorded in Study Area West. Maps provided in **Appendix 4** show the location of all recorded sites in relation to the proposed easement. The figures provided below show site extent and the site's relationship to the local topography.

Table 4-1: Aboriginal sites recorded during the easement survey.

Site Number (for this report only)	Site Designation	GDA Zone 56 Easting	GDA Zone 56 Northing	Location comments	Survey week
1	LT-IF1	462841.00	6804863.00	Located between structure E125 and structure E126, **Appendix 4, Heritage 23**.	1
2	LT-IF2	461664.33	6805013.23	Located between structure E122 and structure E123, **Appendix 4, Heritage 23**.	1
3	LT-OS1 with PAD	458545.00	6805411.00	Located between structure AP50 and structure E114, **Appendix 4, Heritage 22**.	1
4	LT-OS2 with PAD	419316 to 419325	6792585 to 6792650	Located between structure E3 and structure E4, **Appendix 4, Heritage 16**.	2
5	LT-OS3	424409	6798108	Located east of easement in the vicinity of structure E18, **Appendix 4, Heritage 17**.	2
6	LT-PAD1	461459.47	6805041.23	Located at structure AP51, **Appendix 4, Heritage 23**.	1
7	LT-PAD2	452773	6804682	Located between structure E96 and structure E97, **Appendix 4, Heritage 21**.	2
8	LT-PAD3	427267 to 427083	6799193 to 6799062	Located at structure E25, **Appendix 4, Heritage 18**.	2
9	LT-PAD4	418564	6791878	Located between structure E1 and structure E2, **Appendix 4, Heritage 16**.	2
10	LT-PAD5	415800	6788314	This site is within the existing 132kV easement but west of the point where the proposed Tenterfield Substation takes the line to the north. Hence it is not plotted on the **Appendix 4** figures.	2
11	LT-ST1	424550	6798994	This site is located well away from the transmission line and does not appear on the maps in **Appendix 4**.	2

Site Number (for this report only)	Site Designation	GDA Zone 56 Easting	GDA Zone 56 Northing	Location comments	Survey week
12	LT-ST2	424560	6798986	This site is located well away from the transmission line and does not appear on the maps in **Appendix 4**.	2
13	TD-IF1	353027	6778276	Located between structure W52 and structure W53, **Appendix 4, Heritage 3**.	3
14	TD-IF2	353060	6778276	Located between structure W52 and structure W53, **Appendix 4, Heritage 3**.	3
15	TD-IF3	354118	6779022	Located off-easement to the east of structure W55, **Appendix 4, Heritage 4**.	3
16	TD-IF4	354279	6779143	Located off-easement to the east of structure W55, **Appendix 4, Heritage 4**.	3
17	TD-IF5	353424	6778564	Located off-easement to the east of structures W53 and W54, **Appendix 4, Heritage 4**.	3
18	TD-IF6	365108	6787313	Located between structure AP16 and structure W94, **Appendix 4, Heritage 6**.	3
19	TD-IF7	373703	6788549	Located at structure W116, **Appendix 4, Heritage 7**.	3
20	TD-IF8	390502	6788586	Located between structure W163 and structure W164, **Appendix 4, Heritage 10**.	4
21	TD-IF9	410170	6793721	Located between structure W226 and structure W227, **Appendix 4, Heritage 15**.	4
22	TD-OS1	345121	6771042	Located on access track to structure W25, **Appendix 4, Heritage 2**.	3
23	TD-OS2	345334	6771472	Located between structure W25 and structure W26, **Appendix 4, Heritage 2**.	3
24	TD-OS3 with PAD	348021	6774086	Located north of the easement between structure W36 and structure W37, **Appendix 4, Heritage 3**.	3
25	TD-OS4 with PAD (incorporates TD-OS15)	342281	6768452	Located on the access track to structure W14, **Appendix 4, Heritage 1**. This GPS is the eastern extent of the site.	3
		342136	6768402	Western extent.	
26	TD-OS5 with PAD	350768	6776111	Located on the access track to structure W45, **Appendix 4, Heritage 3**.	3
*	TD-OS6 (incorporated into TD-OS20 with PAD)	352607	6777861	Located at structure W51, **Appendix 4, Heritage 3**.	3
27	TD-OS7	352889	6778207	Located at structure W52, **Appendix 4, Heritage 3**.	3

Site Number (for this report only)	Site Designation	GDA Zone 56 Easting	GDA Zone 56 Northing	Location comments	Survey week
28	TD-OS8	355078	6780087	Located north of easement in vicinity of structure W59, **Appendix 4, Heritage 4**.	3
29	TD-OS9 with PAD	362262	6782710	Located at structure W80 and on the access track between structure W80 and structure W81, **Appendix 4, Heritage 5**.	3
		362237	6782714	Limit of site.	
		362160	6782723	Limit of site.	
		362121	6782686	Limit of site.	
		362170	6782641	Limit of site.	
		362330	6782645	Limit of site.	
		362156	6782670	Main scatter.	
30	TD-OS10	363978	6786058	Located on access track to structure W90, **Appendix 4, Heritage 5**.	3
		363964	6786018	Limit of site.	
		363990	6786041	Limit of site.	
		363990	6786078	Limit of site.	
		363941	6786066	Limit of site.	
31	TD-OS11 with PAD	366286	6788218	Limit of site south.	3
		366180	6788209	Located between structure W97 and structure AP17, **Appendix 4, Heritage 6**.	
		366393	6788293	Likely limit of the site to the west.	
32	TD-OS12	379461	6785568	Located on access to structure W133, **Appendix 4, Heritage 8**. This GPS point in site centre.	4
		379465	6785578	TD-OS12: extent north.	
		379456	6785532	TD-OS12: extent south.	
33	TD-OS13	382192	6785067	Located on structure W138, **Appendix 4, Heritage 8**.	4
		382177	6785064	TD-OS13: extent west.	
34	TD-ST1	348490	6774491	Located north of the easement in the vicinity of structure W38, **Appendix 4, Heritage 3**.	3
35	TD-ST2	362197	6782656	Located north of the easement in the vicinity of structure W80, **Appendix 4, Heritage 5**.	3
36	TD-ST3	375327	6787493	Located between structure W121 and structure W122, **Appendix 4, Heritage 7**.	4
37	TD-ST4	390992	6790666	Located east of easement in vicinity of structure W169, **Appendix 4, Heritage 11**.	4
38	TD-ST5	392051	6793758	Located east of easement in vicinity of structure W177, **Appendix 4, Heritage 12**.	4
39	TD-ST6	392176	6793678	Located west of easement in vicinity of structure W177, **Appendix 4, Heritage 12**.	4

Site Number (for this report only)	Site Designation	GDA Zone 56 Easting	GDA Zone 56 Northing	Location comments	Survey week
40	TD-ARG1	348545	6774459	Located north of the easement in the vicinity of structure W38, **Appendix 4, Heritage 3**.	3

* TD-OS6 is incorporated into TD-OS20 with PAD and will not be registered as a separate site.

Details of these sites follow. All coordinates are GDA Zone 56. Where multiple site coordinates are given they reflect extent of observed artefacts. All artefact measurements are in millimetres and are given in the following order: height – width – depth. The location of sites in relation to the proposed alignment and associate structures is provided in **Appendix 4**. Sites are listed here east to west as this was the order in which the survey work was undertaken.

LT-IF1

Site type: Isolated Find

Site Coordinates: 462841.00E/6804863.00N

Site Location: The location of LT-IF1 is given in **Table 4–1** and shown in **Figure 4–1**.

Site Description: LT-IF1 is located at the base of the northern pole of existing Structure 233 where a large ant-hill has created an area of good ground surface visibility (**Plate 4–9**). LT IF1 is a flake of an unidentified grey, fine-grained stone. It measures 17 x 23 x 7. The flake has a faceted platform with 50% cortex on the platform. Three negative flake scars were evident on the dorsal surface. The flake was struck from a multi-directional core (**Plate 4–10**).

Figure 4-1: Map showing the location of LT-IF1, LT-IF2 and LT-PAD1.

LT-IF2

Site type: Isolated Find

Site Coordinates: 461664.33E/6805013.23N

Site Location: The location of LT-IF2 is given in **Table 4–1** and shown in **Figure 4–1**.

Site Description: LT-IF2 is located at the base of the southern pole of existing Structure 227 where a large ant-hill and other disturbances have created an area of good ground surface visibility (**Plate 4–11**). LT-IF2 is a milk quartz flake. It measures 22 x 21 x 2. The flake has a fine platform without cortex on the platform. One (clear) negative flake scar is evident on the dorsal surface (**Plate 4–12**).

LT-OS1 with PAD

Site type: Open Site with PAD

Site Coordinates: 458545.00E/6805411.00N (relating to centre of surface site)

Site Location: The location of LT-OS1 with PAD is given in **Table 4–1** and shown in **Figure 4–2** and **Figure 4–3**.

Site Description: LT-OS1 with PAD is located adjacent to an unnamed tributary of Tabulam Rivulet (which, in turn, is a tributary of the nearby Clarence River) approximately 20m south east from structure E213. The site is located on a bend in the waterway (which contained ponds of water) and it is likely that portions of the site have already been eroded into the waterway as the site extends up to the steep and eroded banks of the waterway (**Plate 4–13**). The main exposure of artefacts was recorded on a large ant-hill that afforded ground surface visibility (**Plate 4–14**). The exposed artefacts covered an area of 10m x 4m and displayed a medium-level density of over 10 artefacts per square metre. Further, the range of artefacts recorded suggests a semi-permanent camp as tool making artefacts were present (cores and anvils). The site appears to be largely undisturbed as there were a range of small artefacts present (**Plate 4–15**). From a preliminary count, LT-OS1 contains in excess of 25 artefacts with a range of raw materials present including milk quartz, grey quartzite and a grey, fine-grained volcanic stone.

While LT-OS1 appears confined to the area surrounding the ant-hill on the promontory of watercourse, low ground surface visibility elsewhere necessitated that a broader area be designated a PAD. The area of the PAD associated with LT-OS1 extends for the width of the easement and around 40-60m west of the creek (see **Figure 4–3**):

- from the northern boundary of the easement south to the banks of the waterway; and
- from the area where structure E213 is located east to the bank of the waterway under the easement.

Figure 4-2: Map showing the location of LT-OS1 with PAD.

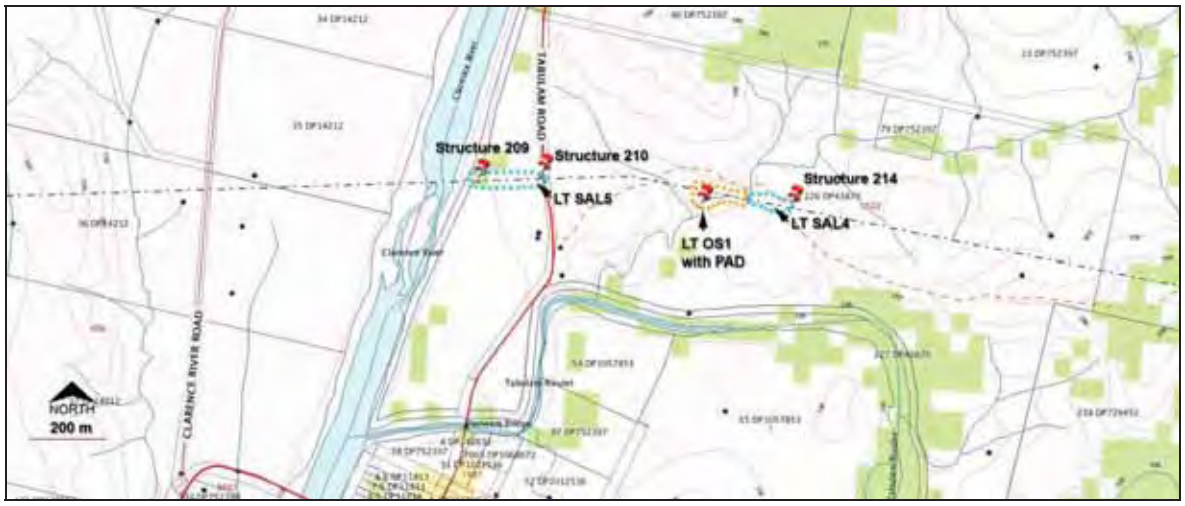
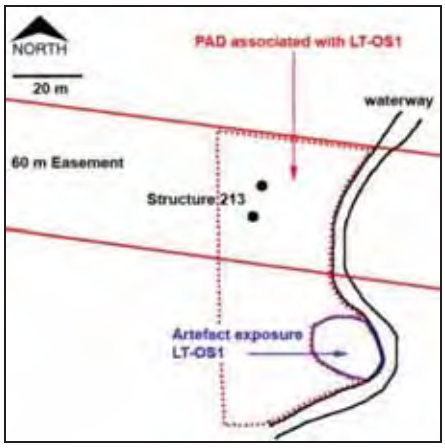


Figure 4-3: Sketch plan to show the extent of the PAD associated with LT-OS1.



LT-OS2 with PAD

Site type: Open Site with PAD

Site Coordinates:

419316E/6792585N

419325E/6792650N

Site Location: The location of LT-OS2 with PAD is given in **Table 4–1** and shown in **Figure 4–4**.

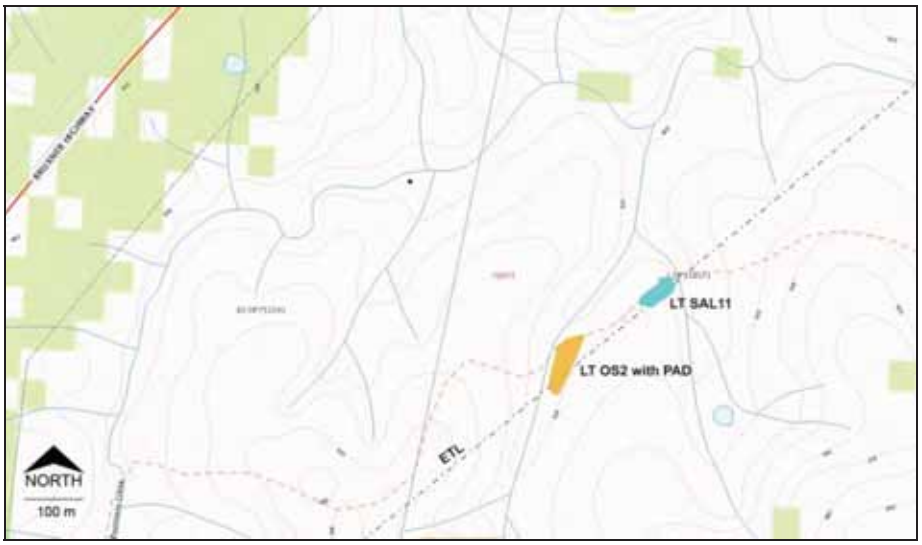
Site Description: LTD-OS2 with PAD is located on an existing access track adjacent to an unnamed tributary of Postmans Creek (**Plate 4–16**). The site occurs a few meters within the northern boundary of the proposed easement. The five artefacts observed are situated on an existing access track while the PAD comprises the extent of the elevated terrace above the unnamed second order drainage line possessing permanent water (a series of rock pools) at 820m AHD.

Given the depth of surrounding soils off track, it was considered likely that intact subsurface archaeological deposits could remain. Disturbance in the elevated terrace is limited to clearing for grazing agriculture.

Materials present were limited to basalt, dark quartzite and milk quartz. The recorded artefacts were weathered and many lacked the distinctive features of flakes such as negative flake scars, however, they were assessed as Aboriginal in origin; particularly as milk quartz was not naturally present in the landscape (**Plate 4–17**). Details of recorded artefacts are:

- Dark quartzite flake: 46 x 32 x 21, proximal present, hinge termination;
- Basalt broken flake: 21 x 14 x 9;
- Basalt broken flake: 20 x 16 x 8, proximal present;
- Milk quartz flake: 46 x 32 x 21; and
- Milk quartz flake: 33 x 12 x 14.

Figure 4-4: Map showing the location of LT-OS2 with PAD.



LT-OS3

Site type: Open Site

Site Coordinates: 424409E/6798108N

Site Location: The location of LT-OS3 is given in **Table 4–1** and shown in **Figure 4–5.**

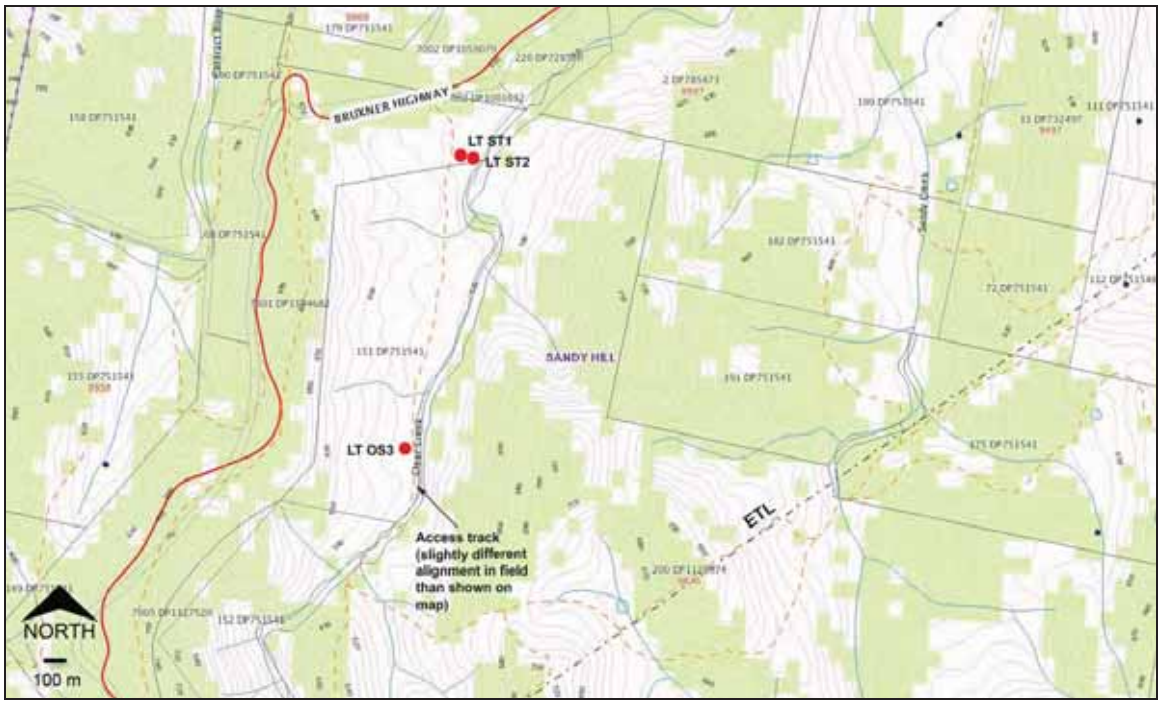
Site Description: LT-OS3 is located on an access track used to service the existing 132kV transmission line. This site was inadvertently observed but officially recorded for due diligence.

The site is located adjacent to and approximately 50m upslope of Clear Water Creek, a second order permanent drainage line feeding the Cataract River. Two artefacts were observed along the access track which had good visibility; it is possible that further artefacts may occur. The site is approximately 30m x 5m and is located on dark brown soils in a previously cleared grazing agricultural landscape at 575m AHD.

A photograph of the landform on which the artefacts were recorded was not taken, an example of artefacts recorded is shown in **Plate 4–18**. Details of recorded artefacts are:

- Grey quartzite flake 36 x 31 x 9, platform preparation evident; and
- Milk quartz flake 27 x 21 x 7.

Figure 4-5: Map showing the location of LT-OS3, LT-ST1 and LT-ST2.



LT-PAD1

Site type: Potential Archaeological Deposit

Site Coordinates: 461459E/6805041N

Site Location: The location of LT-PAD1 is given in **Table 4–1** and shown in **Figure 4–1**.

Site Description: LT-PAD1 extends from the base of structure E226 to a gully created by a minor branch of Tunglebung Creek approximately 200m to the north west. It extends for the width of the 60m proposed easement (**Plate 4–19**). LT-PAD1 is located on a low rise above the floodplain of Tunglebung Creek and a small portion of the floodplain itself. There was no rock outcropping nearby and the area displayed evidence of soil depth. Ground surface visibility was very variable with some portions of the PAD (the majority) having the ground surface completely obscured by long grass. There were areas of good visibility such as on the farm track beside structure E226 although no artefacts were located in these few areas of good visibility. This area was designated a PAD due to the suitable landform that it occupies and its proximity to other recorded sites such as LT-IF2 that is located some 400m to the south east. Tunglebung Creek contains permanent water and a local landowner informed the survey team that it always has water — even in the severest of droughts. This fact, along with the local topography suggested to the survey team that if undisturbed archaeological deposits were to exist in the area, then the low rise (where structure E226 is located) above the floodplain would be the most obvious location for such archaeological deposits.

LT-PAD2

Site type: Potential Archaeological Deposit

Site Coordinates: 452773E/6804682N

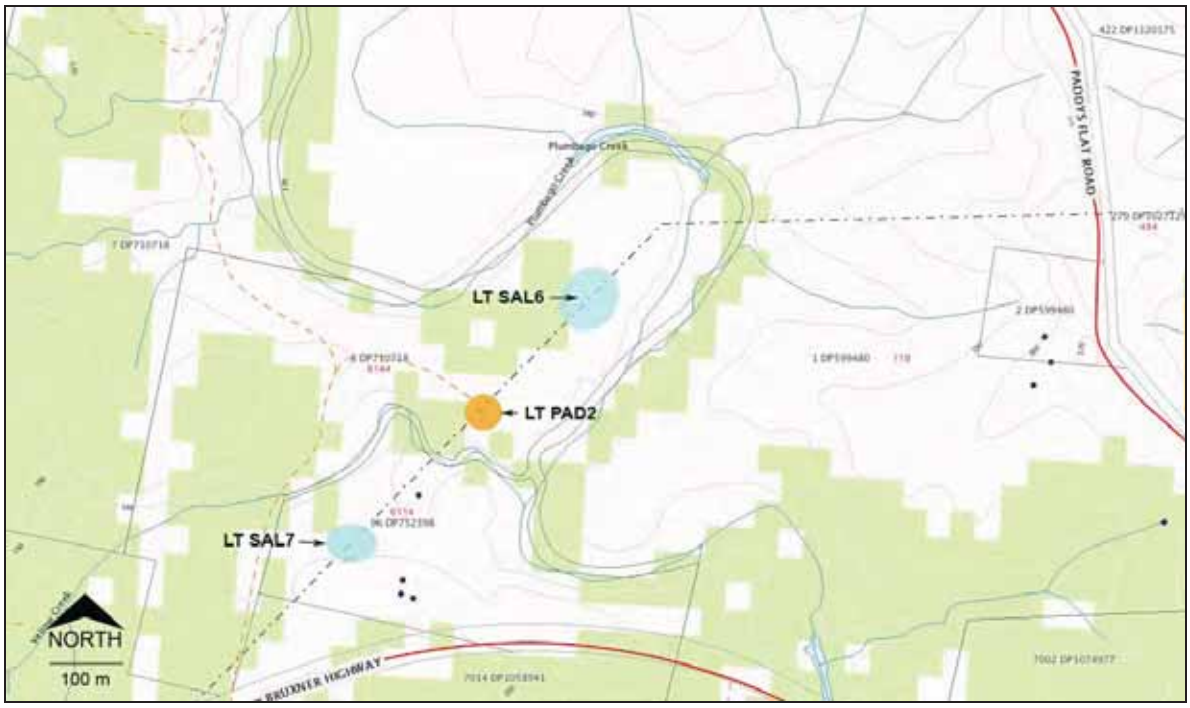
Site Location: The location of LT-PAD2 is given in **Table 4–1** and shown in **Figure 4–6**.

Site Description: TD-PAD2 is surrounded by Plumbago and Yellow Creeks and is located at the boundary of the proposed easement (**Plate 4–20**).

No artefacts were observed, however, designation of this area as a PAD occurred for the following reasons:

- The locality is in the immediate vicinity of permanent water;
- A deep incision of Yellow Creek within 50m of the PAD exposes cobbles of raw materials suitable for the manufacture of stone tools;
- The site is in a riparian zone, an environment well known to provide ample food resources;
- The site is confined to a small (30m x 40m) knoll believed to be above the floodplain of the creeks at 135m AHD.
- The knoll is in the immediate vicinity of a confluence of two substantive waterways; and
- Soils appear to be intact (above the flood level) thus suitable to possess intact sub-surface deposits.

Figure 4-6: Map showing the location of LT-PAD2.



LT-PAD3

Site type: Potential Archaeological Deposit

Site Coordinates:

427267E/6799193N

427083E/6799062N

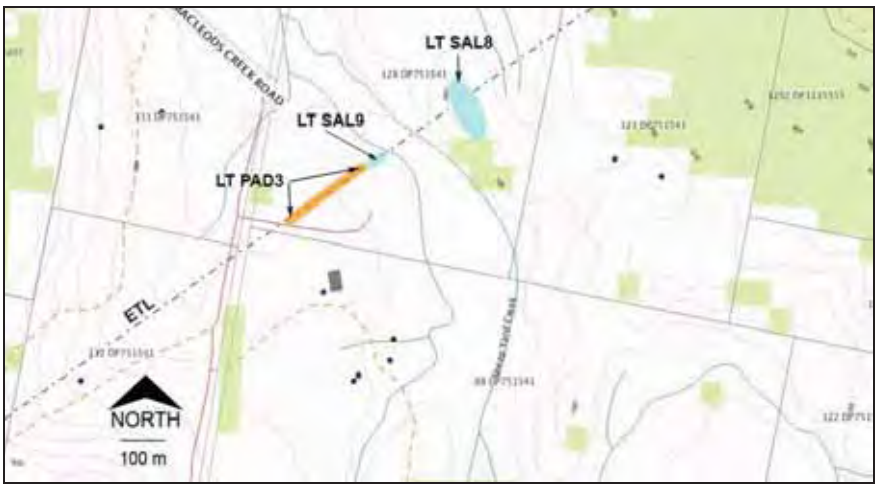
Site Location: The location of LT-PAD3 is given in **Table 4–1** and shown in **Figure 4–7**.

Site Description: TD-PAD3 is on a low hill on the western bank of, and adjacent to, Sheep Yard Creek. The PAD is located on the boundary of the proposed easement (**Plate 4–21**).

No artefacts were observed, however, designation of this area as a PAD occurred for the following reasons:

- The locality is in the immediate vicinity to permanent water (Sheep Yard Creek) and within a long but wide valley immediately adjacent to the Cataract River;
- Cobbles of raw materials suitable for the manufacture of stone tools were present in the bed of the creek;
- The site is in a riparian zone, an environment well known to provide ample food resources. Nearby beds of macrophytes, sedges and rushes were present. These resources are known to be have exploited by Aboriginal people;
- The site is confined to a small gentle hill facing the morning sun (east) that is above the floodplain of the creek at 570m AHD. Soils within the PAD are fine and often sandy; both types well suited as camping locations;
- Adjacent steep knolls and mountains provide geological diversity and habitat complexity within a small area, these landforms and environments provide a higher concentration of different resources (food, defence opportunities etc.) than other landforms in the immediate area; and
- Soils appear to be intact (above the flood level) thus suitable to possess intact subsurface deposits.

Figure 4-7: Map showing the location of LT-PAD3.



LT-PAD4

Site type: Potential Archaeological Deposit

Site Coordinates: 418564E/6791878N

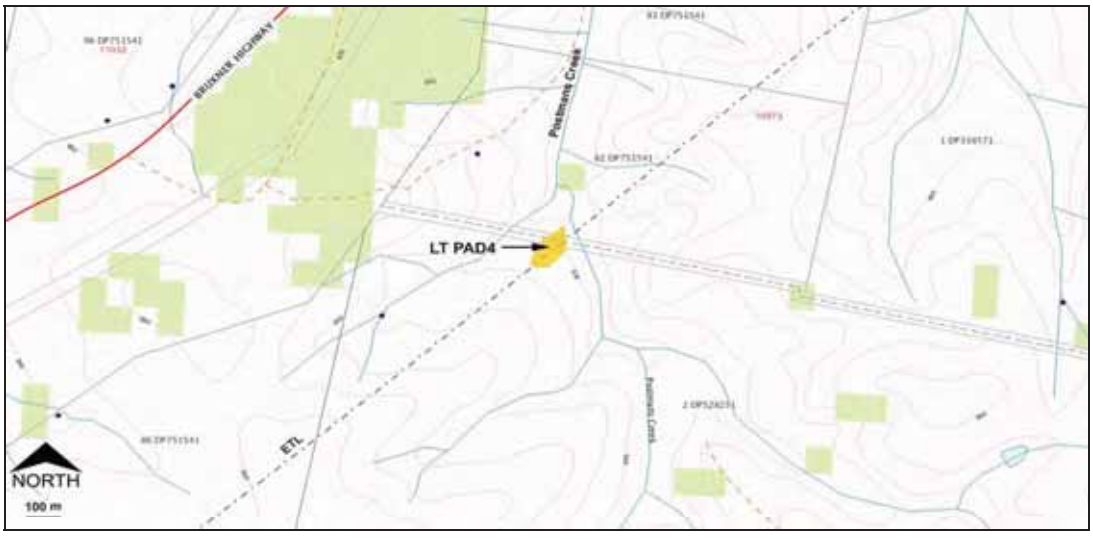
Site Location: The location of LT-PAD4 is given in **Table 4–1** and shown in **Figure 4–8**.

Site Description: LT-PAD4 is on the western bank of Postman's Creek on a flat elevated sandy terrace at the base of a low hill (**Plate 4–22**). The PAD is located across the proposed easement.

No artefacts were observed, however, designation of this area as a PAD occurred for the following reasons:

- The locality is in the immediate vicinity to permanent water (Postmans Creek). At the base of the creek's incised wall there are many large deep rocky pools. Access to these pools is easy from the PAD via surrounding land. The site is within a few kilometres of the Cataract River (less than an hour's walk from the site);
- The site is at the confluence of waterways;
- Cobbles of raw materials suitable for the manufacture of stone tools were present in the bed of the creek;
- The site is in a riparian zone an environment well known to provide ample food resources;
- The site is confined to a small flat portion of ground facing the morning sun (east) that is above the floodplain of the creek at 830m AHD. Soils within the PAD are sandy and well suited as a camping location; and
- Soils appear to be intact (above the flood level) thus suitable to possess subsurface *in situ* deposits.

Figure 4-8: Map showing the location of LT-PAD4.



LT-PAD5

Site type: Potential Archaeological Deposit

Site Coordinates: 415800E/6788314N

Site Location: The location of LT-PAD5 is given in **Table 4–1** and shown in **Figure 4–9**.

Site Description: LT-PAD5 is on a knoll on the eastern bank of the Cataract River (**Plate 4–23**). The PAD is located within the existing easement.

No artefacts were observed, however, designation of this area as a PAD was for the following reasons:

- The locality is in the immediate vicinity to permanent water (Cataract River) at the point of four drainage line confluences;
- Cobbles of raw materials and bed rock containing outcropping high quality quartz for the manufacture of stone tools were present in the bed of the river and surrounding unnamed drainage lines;
- The site is in a riparian zone an environment well known to provide ample food resources;
- The site is confined to a small flat portion of the knoll overlooking the river at 860m AHD. Soils within the PAD are fine loam and well suited as a camping location; and
- Soils appear to be intact (above the flood level) thus suitable to possess subsurface *in situ* deposits.

Figure 4-9: Map showing the location of LT-PAD5.

LT-ST1

Site type: Modified Tree

Site Coordinates: 424550E/6798994N

Site Location: The location of LT-ST1 is given in **Table 4–1** and shown in **Figure 4–5**.

Site Description: LT-ST1 is located adjacent to an access track used to service the existing 132kV transmission line. This site was inadvertently observed but officially recorded for due diligence.

LT-ST1 is adjacent to and approximately 50m upslope of Clear Water Creek, a second order permanent drainage line feeding the Cataract River. The tree is located within 20m of a second scarred tree (LT-ST2) recorded at the location.

The 15m tree is a dead (ringbarked) Blakely's red gum (*Eucalyptus blakelyii*) with a circumference at breast height of 1.72m and as such is of sufficient age to possess a cultural scar. The heartwood of the tree has rotted; the shape left is consistent with a Coolamon (**Plate 4–24**). Other details of the scar have been provided below:

- Min scar length: 1820mm;
- Minimum scar width: 450mm;
- Maximum depth of regrowth: 290mm;
- Scar orientation: SSW; and
- Height of base of scar above ground: 1300mm.

The scar, according to the criteria set out in **Appendix 1**, is assessed as being an Aboriginal Scar (i.e. most likely of Aboriginal origin but without any feature that makes it a definite Aboriginal scar).

LT-ST2

Site type: Modified Tree

Site Coordinates: 424560E/6798986N

Site Location: The location of LT-ST2 is given in **Table 4–1** and shown in **Figure 4–5**.

Site Description: LT-ST2 is located adjacent to an access track used to service the existing 132kV transmission line. This site was inadvertently observed but officially recorded for due diligence.

LT-ST2 is adjacent to and approximately 40m upslope of Clear Water Creek, a second order permanent drainage line feeding the Cataract River. The tree is located within 20m of a second scarred tree (LT-ST1) recorded at the location.

The 10m tree is a dead (ringbarked) Blakely's red gum (*Eucalyptus blakelyii*) with a circumference at breast height of 2.2m and as such is of sufficient age to possess a cultural scar. The heartwood of the tree has rotted; the shape left is consistent with a Coolamon (**Plate 4–24**). Other details of the scar have been provided below:

- Min scar length: 620mm;
- Minimum scar width: 450mm;
- Maximum depth of regrowth: 360mm;
- Scar orientation: East; and

- Height of base of scar above ground: 1200mm.

The scar, according to the criteria set out in **Appendix 1**, is assessed as being a Possible Aboriginal Scar (i.e. conforms to most criteria but is unlikely to be Aboriginal in origin).

TD-IF1

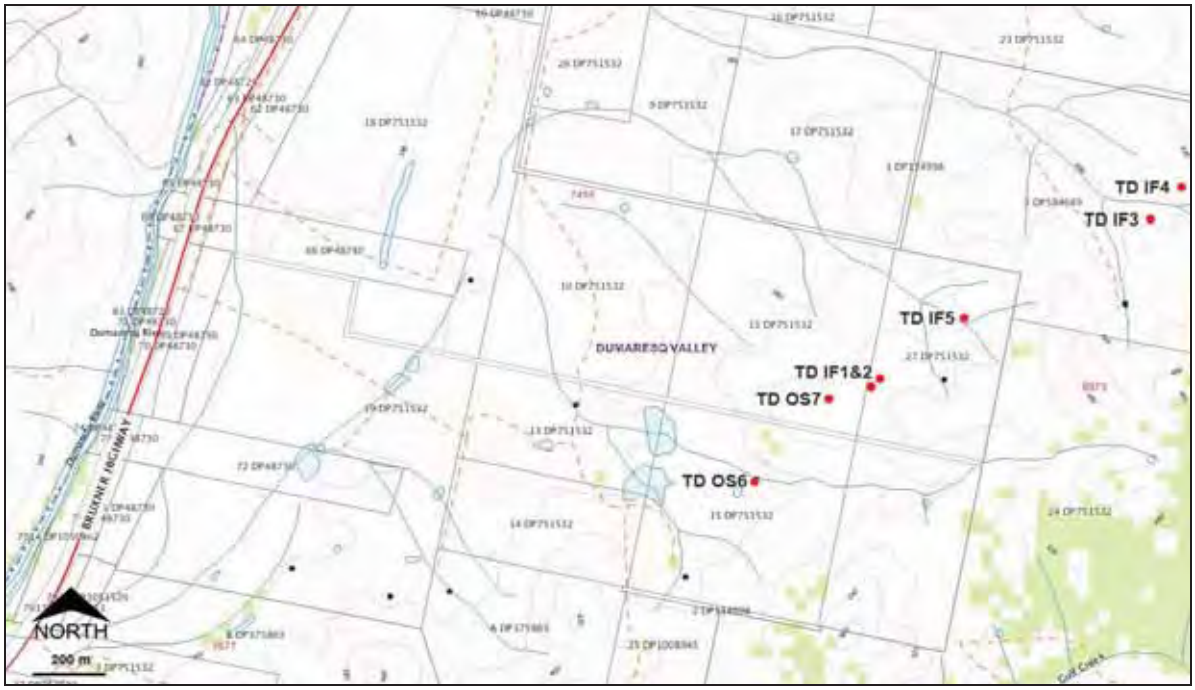
Site type: Isolated Find

Site Coordinates: 353027E/6778276N

Site Location: The location of TD-IF1 is given in **Table 4–1** and shown in **Figure 4–10**.

Site Description: TD-IF1 is a potential hammer stone possessing a 'pitted surface'. The object is possibly granite and measures roughly 80 x 63 x 45 (**Plate 4–25**). TD-IF1 is located on a gentle hill slope between unnamed first order ephemeral drainage lines and is within the proposed easement. This site is located approximately 2.8km east of the Dumaresq River. Natural and agricultural disturbances have created an area of good ground surface visibility where the artefact was observed, however, no other artefacts were present.

Figure 4-10: Map showing the location of TD-OS6, TD-OS7 and TD-IF1–5.



TD-IF2

Site type: Isolated Find

Site Coordinates: 353060E/6778276N

Site Location: The location of TD-IF2 is given in **Table 4–1** and shown in **Figure 4–10**.

Site Description: TD-IF2 is a potential hammer stone. It comprises a water worn cobble possessing a 'pitted surface'. The object is a compacted sedimentary material measuring 91 x 75 x 61 (no photo taken in field). TD-IF2 is located on a gentle hill slope between unnamed first order ephemeral drainage lines and on the southern boundary of the proposed easement.

This site is located approximately 2.8km east of the Dumaresq River. Natural and agricultural disturbances have created areas of good ground surface visibility where the artefact was observed, however, no other artefacts were recorded.

TD-IF3

Site type: Isolated Find

Site Coordinates: 354118E/6779022N

Site Location: The location of TD-IF3 is given in **Table 4–1** and shown in **Figure 4–10**.

Site Description: TD-IF3 is a fine-grained siliceous axe blank measuring 85.5 x 76.5 x 31.5 (**Plate 4–26**). TD-IF3 is located on a gentle hill slope between the confluences of two unnamed first order ephemeral drainage lines (eastern bank) at 400m AHD. This site is well outside the proposed easement and is located approximately 4km east of the Dumaresq River. Natural and agricultural disturbances have created areas of good ground surface visibility where the artefact was observed, however, no other artefacts were recorded.

TD-IF4

Site type: Isolated Find

Site Coordinates: 354279E/6779143N

Site Location: The location of TD-IF4 is given in **Table 4–1** and shown in **Figure 4–10**.

Site Description: TD-IF4 is a chert blade measuring 36 x 17 x 5 (no photo taken in field). TD-IF4 is located 100m upslope of an unnamed first order ephemeral drainage line at 400m AHD. This site is well outside the proposed easement and is located approximately 4km east of the Dumaresq River. Natural and agricultural disturbances have created areas of good ground surface visibility where the artefact was observed, however, no other artefacts were recorded.

TD-IF5

Site type: Isolated Find

Site Coordinates: 353424E/6778564N

Site Location: The location of TD-IF5 is given in **Table 4–1** and shown in **Figure 4–10**.

Site Description: TD-IF5 is a basalt flake with a platform and negative scar measuring 15 x 32 x 6. Unfortunately the photograph of this artefact was not able to be retrieved. TD-IF5 is located at the confluence of two unnamed first order ephemeral drainage lines at 400m AHD and approximately 100m from the southern boundary of the proposed easement. The site is located approximately 2.8km east of the Dumaresq River. Natural and agricultural disturbances have created areas of good ground surface visibility where the artefact was observed, however, no other artefacts were recorded.

TD-IF6

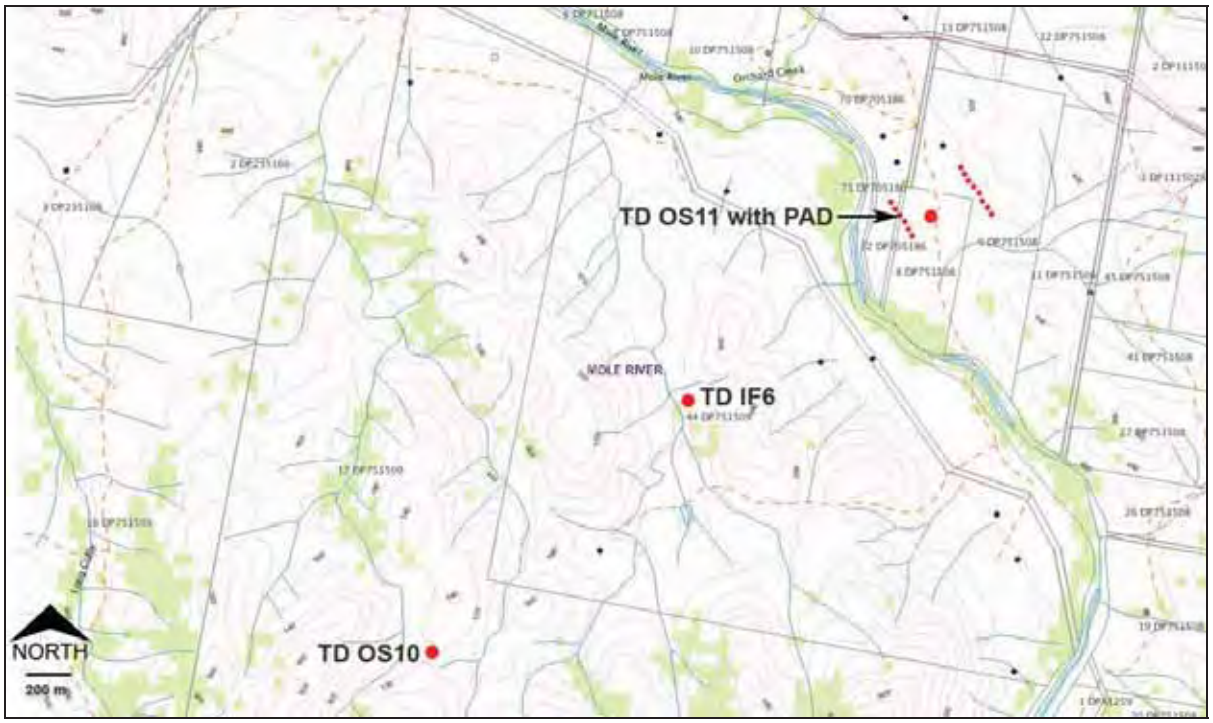
Site type: Isolated Find

Site Coordinates: 365108E/6787313N

Site Location: The location of TD-IF6 is given in **Table 4–1** and shown in **Figure 4–11**.

Site Description: TD-IF6 is a chert cobble measuring 36 x 15 x 21. Unfortunately the photograph of this artefact was destroyed by a camera malfunction in the field. TD-IF6 is located at 420m AHD along the banks of an unnamed second order drainage line to Mole River. The site is on the southern boundary of the proposed easement and approximately 925m west of the Mole River. The artefact was located close to the confluence of first and second order drainage lines and although ground surface visibility was good in the immediate environs (30m x 30m, including a track), no further artefacts were recorded.

Figure 4-11: Map showing the location of TD-OS10, TD-OS11 with PAD and TD-IF6.



TD-IF7

Site type: Isolated Find

Site Coordinates: 373703E/6788549N

Site Location: The location of TD-IF7 is given in **Table 4–1** and shown in **Figure 4–12**.

Site Description: TD-IF7 is a broken coarse-grained basalt flake measuring 38 x 50 x 11 with significant platform preparation and three negative flake scars (**Plate 4–27**). TD-IF7 is located at 650m AHD between Skillion Hut Creek and the Bruxner Highway. The site is within the proposed easement and approximately 2.5km west of Tenterfield Creek. The artefact was located on a ridge top adjacent to an existing track. Although ground surface visibility was good in the immediate environs, no further artefacts were recorded.

Figure 4-12: Map showing the location of TD-IF7.

TD-IF8

Site type: Isolated Find

Site Coordinates: 390502E/6788586N

Site Location: The location of TD-IF8 is given in **Table 4–1** and shown in **Figure 4–13**.

Site Description: TD-IF8 is a basalt flake/core and was recorded in a ploughed paddock. It has 60% cortex and measures 5.8 x 6.2 x 2.3 (**Plate 4–28**). It has two negative flake scars, one indistinct and one bladelet (45mm long). The features of the flake are not definitive enough for TD-IF8 to be assessed as of definite Aboriginal origin; especially as its location in a ploughed paddock suggests that it may have been created by plough strikes. However, there was very little (or no) other stone in the paddock and enough flake-like features were present to give TD-IF8 the benefit of doubt and include it within the recorded sites.

Figure 4-13: Map showing the location of TD-IF8.

TD-IF9

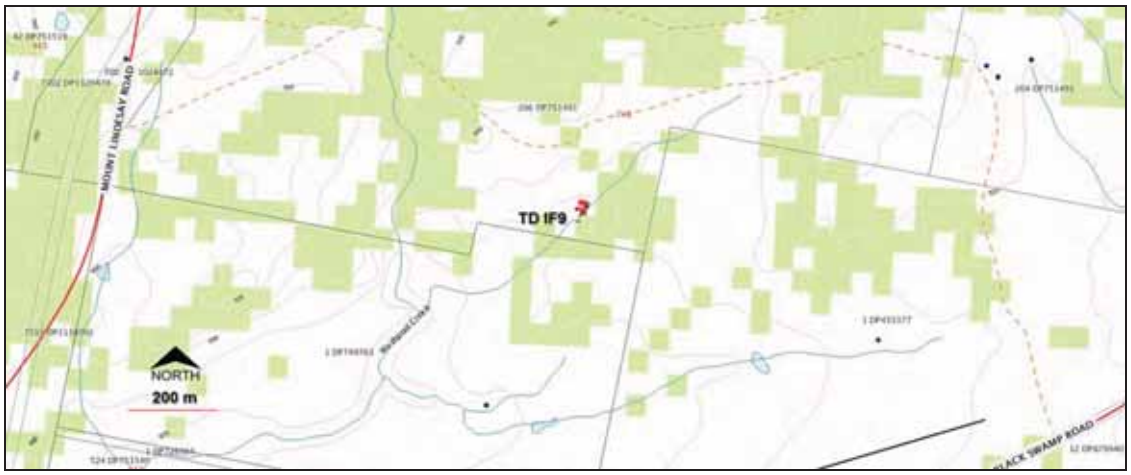
Site type: Isolated Find

Site Coordinates: 410170E/6793721N

Site Location: The location of TD-IF9 is given in **Table 4–1** and shown in **Figure 4–14**.

Site Description: TD-IF8 is a milk quartz flake and was recorded on the edge of an agricultural dam in an area of heavy disturbance. The dam is on a minor tributary of Washpool Creek and would normally only flow after rain events. The flake measures 19 x 31.2 x 5.2 (**Plate 4–29**). It has two negative flake scars, both indistinct, and a wide, unfaceted platform. The features of the flake are definitive enough for TD-IF9 to be assessed as of definite Aboriginal origin.

Figure 4-14: Map showing the location of TD-IF9.



TD-OS1

Site type: Open Site

Site Coordinates:

345121E/6771042N

345125E/6771019N

345111E/6771102N

345095E/6771090N

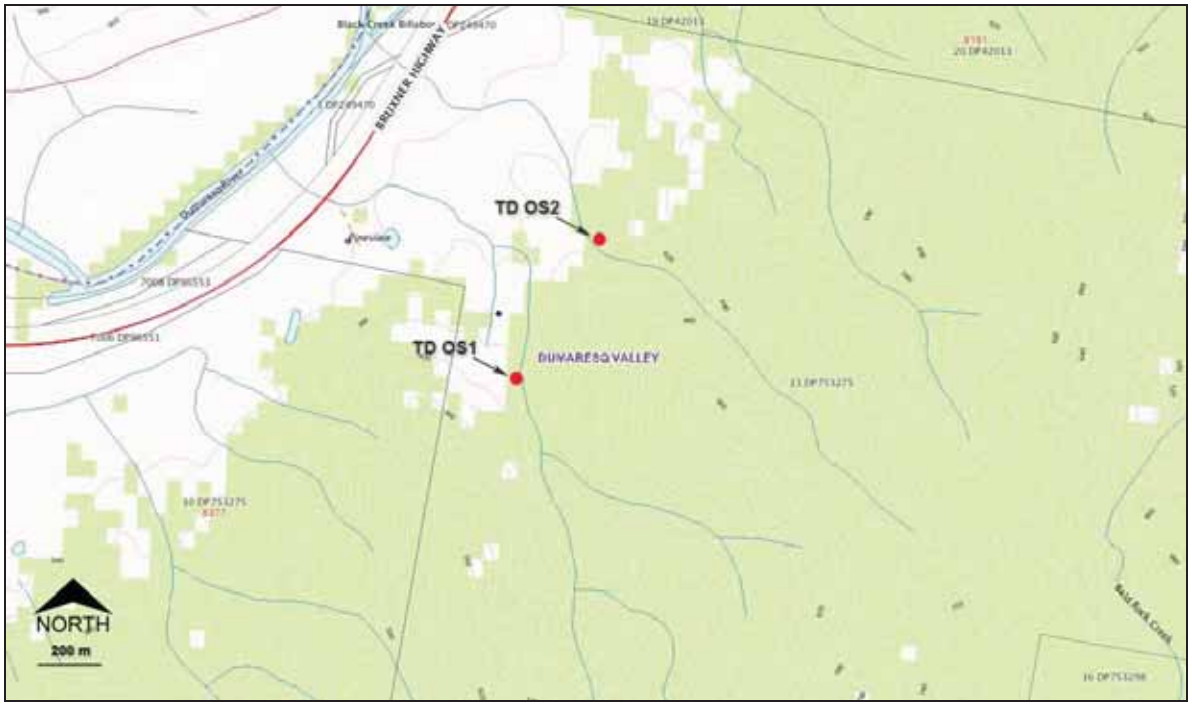
Site Location: The location of TD-OS1 is given in **Table 4–1** and shown in **Figure 4–15**.

Site Description: TD-OS1 is located approximately 50m south east of the proposed easement on the property, “Pineview”. This site was located approximately 700m south east of the Dumaresq River along the top (western bank) and break of slope of an unnamed second order ephemeral drainage line (**Plate 4–30**). The site is approximately 30m x 5m and is located on gravels in a previously cleared grazing agricultural landscape with good ground surface visibility. Artefact densities are less than one artefact per metre square.

Several small milk quartz artefacts were observed (flakes and broken flakes), however, measurements were only taken of one definite quartz artefact. Other materials present included basalt, fine grained siliceous material, chert and indurated mudstone (**Plate 4–31**). An example of artefacts recorded follow:

- Basalt flake 57 x 32 x 16, platform preparation evident;
- Basalt broken flake 30 x 21 x 9, distal missing, two negative flake scars;
- Quartz backed piece 27 x 21 x 7, possible scraper; and
- Chert blade core, 41 x 23 x 18.

Figure 4-15: Map showing the location of TD-OS1 and TD-OS2.



TD-OS2

Site type: Open Site

Site Coordinates: 345334E/6771472N

Site Location: The location of TD-OS2 is given in **Table 4–1** and shown in **Figure 4–15**.

Site Description: TD-OS2 is within the proposed easement on the property, “Pineview”. This site was located approximately 600m south east of the Dumaresq River along the top (eastern bank) and break of slope of an unnamed first order ephemeral drainage line (**Plate 4–32**). The site is approximately 30m x 10m and is located on gravels in a previously cleared grazing agricultural landscape with good ground surface visibility. Artefact densities are less than one artefact per metre square.

Several small artefacts were observed (flakes and broken flakes), however, measurements were only taken of a representative sample of definite artefacts. Materials present included grey quartzite, milk quartz, fine grained siliceous material, chert and indurated mudstone (**Plate 4–33**). An example of artefacts recorded follow:

- Indurated mudstone (brown) flake: 34 x 22 x 5;
- Chert (banded cream) blade: 27 x 17 x 6;
- Fine-grained siliceous blade core: 34 x 17 x 9; and
- Quartz flake: 27 x 18 x 8.

TD-OS3 with PAD

Site type: Open Site with PAD

Site Coordinates:

348020E/6774086N

348008E/6774119N

Site Location: The location of TD-OS3 with PAD is given in **Table 4–1** and shown in **Figure 4–16**.

Site Description: TD-OS3 with PAD is, at its closest point, located 50m beyond the northern boundary of the proposed easement approximately 140m west of an unnamed billabong on Black Creek (**Plate 4–34**). It consists of two artefact scatters of approximately 10 metre square each. Artefact densities are less than one artefact per metre square.

Both artefact scatters observed are situated on an elevated terrace above the Black Creek floodplain at 335m AHD. Black Creek at the location of this site is a 3rd order drainage flowing/meandering for 3.7km until it drains into the Dumaresq River: although the site itself, in direct line of sight, is only 1km from the river. The site is only evident in natural soil exposures and is thought only to occur in association with the elevated terrace. The terrace occurs outside the proposed easement. Disturbance in the elevated terrace is limited to clearing for grazing agriculture.

Materials present included basalt, milk quartz, fine grained siliceous material, chert and quartzite (**Plate 4–35**). An example of artefacts recorded follow:

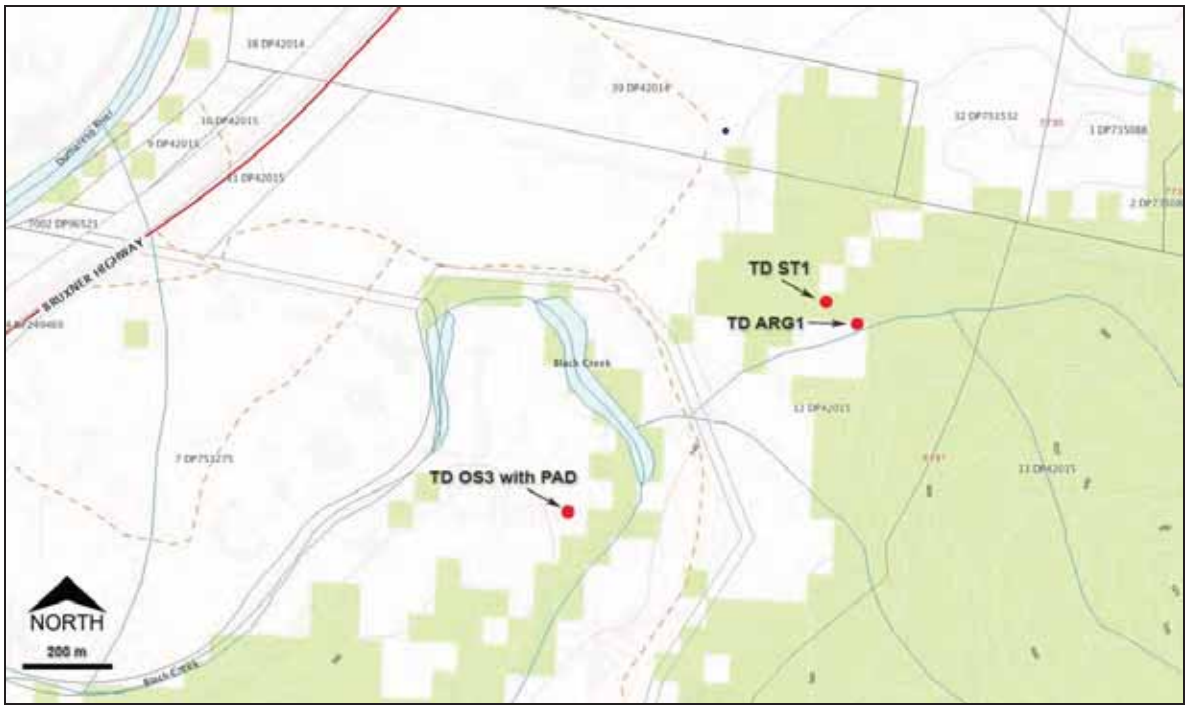
Scatter #1

- Fine-grained basalt broken flake: 33 x 22 x 6, proximal end snapped;
- Grey quartzite flake: 21 x 11 x 3, focal platform, feather termination, 0% cortex, Two negative flake scars;
- Basalt broken flake: 24 x 25 x 6, distal end missing;
- Chert (grey-green) broken flake: 15 x 11 x 3, proximal end snapped; and
- Milk quartz broken flake: 20 x 23 x 8.

Scatter #2

- Basalt flake: 98 x 50 x 20;
- Possible basalt axe preform/blank: 71 x 60 x 28; and
- Possible basalt axe preform/blank: 98 x 51 x 30.

Figure 4-16: Map showing the location of TD-OS3 with PAD, TD-ST1 and TD-ARG1.



TD-OS4 with PAD

Site type: Open Site with PAD

Site Coordinates:

- Northern extent: 342072E/6768085N
- Southern extent: 342281E/6768452N
- Centre of site: 342136E/6768402N

Site Location: The location of TD-OS4 with PAD is given in **Table 4–1** and shown in **Figure 4–17**.

Site Description: TD-OS4 with PAD is, at its closest point, located in the vicinity of the northern boundary of the proposed easement. The site can be accessed via Glendon Road and can be described as being located between this road and the palaeo-branch adjacent to Beardy River (**Plate 4–36**). Beardy River flows 3.6km north to its confluence with the Dumaresq River.

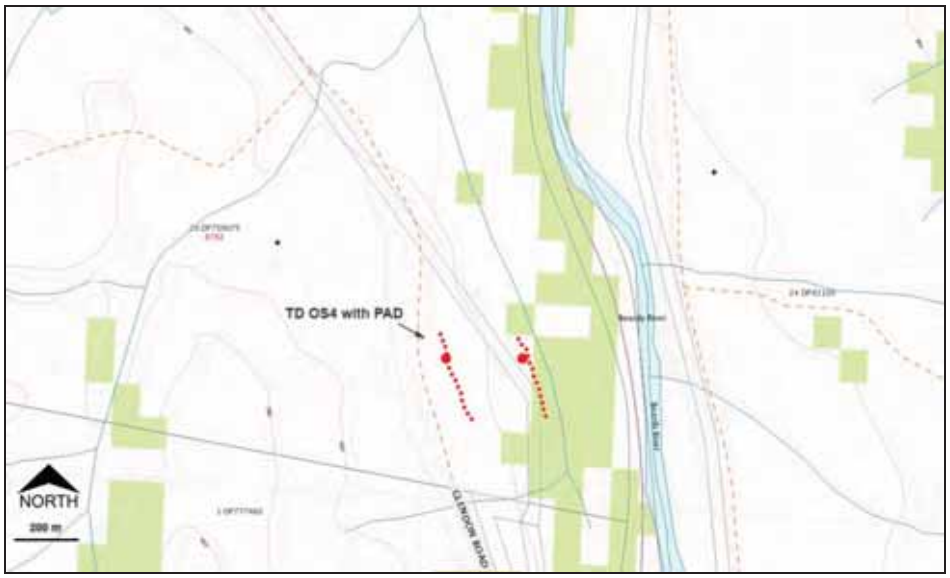
The eastern extent of this site is 250m west of Beardy River and begins with an elevated terrace and runs adjacent its extinct bed (the palaeo-branch). The eastern extent is in the immediate vicinity of the southern boundary of the proposed easement. The western extent of this site is within 20m east of Glendon Road and approximately 50m south of the easement. Its width at the recorded locations is 150m; although this is likely to be variable in other areas but always closely associated with landform.

Materials present included grey quartzite (the dominate material), basalt, chert and milk quartz (**Plate 4–37**). At least 27 artefacts were present, with the more diagnostic being:

- Chert blade core: 39 x 23 x 20;
- Milk quartz – debitage, chips and small flakes (various sizes);
- Grey quartzite – debitage, chips and small flakes (various sizes);
- Grey quartzite broken flake: 37 x 27 x 8, 5% cortex, proximal end missing, three negative flake scars;
- Fine-grained basalt perform axe: 83 x 62 x 21, broken; and
- Grey quartzite core: 73 x 84 x 60.

Access tracks survey 1 recorded TD-OS15 north of TD-OS4. TD-OS15 is identical and continuous with TD-OS4. The coordinates given above include the area recorded as TD-OS15 (see **Section 4.13.6**)

Figure 4-17: Map showing the location of TD-OS4 with PAD.



TD-OS5 with PAD

Site type: Open Site with PAD

Site Coordinates:

350768/6776111N

350752E/6776119N

Site Location: The location of TD-OS5 with PAD is given in **Table 4–1** and shown in **Figure 4–18**.

Site Description: TD-OS5 with PAD is located on an existing access track adjacent to Gulf Creek approximately 100m north of the proposed easement. The site is located approximately 80m west of Gulf Creek that drains north/north–west for 6km into the Dumaresq River (the photograph taken of the site on the day is unusable and hence not included here). Gulf Creek at the location of this site is a 2rd order drainage line possessing permanent water. The four artefacts recorded are situated on an elevated terrace above the

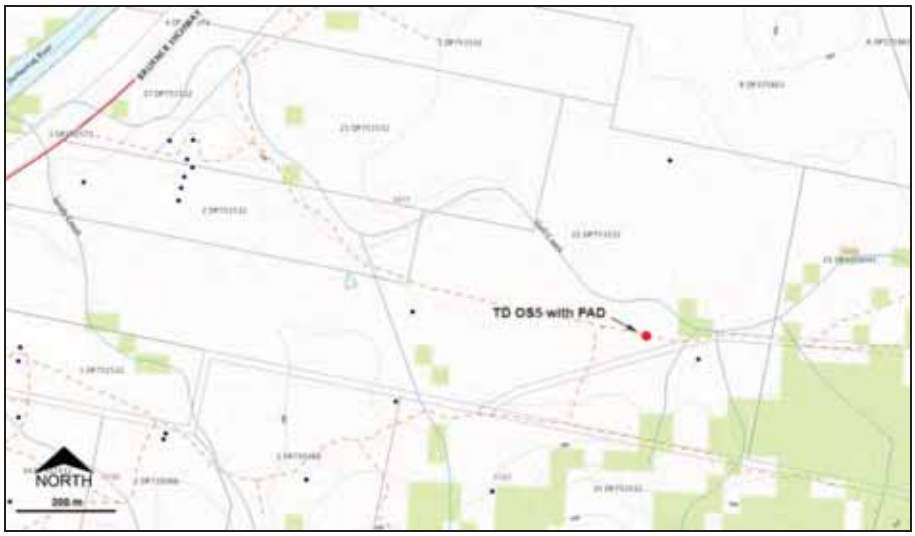
Gulf Creek floodplain at 350m AHD. Artefact densities are less than one artefact per metre square.

The site is only evident along the well-formed access track. Given the depth of surrounding soils off track it was considered likely that subsurface archaeological deposits would remain *in situ*. Disturbance in the elevated terrace is limited to clearing for grazing agriculture.

Artefacts present were limited to fine-grained basalt (**Plate 4–38**). Details of the four recorded artefacts are:

- Basalt broken flake: 41 x 13 x 6 (when joined), two pieces conjoined, three negative flake scars on dorsal surface;
- Possible basalt horse hoof scraper: 67 x 61 x 32;
- Basalt broken blade: 30 x 16 x 6; and
- Basalt broken flake: 23 x 34 x 4.

Figure 4-18: Map showing the location of TD-OS5 with PAD.



TD-OS6

Site type: Open Site

Site Coordinates: 352607E/6777861N

Site Location: The location of TD-OS6 is given in **Table 4–1** and shown in **Figure 4–10**.

Site Description: TD-OS6 is located within the proposed easement. This site is located approximately 2.5km east of the Dumaresq River along the bank and break of slope of an unnamed first order ephemeral drainage line (**Plate 4–39**). The site is approximately 30m x 20m and is located on fine, heavily eroded soils in a previously cleared grazing agricultural landscape with good ground surface visibility. Artefact densities are less than one artefact per metre square.

Only two artefacts were recorded despite good surface visibility in this area. Details of recorded artefacts are:

- Basalt flake: 41 x 18 x 9, bulb, two negative flake scars on dorsal; and
- Light-grey quartzite flake: 32 x 12 x 6, bulb, two negative flake scars.

TD-OS6 is a continuation of TD-OS20 with PAD that was recorded during access tracks survey 1. TD-OS6 will be subsumed into TD-OS20 with PAD and not registered separately.

TD-OS7

Site type: Open Site

Site Coordinates: 352889E/6778207N

Site Location: The location of TD-OS7 is given in **Table 4–1** and shown in **Figure 4–10**.

Site Description: TD-OS7 is located on a gentle hill-slope between unnamed first order ephemeral drainage lines immediately north of and adjacent to the proposed easement. The site is located approximately 2.7km east of the Dumaresq River. The dimensions of the site could not be established (as there were so few artefacts) but it is located on fine, heavily eroded soils in a previously cleared grazing agricultural landscape with good ground surface visibility. Unfortunately the photograph of this site landform was not able to be retrieved from the camera.

An axe perform/blank and two flakes were recorded, a few undiagnostic (i.e. no identifiable flake characteristics present) pieces of good quality quartz were also observed (**Plate 4–40**). Artefact densities are less than one artefact per metre square. Details of recorded artefacts are:

- Grey quartzite axe perform/blank: 105 x 70 x 41, many negative scars present bifacially;
- Greywacke flake: 22 x 11 x 9, bulb, two negative flake scars on dorsal; and
- Fine-grained basalt flake: 18 x 8 x 6, bulb, two negative flake scars on dorsal.

TD-OS8

Site type: Open Site

Site Coordinates: 352889E/6778207N

Site Location: The location of TD-OS8 is given in **Table 4–1** and shown in **Figure 4–19**.

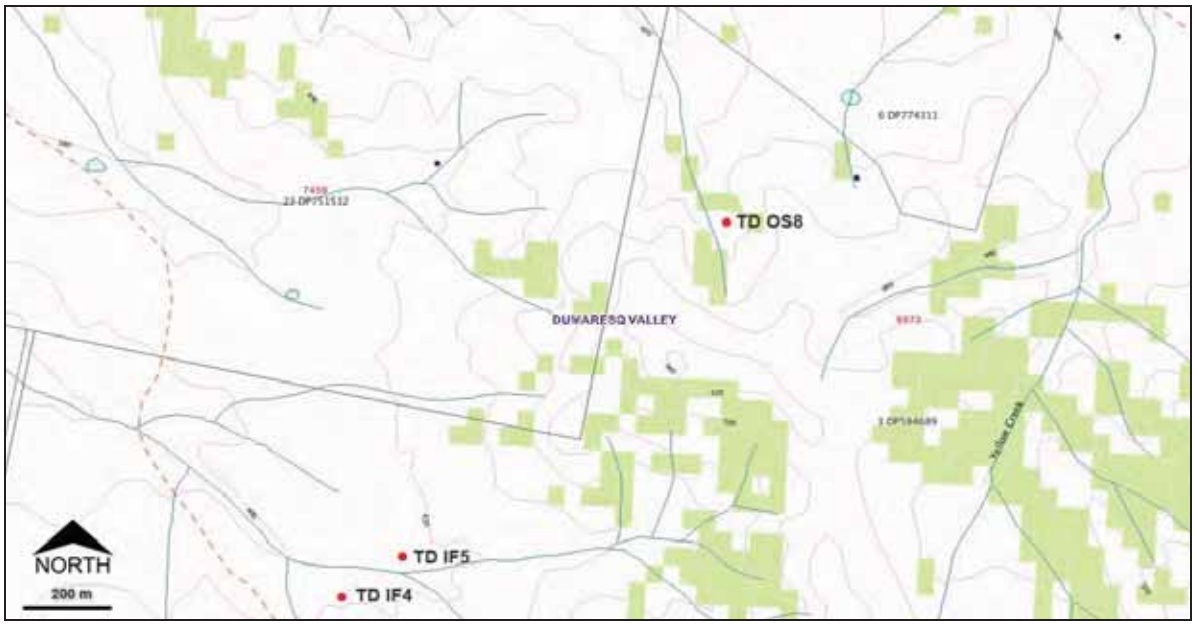
Site Description: TD-OS8 is located at 480m AHD at the head waters of a first order ephemeral drainage line near the top of a hill reaching 540m AHD. The site is 100m north of the proposed easement. This site is located approximately 2.3km south east of the Dumaresq River. The dimensions of the site could not be established as there were very few artefacts but is located on fine, heavily eroded soils in a previously cleared grazing agricultural landscape with good ground surface visibility. Unfortunately the photograph of this site's landform was not able to be retrieved from the camera.

Artefacts recorded were limited to five flakes (**Plate 4–41**). Artefact densities are less than one artefact per metre square. Details of the recorded artefacts are:

- Grey quartzite flake: 55 x 24 x 10, wide platform, feather termination;

- Grey quartzite broken flake: 49 x 27 x 13, wide platform, distal end snapped;
- Grey quartzite flake: 40 x 21 x 12, wide platform, distal end snapped;
- Greywacke flake: 22 x 11 x 9, bulb, two negative flake scars on dorsal; and
- Grey quartzite flake: 18 x 8 x 6, bulb, two negative flake scars on dorsal.

Figure 4-19: Map showing the location of TD-OS8.



TD-OS9 with PAD

Site type: Open Site with PAD

Site Coordinates:

362156E/6782670N (Main scatter)

362262E/6782710N (extent)

362237E/6782714N (extent)

362160E/6782723N (extent)

362121E/6782686N (extent)

362170E/6782641N (extent)

362330E/6782645N (extent)

362339E/6782821N (extent: other side of the drainage line)

Site Location: The location of TD-OS9 with PAD is given in **Table 4–1** and shown in **Figure 4–20**. This site is slightly unusual in that it extends across an unnamed tributary of Rock Camp Creek – it was difficult to separate the area into two distinct areas of occupation.

Site Description: TD-OS9 with PAD is located on a flat contour approximately 50m wide and 460m AHD between unnamed first order headwaters of Rocky Camp Creek and Clay Gully Creek; a portion of the site is immediately adjacent to the ephemeral waterway (**Plate 4–42**).

The site includes a wide variety and diversity of stone artefacts and a modified tree (TD-ST2) hence it should be referred to as a 'site complex'. The modified tree noted above has been individually recorded as an Aboriginal site, however, it remains part of the site complex. Both of the waterways are tributaries of Reedy Creek which, in turn, flows into the Dumaresq River.

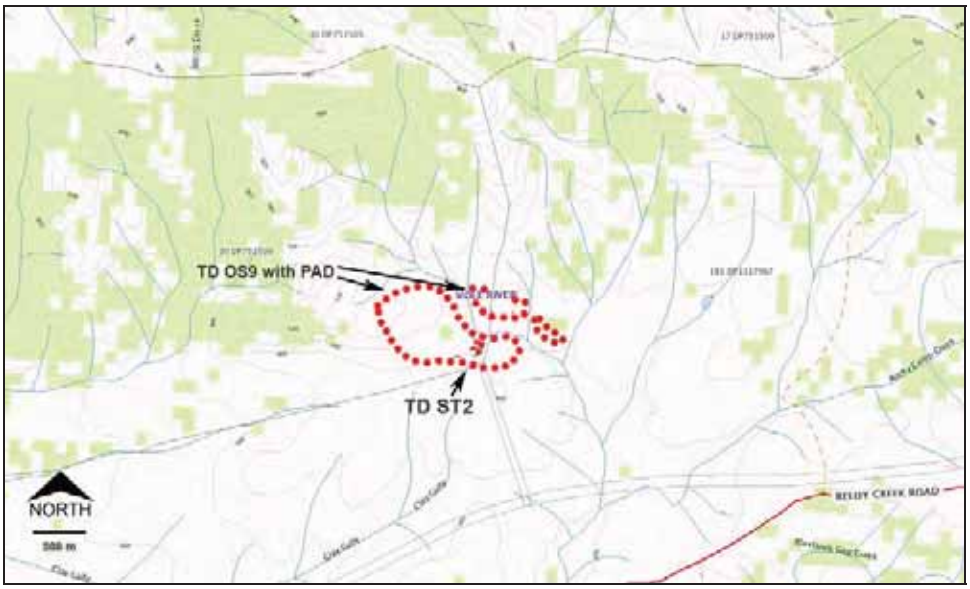
The southern most portion of the main site complex and a small portion on the eastern side (the 'other' side of the unnamed tributary to Rocky Camp Creek) is located within the proposed easement.

One hundred plus artefacts were observed at this site although only a sample (n=6) were recorded. Artefacts were observed in natural scours in the earth, however, it was evident that historic tree clearing and continued grazing had depleted the depth of the soil's A horizon. It is anticipated that soils left are 'surface soils' – not topsoil, that are shallow and skeletal. Potential for *in situ* subsurface archaeological deposits were recognised, however, they are more likely 'upslope' of the proposed easement.

Materials present were dominated by chert, however, geological diversity was noted on site (**Plate 4–43**). Formal tools such as a ground-edge axe, blade flakes and scrapers were observed. The sample size reflects a random 1m x 1m quadrant within the main artefact scatter. An average artefact density at the site is approximately 5 artefacts per square metre. Details of the sample of recorded artefacts are:

- Grey quartzite flake: 45 x 9 x 6 – very long blade, retouch on both sides;
- Chert (red) broken flake: 23 x 28 x 6, one negative flake scar on dorsal, step termination;
- Fine grained basalt broken flake: 25 x 13 x 5;
- Milk quartz broken flake: 22 x 16 x 8;
- Chert (grey) bipolar blade core: 30 x 25 x 21, five negative flake scars;
- Chert (grey) flake: 22 x 14 x 4;
- Grey quartzite broken blade: 30 x 16 x 6; and
- Grey quartzite broken flake: 23 x 34 x 4.

Figure 4-20: Map showing the location of TD-OS9.



TD-OS10

Site type: Open Site

Site Coordinates:

363990E/6786041N

363964E/6786018N

363941E/6786066N

363990E/6786078N

Site Location: The location of TD-OS10 is given in **Table 4–1** and shown in **Figure 4–11**.

Site Description: TD-OS10 is located at 515m AHD. The site is approximately 100m north of the proposed easement (in a ridge saddle on a track likely to be used during construction). The site is located approximately 3.5km west of the Mole River (**Plate 4–44**). The dimensions of the site could be easily established as it conforms to landform and the extent of the artefact scatter was limited to circa 15m x 5m. Artefacts appear to be in a 'deflated' context. Further, the thin skeletal nature of the surface soils did not possess potential for further subsurface *in situ* deposits. The soils are sandy, although eroded and the landform has been previously cleared and is currently grazed with good ground surface visibility.

16 artefacts were observed and a sample of six was recorded (**Plate 4–45**). Fine-grained basalt was the dominant raw material. An average artefact density at the site is approximately two artefacts per square metre. Details of recorded artefacts are:

- Fine-grained basalt core: 42 x 62 x 31, wide platform preparation, three negative flake scars;
- Fine-grained basalt bipolar core: 29 x 38 x 21, broken with wide platform preparation, 5% cortex, six negative flake scars;
- Fine-grained basalt core: 62 x 29 x 19, five negative flake scars;
- Fine-grained basalt flake: 39 x 13 x 9, bulb with eraillure scar;

- Fine-grained basalt broken flake: 23 x 12 x 4, hinge termination; and
- Milk quartz flake: 23 x 23 x 3.

TD-OS11 with PAD

Site type: Open Site with PAD

Site Coordinates:

366E286/6788210N

366180E/6788209N

366167E/6788195N

366347E/6788262N

366393E/6788293N

Site Location: The location of TD-OS11 with PAD is given in **Table 4–1** and shown in **Figure 4–11**. This site extends across an elevated terrace above Mole River. The extent shown in the figure is indicative only and the site extends the width of the easement and probably beyond on both sides.

Site Description: TD-OS11 with PAD is located on an elevated terrace on the eastern bank of the Mole River. The contour it is associated with (380m AHD) is approximately 50m wide at the location assessed. The site is within a reasonably disturbed, fertile landscape with many exposures (**Plate 4–44**). The site extends the width of the proposed easement and beyond.

Seven artefacts were recorded at this site although others were observed. Artefacts were observed in natural scours in the earth as well as in disturbed contexts. It is anticipated *in situ* subsurface archaeological deposits remain.

A geological diversity of raw materials was noted on site. Flakes were the only artefact type recorded (**Plate 4–45**). An example of the artefacts recorded follow:

- Silcrete (pale green) flake: 39 x 16 x 6, focal platform, feather termination, three negative flake scars;
- Milk quartz broken flake: 18 x 16 x 9;
- Chert (black) broken flake: 19 x 22 x 7.8, 10% cortex;
- Quartzite (brown) primary flake: 63 x 60 x 16, focal platform, 50% cortex;
- Fine-grained basalt flake: 51 x 66 x 14;
- Milk quartz broken flake: 22 x 18 x 7; and
- Fine-grained basalt broken flake: 29 x 20 x 5, two negative flake scars on dorsal.

TD-OS12

Site type: Open Site

Site Coordinates: 379461E/6785568N

Site Location: The location of TD-OS12 is given in **Table 4–1** and shown in **Figure 4–21** and **Figure 4–22**.

Site Description: TD-OS12 is a low density site that is located on a prominent knoll high above the confluence of two creeks (Darby Creek and an unnamed tributary) to the east of Mole Station Rd (**Plate 4–48**). Only four artefacts were located at the site despite intensive investigation and reasonable ground surface visibility (**Plate 4–49**). The artefacts were all weathered and of local basalt (note: the underlying stone of the knoll is granite, but in nearby Darby Creek nodules of the same basalt stone could be seen eroding from the creek's banks). The artefacts were:

- Basalt flake: 63.5 x 57.5 x 14.2. Five negative flake scars. Wide unfaceted platform;
- Basalt flake: 33.2 x 26.7 x 9.2. Three negative flake scars. Wide, faceted platform;
- Basalt flake: 14.7 x 13.3 x 2.1. Two negative flake scars. Moderate unfaceted platform; and
- Basalt flake: 33.5 x 24.2 x 12.4. Five negative flake scars. Wide unfaceted platform. Multi-directional.

From the evidence of rock outcropping nearby there appears to be very little soil depth at TD-OS12 and therefore very little chance of sub-surface deposits.

TD-OS12 is just outside the proposed easement on its southern side (**Figure 4–22**).

Figure 4-21: Map showing the location of TD-OS12.

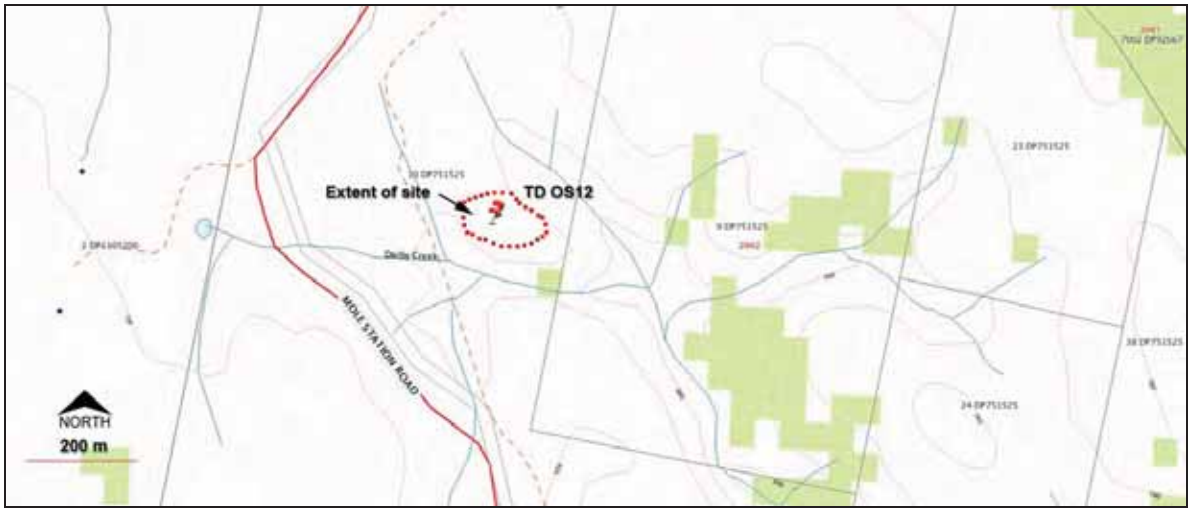
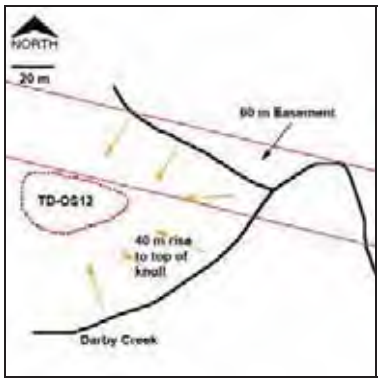


Figure 4-22: Sketch plan of TD-OS12.



TD-OS13

Site type: Open Site

Site Coordinates: 382202E/6785051N

Site Location: The location of TD-OS13 is given in **Table 4–1** and shown in **Figure 4–23** and **Figure 4–24**.

Site Description: TD-OS13 is a low density site that is located on a raised terrace to the west of an unnamed watercourse (**Plate 4–50**). This site extends partially into the easement as shown in **Figure 4–24**. Only two artefacts were located at the site despite intensive investigation and reasonable ground surface visibility (**Plate 4–51**). Artefact density was less than one artefact per square metre. The artefacts were:

- Dark chert blade. 9.1 x 7.5 x 0.62. Three negative flake scars. Truncated at both proximal and distal. Backed on one lateral edge; and
- Basalt flake. 28.8 x 24.5 x 3.5. Three negative flake scars. Proximal broken.

TD-OS13 is centred on a remnant group of trees on the creek's bank. On the southern margin of this group of trees is a modified tree (**Plate 4–52**) that is located within the boundaries of TD-OS13 (**Figure 4–24**). The scar is within a dead and fallen tree (that is propped up by other trees). The scar is 1700mm (top–bottom) and 500mm (left–right). The precise location of the modified tree is: GDA Zone 56, 382202E, 6785051N. The tree is very fragile and the heart-wood within the scar is decayed making absolute determination of the nature of the scar difficult.

The scar, according to the criteria set out in **Appendix 1**, is assessed as being an Aboriginal Scar (i.e. there is nothing present in the scar to definitely indicate that it is of Aboriginal origin).

Figure 4-23: Map showing the location of TD-OS13.

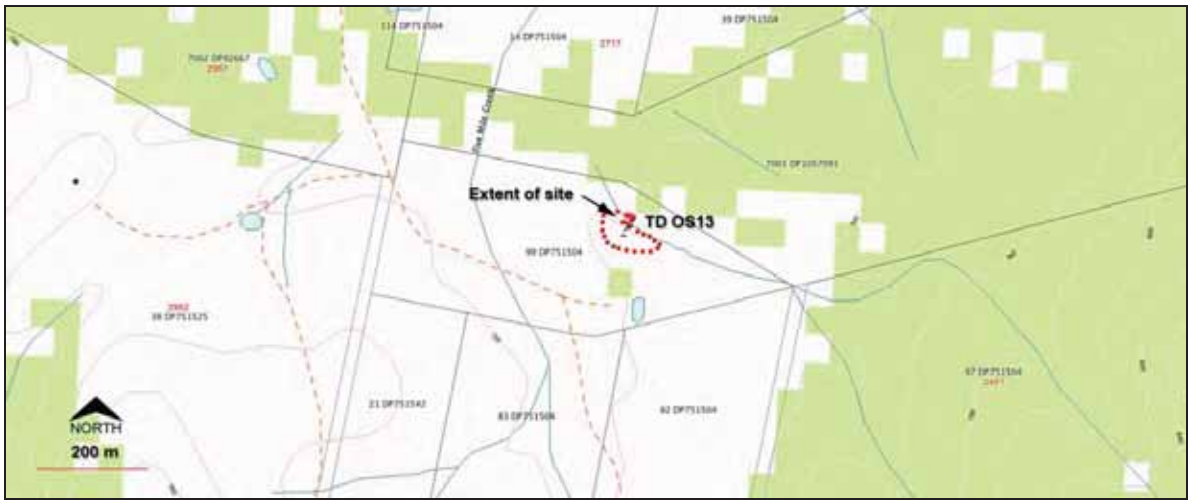
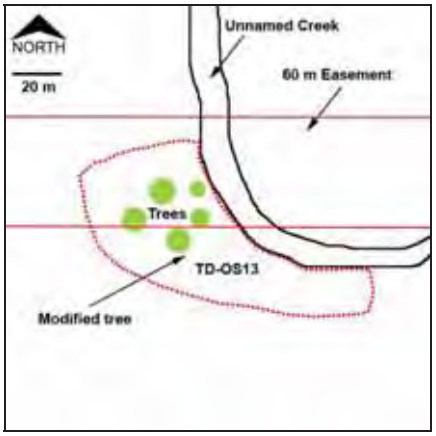


Figure 4-24: Sketch plan showing the extent of TD-OS13.



TD-ST1

Site type: Modified Tree

Site Coordinates: 348490E/6774491N

Site Location: The location of TD-ST1 is given in **Table 4–1** and shown in **Figure 4–16**.

Site Description: TD-ST1 is located approximately 100m north of the proposed easement. This site is located 50m north of an unnamed second order drainage line that has its confluence with Black Creek 400m downstream (west) of the site. Recording this site reflects the 'precautionary principle'.

The 15m tree is a yellow box (*Eucalyptus melliodora*) with a circumference at breast height of 3830mm and as such is of sufficient age to possess a cultural scar. The heartwood of the tree has rotted and has disappeared making definite identification of the nature of the scar difficult (**Plate 4–53**). Other details of the scar are:

- Min scar length: 1720mm;
- Minimum scar width: 430mm;
- Maximum depth of regrowth: 290mm;
- Scar orientation: SSW; and

- Height of base of scar above ground: 1380mm.

The scar, according to the criteria set out in **Appendix 1**, is assessed as being a Possible Aboriginal Scar (i.e. conforms to most criteria but is unlikely to be Aboriginal in origin).

TD-ST2

Site type: Modified Tree

Site Coordinates: 362194E/6782654N

Site Location: The location of TD-ST2 is given in **Table 4–1** and shown in **Figure 4–20**.

Site Description: TD-ST2 is a component of the larger site complex TD-OS9 with PAD. This site complex is located on a flat contour approximately 50m wide between unnamed first order headwaters of Rocky Camp Creek and Clay Gully Creek; a portion of the site is immediately adjacent to the ephemeral waterway. The site includes a wide variety and diversity of stone artefacts, as well as TD-ST2. Both of the abovementioned waterways are tributaries of Reedy Creek which, in turn, flow into the Dumaresq River.

TD-ST2 is approximately 10m north of the northern boundary of the proposed easement.

The 10m tree is a white box (*Eucalyptus albens*) with a circumference at breast height of 3200mm and as such is of sufficient age to possess a cultural scar. While the heartwood of the tree has rotted, the shape left is consistent with a Coolamon (**Plate 4–54**). The tree is alive but stressed. Other details of the scar have been provided below:

- Min scar length: 920mm;
- Maximum scar length: 1000mm
- Minimum scar width: 150mm;
- Maximum scar width: 240mm;
- Maximum width of regrowth: 180mm;
- Maximum depth of regrowth: 290 mm;
- Scar orientation: NW;
- Scar shape: elongated;
- Scar does not extend to the ground;
- Axe marks not visible; and
- Height of base of scar above ground: 240mm.

The scar, according to the criteria set out in **Appendix 1**, is assessed as being a Possible Aboriginal Scar (i.e. conforms to most criteria but is unlikely to be Aboriginal in origin).

TD-ST3

Site type: Modified Tree

Site Coordinates: 375327E/6787493N

Site Location: The location of TD-ST3 is given in **Table 4–1** and shown in **Figure 4–25**. It is located within the assessed easement.

Site Description: TD-ST3 is located on a minor watercourse that would only ever hold ephemeral run-off from rain events (it was completely dry at the time of assessment). TD-ST3 is located on a dead and fallen tree with a circumference of less than one metre. The scar is approximately 1500mm from the ground (when the tree was standing), is ovoid in shape and is approximately 1300mm top–bottom and 450mm left–right. There is substantial regrowth around the scar and no other markings appear to be present (i.e. axe marks or carving) although the heart-wood of the tree is in a state of decay which diminishes the chances of locating such marks (**Plate 4–55**).

The scar, according to the criteria set out in **Appendix 1**, is assessed as being an Aboriginal Scar (i.e. most likely of Aboriginal origin but without any feature that makes it a definite Aboriginal scar).

Figure 4-25: Map showing the location of TD-ST3.

TD-ST4

Site type: Modified Tree

Site Coordinates: 390992E/6790666N

Site Location: The location of TD-ST4 is given in **Table 4–1** and shown in **Figure 4–26**. It is located several hundred metres to the north of the proposed easement.

Site Description: TD-ST4 is located 30m northwest of Sunnyside Creek, a tributary of Tenterfield Creek. TD-ST4 is located on the southeast face of a living tree with a circumference of 1200mm. The scar is approximately 1000mm from the ground, is ovoid in shape and is approximately 400mm top–bottom and 150mm left–right. There is substantial regrowth around the scar and no other markings appear to be present (i.e. axe marks or carving) (**Plate 4–56**). Above the scar is a mark that circles the tree (see **Plate 4–56**) and seems to indicate to the archaeologist that the tree at some point may have been used for fencing. The tree is also in close proximity to a ruined farm house (TD-HS02) indicating that the area has been extensively used in the post-contact period.

The scar, according to the criteria set out in **Appendix 1**, is assessed as being a Possible Aboriginal Scar (i.e. due to the small size of the scar and the fact that it may have been created in the post-contact period suggests that it may not be of Aboriginal origin).

Figure 4-26: Map showing the location of TD-ST4.

TD-ST5

Site type: Modified Tree

Site Coordinates: 392051E/6793758N

Site Location: The location of TD-ST5 is given in **Table 4–1** and shown in **Figure 4–27**. This tree is situated outside the proposed easement to the north of AP27.

Site Description: TD-ST5 is a dead tree with a circumference of 1500mm, situated in close proximity to TD-ST6. The scar is approximately 400mm from the ground, is roughly ovoid in shape and is approximately 1200mm top–bottom and 500mm left–right. There is substantial regrowth around the scar and no other markings appear to be present (i.e. axe marks or carving) (**Plate 4–57**). The tree is in close proximity to a ruined farm house (TD-HS04) indicating that the area has been extensively used in the post-contact period.

The scar, according to the criteria set out in **Appendix 1**, is assessed as being an Aboriginal Scar (i.e. this is a scar which conforms to most of the criteria, and where an Aboriginal origin is considered to be the most likely).

TD-ST6

Site type: Modified Tree

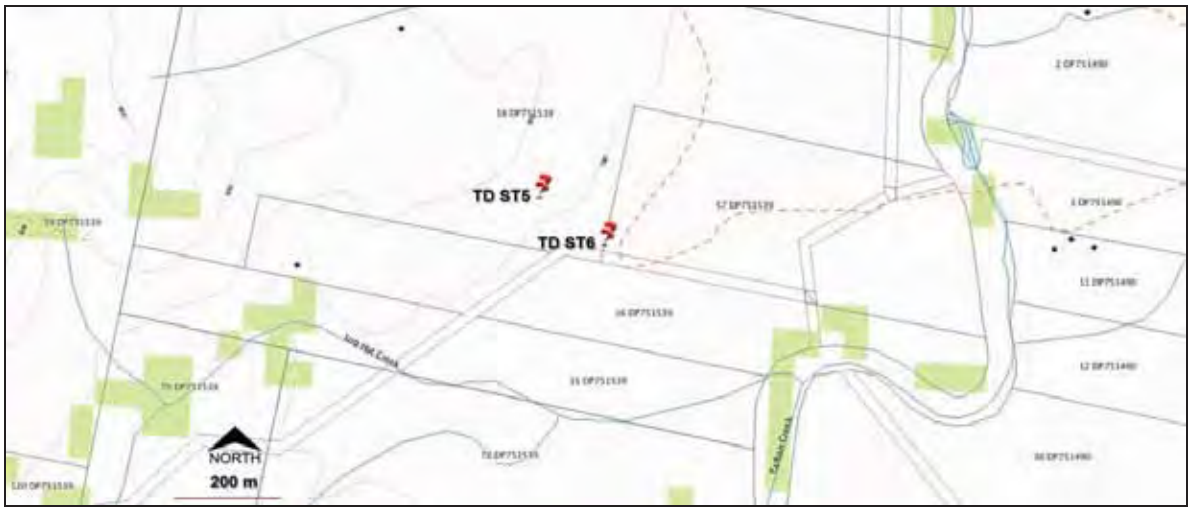
Site Coordinates: 392176E/6793678N

Site Location: The location of TD-ST6 is given in **Table 4–1** and shown in **Figure 4–27**. The tree is located within the assessed easement and close to AP27.

Site Description: TD-ST6 is located in close proximity to TD-ST5 within a living tree with a circumference of 2000mm. The scar is approximately 500mm from the ground, is roughly ovoid in shape and is approximately 1200mm top–bottom and 600mm left–right. There is substantial regrowth around the scar and no other markings appear to be present (i.e. axe marks or carving) (**Plate 4–58**). Marks around the tree above the scar show that an attempt to ringbark the tree was made at some time in the past. The tree is in close proximity to a ruined farm house (TD-HS04) indicating that the area has been extensively used in the post-contact period.

The scar, according to the criteria set out in **Appendix 1**, is assessed as being an Aboriginal Scar (i.e. this is a scar which conforms to most of the criteria, and where an Aboriginal origin is considered to be the most likely).

Figure 4-27: Map showing the location of TD-ST5 and TD-ST6.



TD-ARG1

Site type: Potential Aboriginal Resource Gathering Site

Site Coordinates: 348545E/6774459N

Site Location: The location of TD-ARG1 is given in **Table 4–1** and shown in **Figure 4–16**.

Site Description: TD-ARG1 is located outside the proposed easement to the north by approximately 100m. This potential site is located adjacent to an unnamed second order drainage line that has its confluence with Black Creek 400m downstream (west) of the site. The site is a large hole chopped into a log while it was lying on the ground in order to extract an animal from the hollow log (**Plate 4–59**). The 'potential' prefix attached to this site reflects it being a site type that cannot be proven to be either Aboriginal or historic in origin. Recording of this site reflects the views of one of the Aboriginal community representatives as his immediate ancestors used this technique to gather rabbits and goanna. Its position is near an Aboriginal Modified Tree (TD-ST1) and associated with other Aboriginal stone artefact sites (TD-OS3 with PAD) and an early European settler's cottage (TD-HS01).

4.1.2. Sensitive archaeological landforms recorded: Easement survey

During the course of assessment eleven locations were recorded as Sensitive Archaeological Landforms (SALs). For a definition of a SAL, please refer to **Section 1.8**.

SALs were recorded exclusively in Study Area East for the following reasons:

- the ground surface visibility was generally lower in Study Area East when compared with Study Area West. Therefore more landforms of an archaeologically sensitive nature could not be accurately assessed;
- The level of disturbance was greater in Study Area East when compared with Study Area West. Therefore there was a greater reliance on designating an landform a SAL rather than a PAD (as a PAD designation implies *in situ* and undisturbed archaeological deposits); and

- The hydrology of Study Area East, with the presence of large river systems such as the Clarence and Richmond Rivers, provided a situation of generally high archaeological sensitivity combined with low ground surface visibility. In Study Area West where similar drainage systems, such as the Mole River exist, ground surface visibility allowed the area to be assessed more fully.

Within Study Area East, 11 SALs were recorded. Details of the SALs recorded during the assessment follow. All coordinates are GDA Zone 56. **Table 4–2** displays the location of these SALs.

Table 4-2: Sensitive archaeological landforms recorded in Study Area East.

SAL number (for this report only)	SAL designation	GDA Zone 56 Easting	GDA Zone 56 Northing	Location comments	Survey week
1	LT-SAL1	491083.79	6807588.74	West of AP60	1
2	LT-SAL2	461237.30	6805071.78	Tunglebung Creek, near AP51	1
3	LT-SAL3	460959.82	6805110.11	Tunglebung Creek, near AP51	1
4	LT-SAL4	458781.89	6805410.41	near the Clarence River near AP50	1
5	LT-SAL5	457975.02 to 458141.61	6805432.91 to 6805445.77	on the Clarence River near AP50	1
6	LT-SAL6	452956	6804892	on Plumbago and Yellow Creek, near AP 49	2
7	LT-SAL7	452547	6804425	on Yellow Creek, between AP48 and 49	2
8	LT-SAL8	427424.63	6799308.42	overlooking Sheep Yard Creek between AP40 and 41	2
9	LT-SAL9	427302	6799173	on Sheep Yard Creek between AP40 and 41	2
10	LT-SAL10	426021 to 425865	6798221 to 6798023	on Sandy Creek, between AP40 and 41	2
11	LT-SAL11	419495 to 419316	6792741 to 6792627	between AP41 and 42	2

LT-SAL1

SAL Coordinates: 491083.79E/6807588.74N

SAL Location: The location of LT-SAL1 is shown in **Figure 4–28.**

SAL Description: LT-SAL1 occupies an area of high ground between swampy areas to the east and Shannon Brook to the west (**Plate 4–60**). The area was designated a SAL due to low ground surface visibility, the possibility of little soil depth (rock outcrops nearby) and its position in the middle of a favourable ecological zone. LT-SAL1 extends the width of the proposed 60m easement from the break of slope to the east of structure E319 to Piora Rd in the west.

Figure 4-28: Map showing the location of LT-SAL1.

LT-SAL2

SAL Coordinates: 461237.30E/6805071.78N

SAL Location: The location of LT-SAL2 is shown in **Figure 4–29**.

SAL Description: LT-SAL2 occupies an area on the floodplain of Tunglebung Creek. As it is on a floodplain where flooding has probably disturbed any archaeological deposits, this area has been designated a SAL while nearby, better positioned landforms, have been designated a PAD (LT-PAD1). There was extremely low ground surface visibility in the area (**Plate 4–61**). LT-SAL2 extends the width of the proposed 60m easement extends for at least 100m from the gully of a minor tributary to Tunglebung Creek to the south east, through structure E225 to the drop-off at the banks of Tunglebung Creek to the north west.

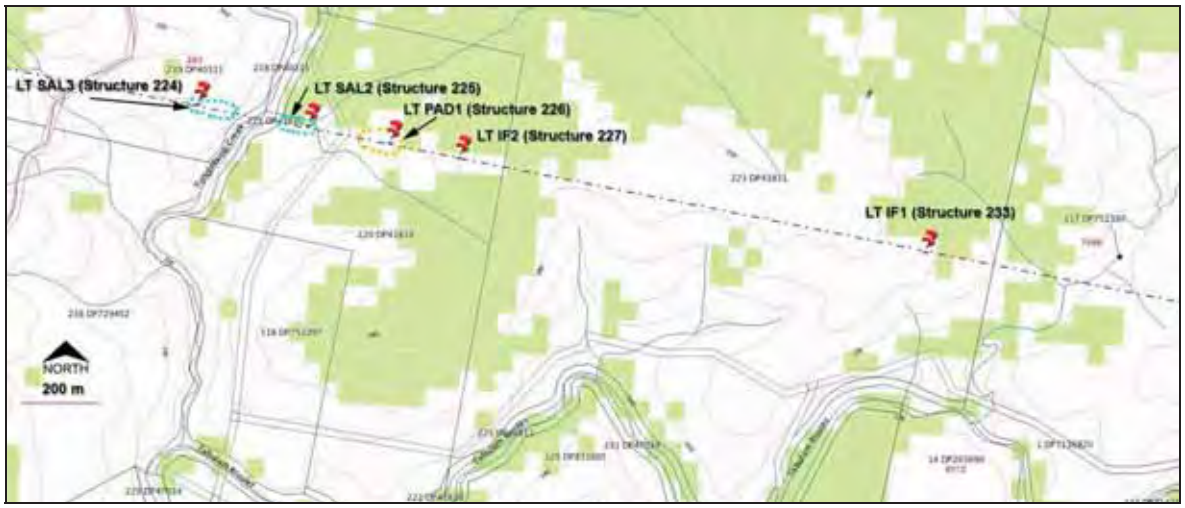
LT-SAL3

SAL Coordinates: 460959.82E/6805110.11N

SAL Location: The location of LT-SAL3 is shown in **Figure 4-29**.

SAL Description: LT-SAL3 occupies a raised area to the west of Tunglebung Creek. The area has been cleared of native vegetation and extensively grazed and any archaeological deposits in the area have probably been disturbed by such land-use (**Plate 4–62**). Due to grass cover, there was very little ground surface visibility but the nature of the landform including the proximity to a permanent watercourse necessitated that the area be treated with caution (hence its designation as a SAL). LT-SAL3 extends the width of the proposed 60m easement from the vicinity of structure E224 to the drop-off at the banks of Tunglebung Creek in the south east, being a length of c. 130m.

Figure 4-29: Map showing the location of LT-SAL2 and LT-SAL3.



LT-SAL4

SAL Coordinates: 458781.89E/6805410.41N

SAL Location: The location of LT-SAL4 is shown in **Figure 4–30**.

SAL Description: LT-SAL4 occupies a raised area of land to the east of an unnamed watercourse (**Plate 4–63**). On the western bank of this watercourse is located LT-OS1 with PAD. Due to the proximity of LT-OS1 with PAD, the low ground surface visibility and the suitable landform (a raised area beside water), this area was designated a SAL. The area has been cleared of native vegetation and extensively grazed and any archaeological deposits in the area have probably been disturbed by such land-use. LT-SAL4 extends the width of the proposed 60m easement from the vicinity of structure E214 to the drop-off at the banks of the unnamed watercourse in the north west.

LT-SAL5

SAL Coordinates: 457975.02 to 458141.61E/6805432.91 to 6805445.77N

SAL Location: The location of LT-SAL5 is shown in **Figure 4–30**.

SAL Description: LT-SAL5 occupies raised terraces east of the Clarence River (**Plate 4–64**). Due to the proximity of a major waterway, the extremely low ground surface visibility and the suitable landform (a raised area beside water), this area was designated a SAL. The area has been cleared of native vegetation and extensively grazed and any archaeological deposits in the area have probably been disturbed by such land-use. LT-SAL5 extends the width of the proposed 60m easement from the vicinity of structure E209 to the vicinity of structure E210[11].

Figure 4-30: Map showing the location of LT-SAL4 and LT-SAL5.

[11] The western bank of the Clarence River was not designated a SAL as the landform is very swampy with many flood channels of the Clarence dissecting it. In the archaeologist's opinion, this area is so disturbed that little of archaeological interest would remain and it was probably always too swampy to encourage occupation.

LT-SAL6

SAL Coordinates: 452956E/6804892N

SAL Location: The location of LT-SAL6 is shown in **Figure 4–31**. It extends for the width of the easement and beyond and for at least 100m.

SAL Description: LT-SAL6 is surrounded by Plumbago and Yellow Creeks and is located within the proposed easement (**Plate 4–65**).

Designation of this area as a SAL occurred for the following reasons:

- The locality is in the immediate vicinity of permanent water;
- The landform on which the SAL is located is elevated above the two creeks at 125–130m AHD;
- Deep incision of Yellow Creek adjoining the SAL PAD exposes cobbles of raw materials suitable for the manufacture of stone tools;
- The SAL is in a riparian zone, an environment well known to provide ample food resources;
- The SAL landform is in the immediate vicinity of a confluence of two substantive waterways;
- The SAL is confined to a small low spur/knoll, the important distinction is that extensive north–south riling of the surface soils occur thus providing evidence that these portions of the landform are subject to flooding; and
- Thus whilst the occasional artefact may occur, there is little probability that the area possesses subsurface *in situ* deposits.

LT-SAL7

SAL Coordinates: 452956E/6804892N

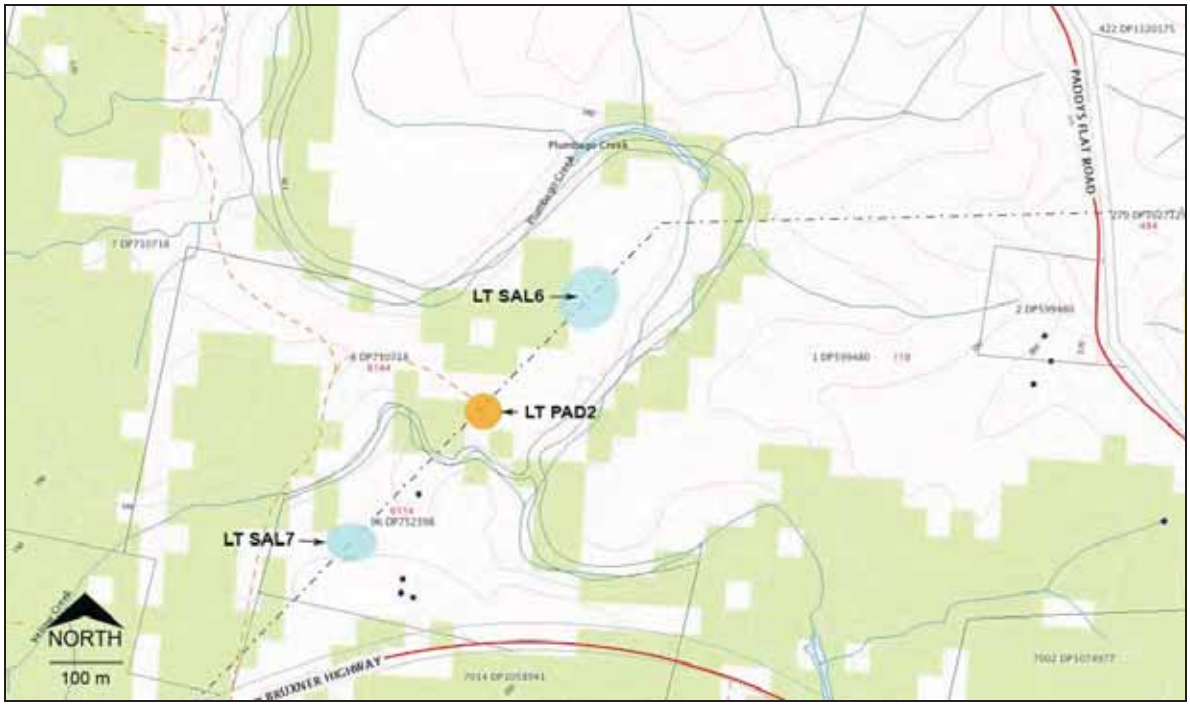
SAL Location: The location of LT-SAL7 is shown in **Figure 4–31**. It extends for the width of the easement and beyond and for at least 80–100m.

SAL Description: LT-SAL7 is 100m south west of Yellow Creek and is located within the proposed easement (**Plate 4–66**).

Designation of this area as a SAL occurred for the following reasons:

- The locality is in proximity to permanent water;
- The landform on which the SAL is located is elevated above the floodplain two creeks at 140–130m AHD;
- The SAL is confined to a small low spur, this spur is more distant to water and not as in a favourable position and has 'harder' soils to camp on. It has been assumed that this area whilst having potential to be 'used' is the least favourable of the camp site options in the immediate vicinity; and
- Further to the above, the combined impact from land clearing and construction of the transmission line suggests the probability that soils would not possess subsurface *in situ* deposits.

Figure 4-31: Map showing the location of LT-SAL6 and LT-SAL7.



LT-SAL8

SAL Coordinates: 427424.63E/6799308.4

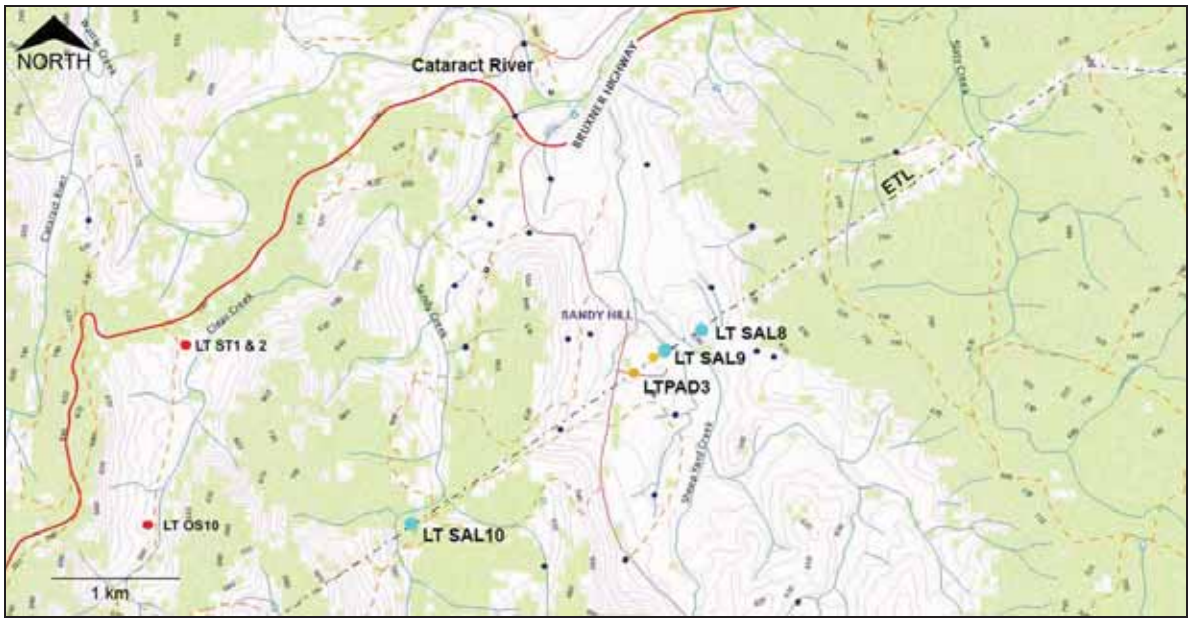
SAL Location: The location of LT-SAL8 is shown in **Figure 4–32**. It occupies the rest of knoll underneath the easement. Dimensions approximately 60m x 80m

SAL Description: LT-SAL8 is on a small elongated flat hill top immediately adjacent, parallel to and overlooking Sheep Yard Creek (**Plate 4–67**). The SAL is located within the proposed easement.

Designation of this area as a SAL occurred for the following reasons:

- The locality is in the immediate vicinity to permanent water (Sheep Yard Creek) and within a long but wide valley immediately adjacent to the Cataract River;
- The SAL is in a riparian zone, an environment well known to provide ample food resources. Beds of macrophytes, sedges and rushes were present. These recourses are known to be have been exploited by Aboriginal people and it is highly likely that Aboriginal would have camped on surrounding suitable landforms;
- The SAL is confined to a small hill top that is above the floodplain of the aforementioned creek at 595m AHD. This hill top is the best lookout point in the vicinity; and
- Soils on the hilltop are eroded and skeletal. No A horizon is left (thus not suitable to be considered a PAD) and no artefacts were observed (thus not a site).

Figure 4-32: Map showing the location of LT-SAL8, LT-SAL9 and LT-SAL10.



LT-SAL9

SAL Coordinates: 427302E/6799173N

SAL Location: The location of LT-SAL9 is shown in **Figure 4–32**. It runs at minimum the width of the easement and possibly up to 80–100m from the creek.

SAL Description: LT-SAL9 immediately adjacent and parallel to Sheep Yard Creek (**Plate 4–68**). The SAL is located within the proposed easement.

Designation of this area as a SAL occurred for the following reasons:

- The locality is in the immediate vicinity to permanent water (Sheep Yard Creek) and within a long but wide valley immediately adjacent to the Cataract River;
- The SAL is in a riparian zone, an environment well known to provide ample food resources. Beds of macrophytes, sedges and rushes were present. These recourses are known to have been exploited by Aboriginal people and it is highly likely that Aboriginal would have camped on such suitable landforms;

- The SAL is confined to the terminal ends of a slight foot slope that whilst suitable as a camping location are subject to frequent flooding (565m AHD); and
- Soils on the SAL are sandy but flood prone. It was not considered probable that *in situ* subsurface archaeological deposits would remain (thus not suitable to be considered a PAD) and no artefacts were observed (thus not a site).

LT-SAL10

SAL Coordinates: 426021E/6798221N to 425865E/6798023N

SAL Location: The location of LT-SAL10 is shown in **Figure 4–32**. It runs at minimum the width of the easement and extends for c. 80–100 m from the creek

SAL Description: LT-SAL10 is immediately adjacent and parallel to Sandy Creek. The SAL is located within the proposed easement (**Plate 4–69**).

Designation of this area as a SAL occurred for the following reasons:

- The locality is in the immediate vicinity to ephemeral water (Sandy Creek);
- The SAL is in a riparian zone: an environment well known to provide ample food resources. The landform has potential as a camping site, however, 'better ones' were present in the immediate vicinity;
- The SAL is confined to the terminal ends of a slight foot slope that whilst suitable as a camping location are subject to flooding (570m AHD) and has also been mechanically disturbed; and
- Soils on the SAL are sandy but affected by erosion, disturbance and are flood prone. It was not considered probable that the soil's A horizon remains, thus *in situ* subsurface archaeological deposits are unlikely (thus not suitable to be considered a PAD) and no artefacts were observed (thus not a site).

LT-SAL11

SAL Coordinates: 419495E/6792741N to 419316E/6792627N

SAL Location: The location of LT-SAL11 is shown in **Figure 4–33**.

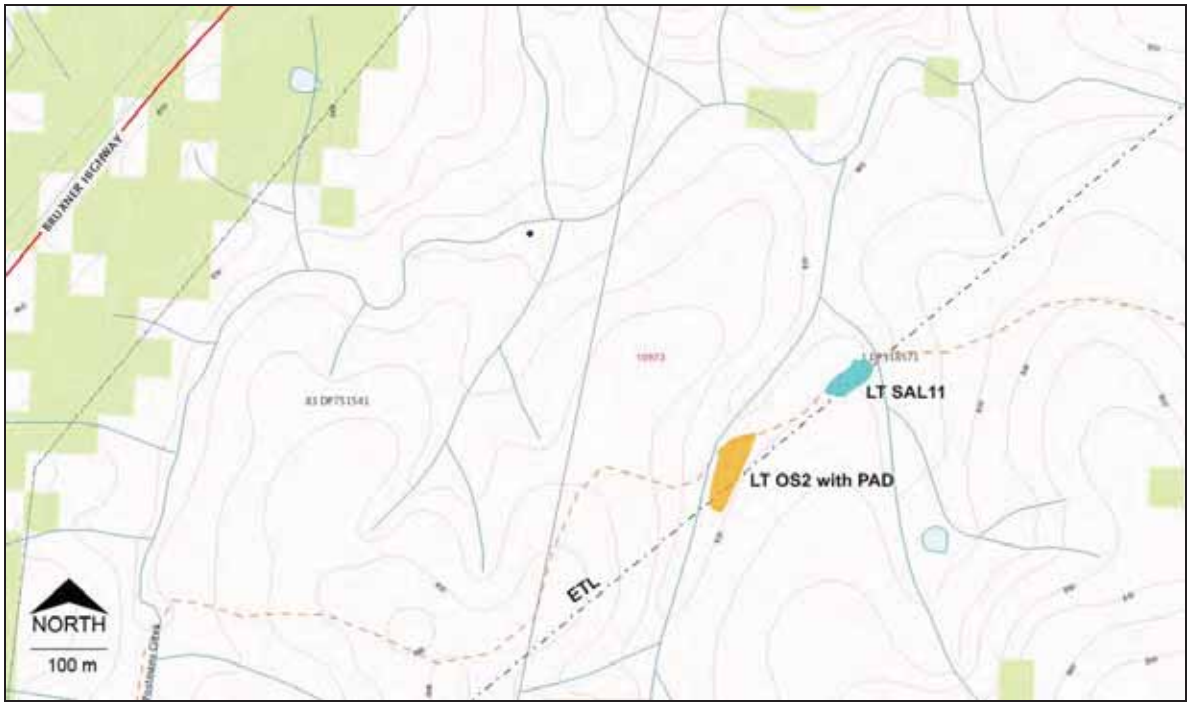
SAL Description: LT-SAL11 is located on an existing access track adjacent to an unnamed tributary of Postmans Creek (**Plate 4–70**). The SAL is located on the northern boundary of the proposed, enlarged, easement, but outside the existing easement.

Designation of this area as a SAL occurred for the following reasons:

- The locality is in the immediate vicinity to permanent water (rock pools in a closely occurring separate unnamed tributary to Postman's Creek) at 815m AHD;
- The landform (a slight foot slope adjacent to the drainage line) has potential as a camping site, however, more appropriate landforms were present in the immediate vicinity beyond the easement, and a site with PAD was subsequently recorded at one of these – LT-OS2 with PAD); and
- Soils on the SAL are sandy but affected by erosion, disturbance and are flood prone. It was not considered probable that the soil's A horizon remains, thus *in situ*

subsurface archaeological deposits are unlikely (thus not suitable to be considered a PAD) and no artefacts were observed (thus not a site).

Figure 4-33: Map showing the location of LT-SAL11.



4.1.3. Aboriginal sites re-located: Easement survey

Section 3.3.4 demonstrated that no previously recorded sites were located within the Study Area and it was, therefore, not necessary to relocate any of these sites. However, the GPS coordinates of sites located near Study Area East (such as 03-6-009 and 03-5-0012) were entered into a hand-held GPS device to ensure that they were, in fact, located outside the Study Area.

4.1.4. Aboriginal community input: Easement survey

No items of cultural significance within the Study Area were mentioned by any of the Registered Stakeholders or any of the Aboriginal community representatives who accompanied the survey team in the field.

In one instance, two trees bearing scars were regarded by the Aboriginal community representatives accompanying the survey team as being of Aboriginal origin. These trees were located at the top of a steep hill at the junction of two property boundaries. The landholder who accompanied the survey team on this particular property had told the survey team that the whole property on which the 'scarred' trees were located had been largely cleared in the past and that most of the present trees were the result of regrowth in the past 50–60 years. It was therefore, in the opinion of the archaeologist (Ben Churcher), unlikely that the scars were of Aboriginal origin. His reasoning behind this decision was:

- the location of the trees was distant to water and in an unlikely location – even as a travel path;

- the trees did not appear to be mature enough and, when compared with other trees that had obviously been left during the original clearing of the land, their girth (c. 1.5 m in circumference) was much smaller;
- the scars touched the ground — a criterion that often distinguishes a scar as being possibly natural in origin (see **Appendix 1**); and
- as they were located together, at a property junction and at the top of a fire-break, it suggested to the archaeologist that if the scars are in fact anthropogenic, then they were probably created by moving machinery.

While the archaeologist, for these reasons, did not record these 'scarred' trees as a site, the scars, nevertheless displayed symmetry and considerable regrowth. Therefore their position was noted (GDA 56 408380E, 6793865N) and photographs taken (**Plate 4–71**).

4.1.5. Landholder community input: Easement survey

Many landholders have detailed historic knowledge relating to their properties and the overall local area. When provided to the heritage team, this information has been very useful and has assisted us in identifying sites both within the easement and also outside it. We are grateful to those landholders who have assisted us in this way.

4.1.6. Aboriginal sites recorded: access tracks surveys

Access tracks survey 1 (Study Area West) recorded eleven Aboriginal sites.

Access tracks survey 2 (Study Area East) did not record any Aboriginal sites.

The site nomenclature used for the easement survey will be continued with the access tracks surveys: TD refers to sites located in Study Area West while LT refer to sites located in Study Area East.

Maps provided in **Appendix 4** show the location of all recorded sites in relation to the proposed easement and access tracks. The figures provided below show site extent and the site's relationship to the local topography.

Access tracks survey 1

Access tracks survey 1 (Study Area West) recorded eleven Aboriginal sites. They comprise seven open sites and four isolated finds. The recorded sites are listed in **Table 4–3**.

Table 4-3: Aboriginal sites recorded during access tracks survey 1.

Site number (for this report only)	Site designation	GDA Zone 56 Easting	GDA Zone 56 Northing	Location comments	Access tracks Survey week
41	TD-OS14	338395	6768085	Midway between AP1 and AP2. **Appendix 4**, **Heritage 1**	1
*	TD-OS15	342072	6768358	Between AP3 and AP4 on west bank of Beardy River. **Appendix 4**, **Heritage 1**	1
42	TD-OS16	346677	6773303	Access to structure W32. **Appendix 4**, **Heritage 2**	1
43	TD-OS17	348311	6774152	Access to structure W37. **Appendix 4**, **Heritage 3**	1
44	TD-OS18	350255	6775890	Access to structure W45. **Appendix 4**, **Heritage 3**	1
45	TD-OS19 with PAD	384603	6785103	Access to structure W145. **Appendix 4**, **Heritage 9**	1
46	TD-OS20 with PAD	352794	6777863	Access to structure W52. **Appendix 4**, **Heritage 3** (site extends from position shown to the position of TD-OS6)	1
47	TD-IF10	346540	6773229	Associated with TD-OS16. Access to structure W31. **Appendix 4**, **Heritage 2**	1
48	TD-IF11	346512	6773278	Associated with TD-OS16. Access to structure W31. **Appendix 4**, **Heritage 2**	1
49	TD-IF12	390585	6788782	20m south of structure W164. **Appendix 4**, **Heritage 11**	1
50	TD-IF13	407548	6794386	Opportunistic survey of Washpool Creek Fire Trail. **Appendix 4**, **Heritage 14**	1

* TD-OS15 is incorporated into TD-OS4 with PAD and will not be registered as a separate site.

Details of these sites follow. All coordinates are GDA Zone 56. Where multiple site coordinates are given they reflect extent of observed artefacts. All artefact measurements are in millimetres and are given in the following order: height–width–depth. The location of sites in relation to the proposed alignment and associate structures is provided in **Appendix 4**.

TD-OS14

Site type: Open Site

Site Coordinates:

Centre of site: 338395E/6768085N
Eastern extent: 338356E/6768145N

Southern extent: 338378E/6768053N
Northern extent: 338403E/6768185N
Western extent: 338432E/6768185N

Site Location: Located on the access track from the Dumaresq Switching Station to structure W5. The site is located between structures 3 and 4. The location of TD-OS14 in relation to the easement and proposed access tracks is given in **Table 4–3**. A sketch map of TD-OS14 is shown in **Figure 4–34**.

Site Description: TD-OS14 is located at the confluence of two unnamed water courses 750m to the east of the Dumaresq Switching Station. The water courses are first and second order drainage lines that carried a small amount of water at the time of the survey. The water courses associated with TD-OS14 join at the site's location and flow north to the Dumaresq River (approximately three kilometres to the north, **Plate 4–72**). The eastern watercourse is the larger while the western water course would only run following rain events.

Artefacts were recorded on both the east bank, central promontory between the water courses and on the west bank of the water courses. Artefact densities appear to be greater on the east bank and to the south of the easement: although, within the proposed transmission line easement, artefacts are present on both banks of the water courses, albeit in lower densities.

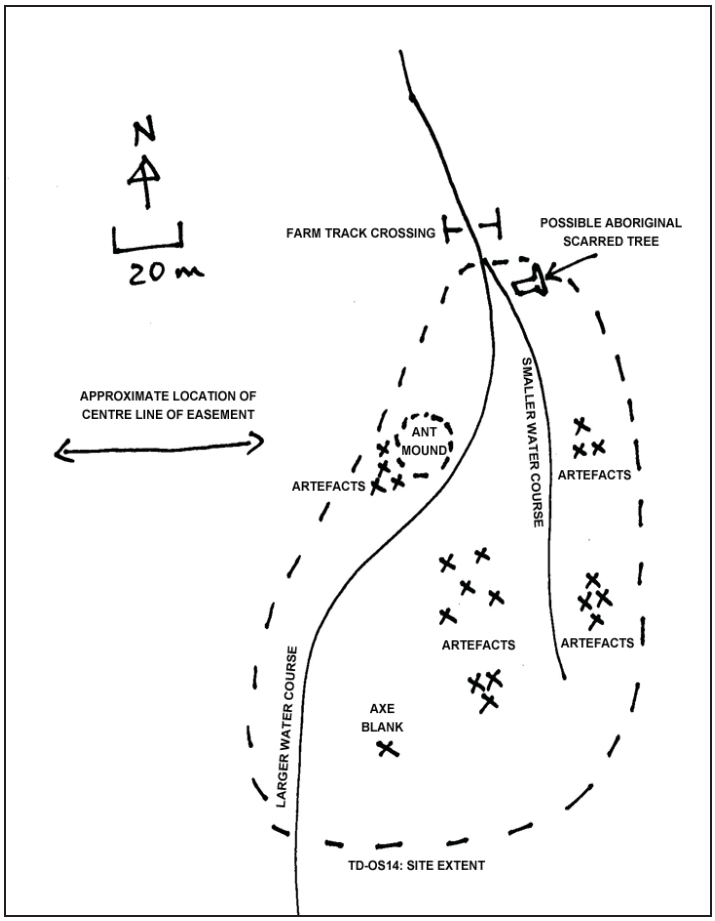
Across TD-OS14 there appeared to be very little soil depth and it is assessed that there is a low probability of subsurface archaeological deposits being present. The site is also affected by erosion and stock movement and the surface artefacts recorded are very likely to have been moved by these factors within recent years.

Recorded artefacts were of a local dark chert (that was noted in the water courses adjacent to TD-OS14), quartz, quartzite and a fine-grained indurated mudstone (**Plate 4–73**). Artefact densities across the site were variable but ranged between low and low/moderate. Recordings included an axe blank, chert scrapper and a range of flakes. Locations of exposures and or artefacts are listed below.

- 10+ Dark chert flakes: 338356E; 6768145N
- 2+ chert flakes, Milk quartz flake: 338395E/6768085N;
- Axe head: 338378E/6768053N;
- Indurated mudstone core: 338387E/6768161N;
- Chert scraper: 338432E/6768109N; and
- Possible scarred tree: 338403E/6768185N.

On the west bank of the water course, just south of the confluence, a dead tree was noted that contained a possible Aboriginal scar (**Plate 4–74**). The scar, according to the criteria set out in **Appendix 1**, is assessed as being an Aboriginal Scar (i.e. most likely of Aboriginal origin but without any feature that makes it a definite Aboriginal scar). Determination of the scar's origin is hampered by the fact that the heartwood of the scar has decayed.

Figure 4-34: Sketch plan of TD-OS14.



TD-OS15

Site type: Open Site

Site Coordinates:

342072E/6768085N

Site Location: Located on the access track to structure W14. The site is located between structures 13 and 14. The location of TD-OS15 in relation to the easement and proposed access tracks is given in **Table 4–3**. A sketch map of TD-OS15 is shown in **Figure 4–35**.

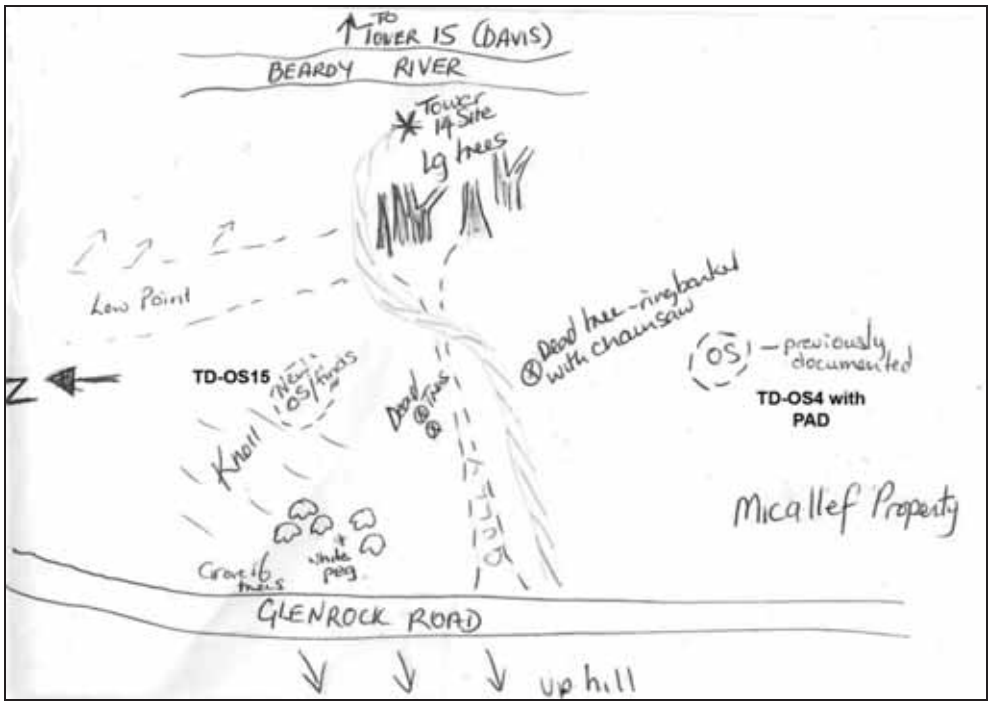
Site Description: TD-OS15 is a continuation of TD-OS4 with PAD that was recorded in easement survey week 3. It occupies the same landform as TD-OS4: a raised terrace above a palaeo-branch of the Beardy River (**Plate 4–75**). While TD-OS4 was recorded on knoll within the terrace to the south of a small erosion gully, TD-OS15 is located on a knoll within the terrace to the north of the gully. It is recorded separately here as the sites were recorded in different surveys, but only site, TD-OS4 with PAD, will be registered with OEH AHIMS. The coordinates of TD-OS4 with PAD, that include TD-OS15, are:

- Northern extent: 342072E/6768085N
- Southern extent: 342281E/6768452N

- Centre of site: 342136E/6768402N

The survey recorded chert, quartz and quartzite flakes and a milk quartz core in low density (less than 1/m^2) on the northern knoll within the terrace (**Plate 4–76**). The soil appeared thin and rock outcroppings were present. Further artefacts were observed on the southern knoll in the area assessed during the easement survey week 3.

Figure 4-35: Sketch map of relationship between TD-OS15 and TD-OS4 with PAD.



TD-OS16

Site type: Open Site

Site Coordinates:

346677E/6773303N

Site Location: Located on the access track to structure W32. The location of TD-OS16 in relation to the easement and proposed access tracks is given in **Table 4–3**. A sketch map of TD-OS16 is shown in **Figure 4–36**.

Site Description: TD-OS16 is located on a prominent knoll on the southern terrace overlooking Black Creek billabong. The knoll containing TD-OS16 is at the base of hills that rise to the south and east (**Plate 4–77**).

TD-OS16 is associated with TD-IF10 and TD-IF11 that were recorded in the same vicinity as TD-OS16 but in an adjacent landform.

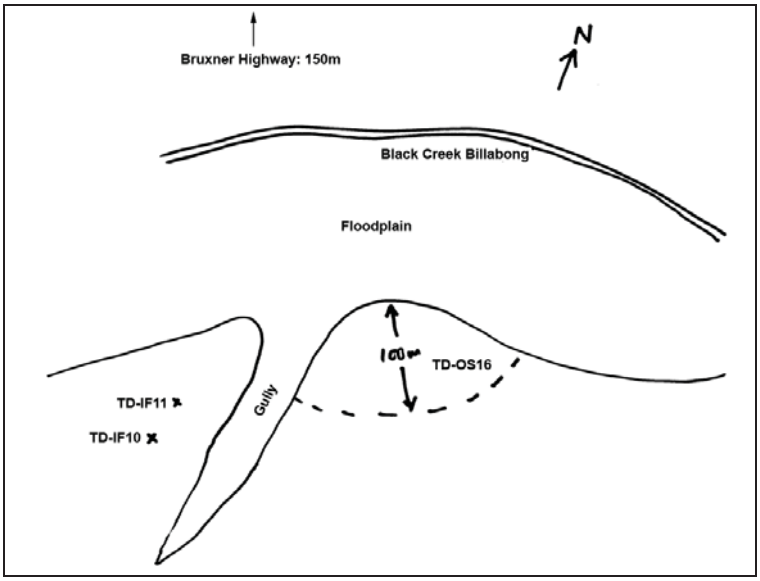
Artefacts recorded at TD-OS16 included a bifacially worked axe blank made from a fine-grained basalt, a broken basalt scrapper, a greywacke bladelet core and milk quartz flakes (**Plate 4–78**). Ground surface visibility across TD-OS16 was variable but it is assessed that Aboriginal artefacts could be located anywhere on the knoll from the break of slope to the

floodplain in the north to a distance of 100m to the south/south east. Artefact densities were less than 1 per square metre.

The knoll has been cleared of trees and has been extensively used for grazing. A ruined hut, located further south at the break of slope between the knoll and the adjoining hills, indicates that the area has been the focus of agricultural activity for some time. While the soils appeared thin, there remains the possibility that intact archaeological deposits will remain in places.

The site is ideally located between two ecosystems: the floodplain of the Black Creek billabong and the resources of the wooded hills. This, coupled with the range of artefacts recorded (axe, scrapper, core etc.) indicates that TD-OS16 is, or at least would have been prior to agricultural disturbances, a long term occupation site.

Figure 4-36: Sketch map showing the location and extent of TD-OS16.



TD-OS17

Site type: Open Site

Site Coordinates:

348311E/6774152N

Site Location: Located on the access track to structure W32. The location of TD-OS17 in relation to the easement and proposed access tracks is given in **Table 4–3**. A sketch map of TD-OS17 is shown in **Figure 4–37**.

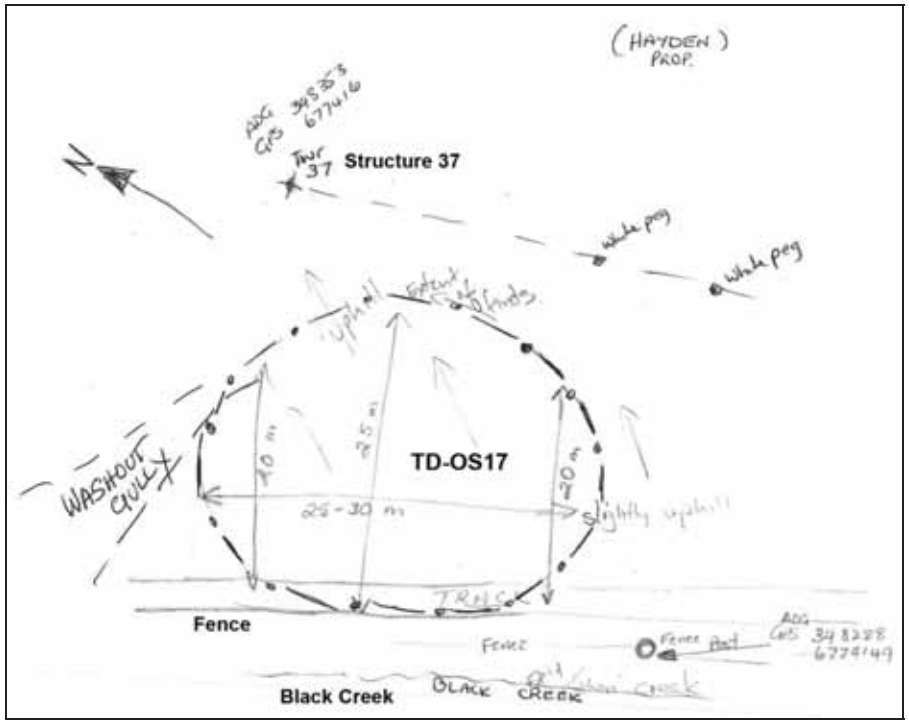
Site Description: TD-OS17 is located 35m east of Black Creek and 15m west of structure W37. The site is located on sandy soils where natural exposures and a farm track afforded ground surface visibility (**Plate 4–79**). Over 30 Aboriginal artefacts were observed with the majority being made from milk quartz and fine-grained basalt (**Plate 4–80**). Artefact densities were in excess of 5 per square metre.

The site does not extend to the location of structure W37 that was marked in the field by a surveyor's peg. The area comprising 20m from an agricultural fence to the banks of Black

Creek was not surveyed as this area will not be impacted; although it is assumed that TD-OS17 extends to the banks of Black Creek. As shown in **Figure 4–40** the site extends 30m x 25m to the east of the agricultural fence.

The area comprising TD-OS17 has been disturbed by agricultural use but there appears to be soil depth and there is the likelihood of further subsurface archaeological deposits.

Figure 4-37: Sketch map showing the location and extent of TD-OS17.



TD-OS18

Site type: Open Site

Site Coordinates:

350255E/6775890N

Site Location: Located on the access track to structure W45. The location of TD-OS18 in relation to the easement and proposed access tracks is given in **Table 4–3**. A sketch map of TD-OS17 is shown in **Figure 4–38**.

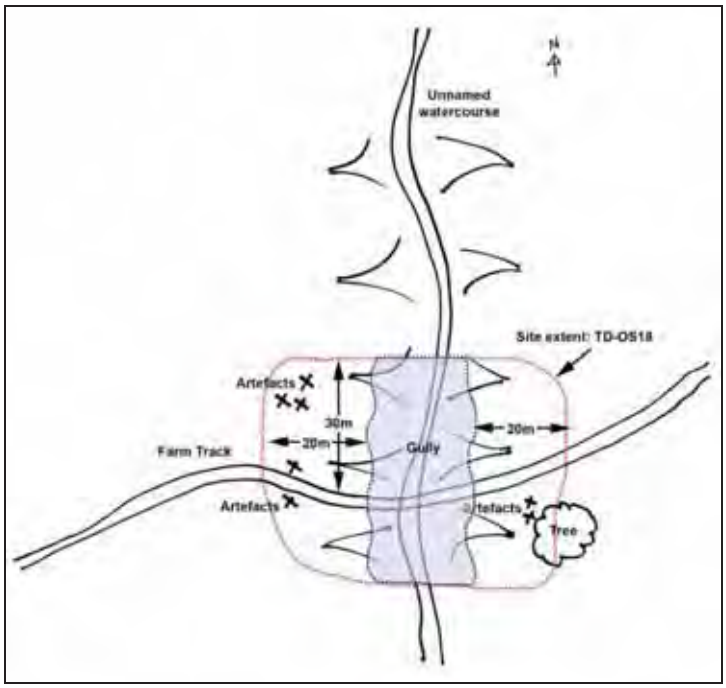
Site Description: TD-OS18 was recorded in a bulldozer scrape about 15m south of a farm track on the banks of a steeply incised gully formed by an unnamed first order waterway (**Plate 4–81**). Artefacts, although in lower numbers, were recorded up to the farm track itself and on the western bank of the unnamed water course.

Artefacts recorded at TD-OS17 included (**Plate 4–82**):

- Basalt flake: 35.03 x 26.99 x 9.05; two negative flake scars;
- Indurated mudstone flake: 24.39 x 16.14 x 4.28; three negative flake scars; moderate platform; and
- Quartzite flake: 25 x 31 x 6; three negative flake scars; 25% cortex.

TD-OS18 extends 30m south from the farm track and 10m north of the farm track. TD-OS18 also includes 20m along each bank of the gully from the top break of slope away from the gully (see **Figure 4–38**). There is very low archaeological potential from the top break of slope towards the gully bottom on both banks (shaded 'gully' area in **Figure 4–38**). TD-OS18 has been affected by erosion and agricultural land use. The site appears to be highly disturbed and the thin soils suggest that subsurface archaeological deposits are unlikely.

Figure 4-38: Sketch map showing the location and extent of TD-OS18.



TD-OS19 with PAD

Site type: Open Site

Site Coordinates:

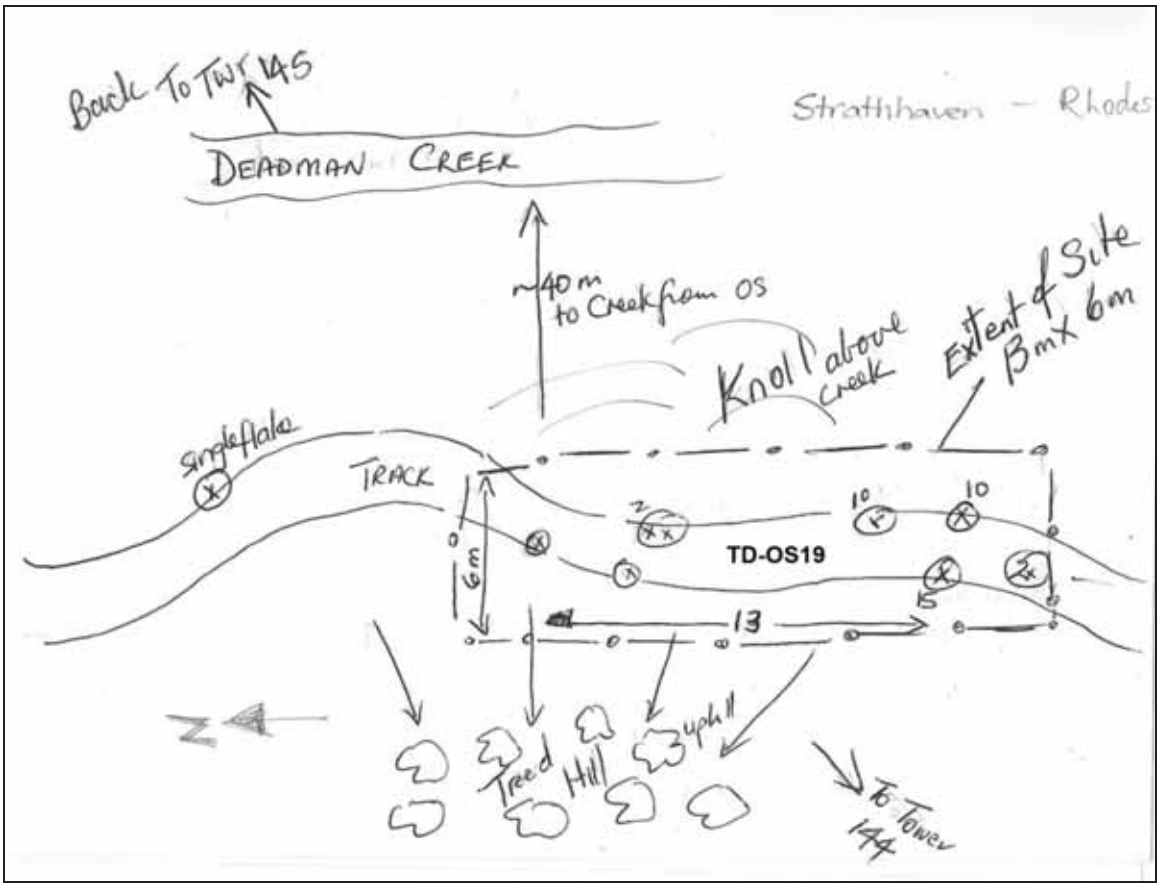
384603E/6785103N

Site Location: Located on the access track to structure W145. The location of TD-OS19 with PAD in relation to the easement and proposed access tracks is given in **Table 4–3**. A sketch map of TD-OS19 with PAD is shown in **Figure 4–39**.

Site Description: TD-OS19 displays a moderate density of artefacts and is located on the western side of a knoll that overlooks Deadmans Creek (located 40m to the east; **Plate 4–83**). Artefacts were recorded on either side of the farm track and cover an area of 13m x 6m. Over 40 artefacts were observed and while the majority were unaltered flakes, a banded chert core was recorded, as well as a basalt core-trimming element. Artefacts were recorded at TD-OS19 constructed from milk quartz, grey quartzite, basalt and banded chert (**Plate 4–84**).

TD-OS19 has been disturbed by the farm track that has dissected the site. On either side of the farm track, ground cover made ground surface visibility difficult. However, it was assessed that due to the relatively undisturbed nature of the site 'off-track' and evidence of soil depth that there is the likelihood of further undisturbed archaeological deposits to exist in association with TD-OS19.

Figure 4-39: Sketch map showing the location and extent of TD-OS19.



TD-OS20 with PAD

Site type: Open Site

Site Coordinates:

Centre of site: 352794E/6777863N
North east extent: 352885E/6777875N
South west extent: 352607E/6777861N

Site Location: Located on the access track to structure W52. The location of TD-OS20 with PAD in relation to the easement and proposed access tracks is given in **Table 4–3**. A sketch map of TD-OS20 with PAD is shown in **Figure 4–40**.

Site Description: TD-OS20 is an extensive site displaying features of complexity and a moderate density of artefacts. The site is located on both banks of an unnamed first order watercourse that drains from the nearby hills towards a large farm dam to the east. The property owner who accompanied the survey team stated that a spring in this watercourse at the location of TD-OS20 with PAD never ran dry and always produced a small amount of water. TD-OS20 with PAD is also ideally situated between the Dumaresq River to the east and the hills to the west making it a likely staging point on pathways leading from the Dumaresq River.

TD-OS20 with PAD is identical and continuous with TD-OS6 that was recorded during the easement survey week 3. TD-OS6 will be subsumed into TD-OS20 with PAD and not registered separately.

TD-OS20 with PAD is mostly concentrated on the southern bank of the water course but artefacts were recorded on the northern bank, particularly in the east of the site near the spring (**Plate 4–85**). Much of the southern bank is affected by erosion that has impacted the site along much of its 300m length (**Plate 4–86**).

TD-OS20 with PAD extends for at least 300m along both banks of the water course and extends 15m from the creek to the north and 50m from the creek in the south.

Artefacts at TD-OS20 with PAD display a variety of raw materials and include both unaltered flakes, as well as re-worked pieces such as axe blanks, backed blades and scrappers (**Plate 4–87**). Generally, however, it was noted that there was very little incidence of reworking on the flakes and that the large majority are un-reworked (**Plate 4–88**). As the dominant raw materials present were basalt and quartz, perhaps the poor quality stone did not lend itself to the finer work of reworking a flake's edge.

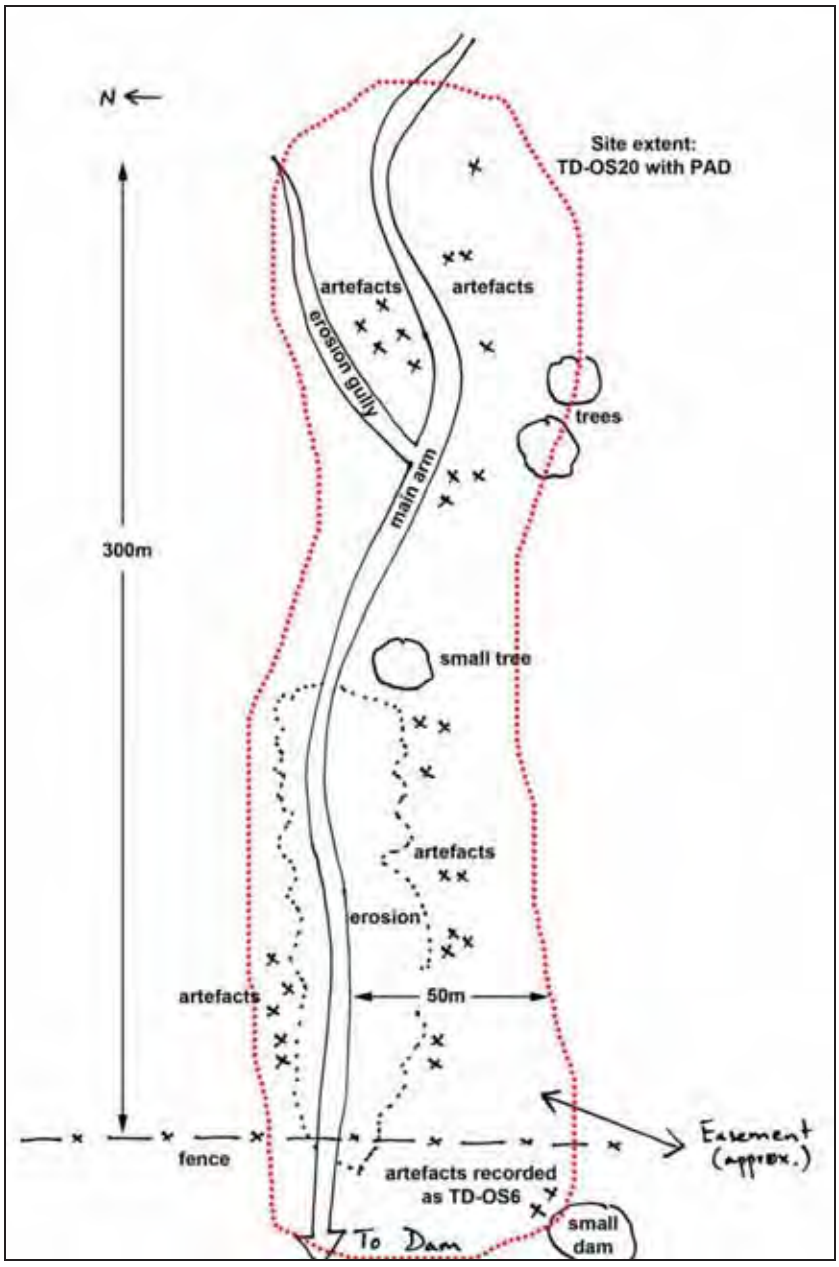
A selection of artefacts recorded at TD-OS20 are:

- Basalt flake: 50.55 x 33.02 x 8.59; moderate platform, six negative flake scars;
- Basalt flake: 44.42 x 51.46 x 12.68; wide platform, two negative flake scars;
- Basalt flake (broken): 44.33 x 60.18 x 21.33; proximal missing; four negative flake scars;
- Milk quartz flake: 14.98 x 16 x 5.8; wide platform, one negative flake scar;
- Clear quartz flake: 23.02 x 17.07 x 7.90, two negative flake scars;
- Basalt core: 47.15 x 36.69 x 20.44; bi-directional; five negative flake scars;
- Milk quartz scrapper: 48 x 60 x 29; semi-steep retouch to one end;
- Basalt axe blank: located at 56 352731E/6777819N; and
- Basalt axe blank: located at 56 352675E/6777877N

The eroded banks of the creek indicate that there is considerable soil depth at TD-OS20 with PAD and it is assessed that there is a high probability that TD-OS20 has further undetected subsurface archaeological deposits.

The artefact density at TD-OS20 with PAD, as well as the types of artefacts recorded at the site, indicates that TD-OS20 was an occupational camp that appears to have been used over a long period of time.

Figure 4-40: Sketch map of TD-OS20 with PAD showing the location and extent of the site.



TD-IF10

Site type: Isolated Find

Site Coordinates:

346540E/6773229N

Site Location: Located on the access track to structure W31. The location of TD-IF10 in relation to the easement and proposed access tracks is given in **Table 4–3**.

Site Description: TD-IF10 is associated with TD-OS16 as it is located approximately 200m to the west of TD-OS16 on the other side of a first order drainage gully (shown in **Figure 4–36**). TD-IF10 is also associated with TD-IF11 that is located approximately 50m to the north.

Despite an intensive survey of the landform, only TD-IF10 and TD-IF11 were recorded and due to the distance between them it was decided to keep them as isolated finds rather than an open site.

TD-IF10 is a river cobble with an area of pitting at the centre of one of its two flat sides. This may provide evidence that the cobble was used as an anvil (**Plate 4–89**).

It was assessed that there is a low likelihood of there being further archaeological deposits associated with TD-IF10.

TD-IF11

Site type: Isolated Find

Site Coordinates:

346540E/6773278N

Site Location: Located on the access track to structure W31. The location of TD-IF11 in relation to the easement and proposed access tracks is given in **Table 4–3**.

Site Description: TD-IF11 is associated with TD-OS16 as it is located approximately 250m to the north west of TD-OS16 on the other side of a first order drainage gully (shown in **Figure 4–36**). TD-IF11 is also associated with TD-IF10 that is located approximately 50m to the south. Despite an intensive survey of the landform, only TD-IF11 and TD-IF10 were recorded and due to the distance between them it was decided to keep them as isolated finds rather than an open site.

TD-IF11 is a milk quartz core showing multi-directional use and four negative flake scars. It measures 37.06 x 30.01 x 17.31 (**Plate 4–90**).

It was assessed that there is a low likelihood of there being further archaeological deposits associated with TD-IF11.

TD-IF12

Site type: Isolated Find

Site Coordinates:

390585E/6788782N

Site Location: Located on the access track to structure W164. The location of TD-IF12 in relation to the easement and proposed access tracks is given in **Table 4–3**.

Site Description: TD-IF12 is located 20m south of structure W164. TD-IF12 is located in the same area as TD-IF8 although the site is located close to the northern bank of an unnamed waterway; while TD-IF8 is located further away on the southern bank.

TD-IF12 is a basalt flake with a wide platform and three negative flake scars. It measures 35.17 x 37.22 x 9.09 (**Plate 4–91**).

It was assessed that there is a low likelihood of there being further archaeological deposits associated with TD-IF12.

TD-IF13

Site type: Isolated Find

Site Coordinates:

407548E/6794386N

Site Location: Located in a clearing next to the Washpool Creek Fire Trail. The location of TD-IF13 in relation to the easement and proposed access tracks is given in **Table 4–3**.

Site Description: TD-IF13 was recorded during an opportunistic survey of two creek crossings on the Washpool Creek Fire Trail that may be used as an access track to structures 219 and 220. TD-IF13 is located 20m north of an unnamed creek on the flat bank above the creek. It was located in a disturbed area where a small clearing above the creek has been made.

TD-IF13 is a milk quartz flake with a moderate platform and two negative flake scars. It measures 35 x 25 x 12 (**Plate 4–92**).

It was assessed that there is a low likelihood of there being further archaeological deposits associated with TD-IF13.

4.1.7. March 2010 visit to Moorabinda Station

As part of the heritage assessment program by OzArk, an OzArk archaeologist visited Phil and Julia Harpham of Moorabinda Station on 11 March 2010.

The Harphams had not allowed access to their property at the time of the easement survey and this subsequent assessment only included Moorabinda Station, particularly the areas around Reedy Creek. Mrs Harpham had previously informed OzArk that there are connections between Aboriginal women and parts of her property and specifically that the property once contained a birthing site. The area held by the Harphams as a birthing site was investigated on foot by OzArk and an oral history of Mrs Harpham's recollections recorded.

No Aboriginal artefacts or sites were recorded as part of this assessment. OzArk is not in the position to comment on the prior existence of a birthing site at Moorabinda Station except to say that there is no extant evidence of its existence and that no Aboriginal person in communication with OzArk has collaborated the existence of the site. OzArk will retain the transcript of the interview with Julia Harpham and it is available on request following Julia Harpham's approval.

4.2. Survey Results: Historic Heritage

5.4.1. Historic sites recorded: Easement survey

The heritage assessment recorded eight historic sites during the course of the survey. **Table 4–4** presents location details for these sites. All were located within or adjacent to Study Area West. Maps provided in **Appendix 4** show the location of all recorded sites in relation to the proposed easement at a larger scale than the maps provided as figures below.

Table 4-4: Historic sites recorded during the heritage assessment.

Site number (for this report only)	Site Designation	GDA Zone 56 Easting	GDA Zone 56 Northing	Comment	Survey Week
1	TD-HS01	347939	6774011	structure	3
		347937	6773996	post and rail	
		347957	6774003	post and rail	
		347902	6774161	House ruins	
2	TD-HS02	390999	6790751	Collapsed shepherd's hut	4
3	TD-HS03	390936	6790653	fence posts associated with TD-HS02	4
4	TD-HS04	392164	6793560	House ruin	4
5	TD-HS05	399579	6793623	Ruined tobacco drying shed	4
6	TD-HS06	401247	6793675	Shepherd's hut ruin	4
7	TD-HS07	406846	6793760	WWII dry stone wall	4
8	TD-HS08	406845	6793740	WWII dry stone wall	4

Details of these sites follow. All coordinates are GDA Zone 56.

TD-HS01

Site type: Historic site

Site Coordinates: 347939E/6774011N

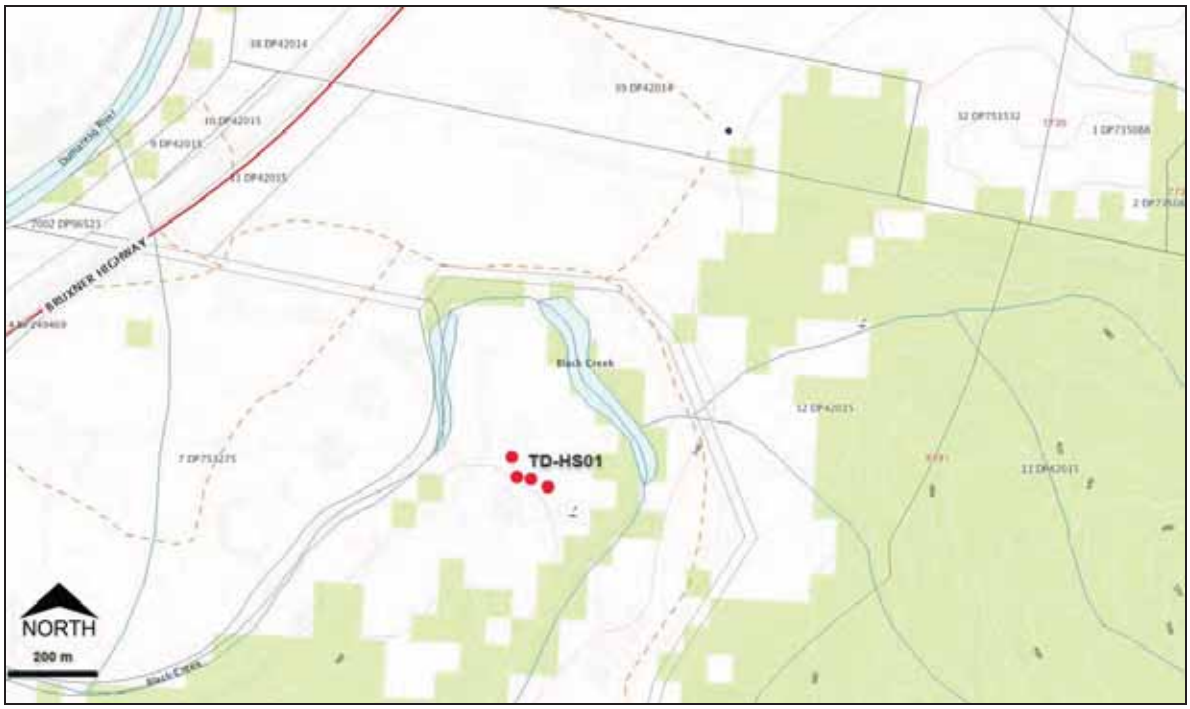
Site Location: The location of TD-HS01 is shown in **Figure 4–41** and **Appendix 4**, **Heritage 3**. It is north of easement by c. 50 m.

Site Description: TD-HS01 is, at its closest point (coordinates presented above), located approximately 100m north of the northern boundary of the proposed easement. This site is located approximately 140m west and south of unnamed billabong on Black Creek and Black Creek itself respectively.

The site consists of the ruins of a settler's cottage, two outbuildings (one for machinery, the other general storage) and a meat storage room (**Plate 4–93**). Several wooden posts remain that once formed the house yard. The remains are situated on an elevated terrace above the Black Creek floodplain at 335m AHD. Black Creek at the location of this site is a 3rd order drainage flowing/meandering for 3.7km until it drains into the Dumaresq River although the site itself in direct line of sight is only 1km from the river. Disturbance associated with these objects can be summarised as follows:

- Cottage – burnt down, only chimney, stairs and concrete footings remain;
- Machinery shed – frame still upright, corrugated iron walls mostly loose;
- 'Other' shed (not pictured) - totally collapsed;
- Meat room - mostly collapsed; and
- Post and rail fence posts – possibly missing as a result of fire.

Figure 4-41: Map showing the location of TD-HS01.



TD-HS02

Site type: Historic site

Site Coordinates: 390999E/6790751N

Site Location: The location of TD-HS02 is shown in **Figure 4–42** and **Appendix 4**, **Heritage 11**. It is west of the easement.

Site Description: TD-HS02 is a ruined and collapsed farm house adjacent to Sunnyside Creek. While the floor joists are intact, the roof and walls have fallen and are *in situ* where they have fallen (**Plate 4–94**). The house/hut measures 4m x 4.5m and is at the centre of a debris field that extends 15m x 15m around the ruin. Artefacts such as an iron bed, cooking utensils and a bottle carrying the date 1956 are among the items associated with the hut. TD-HS02 is to the west of Study Area West and is outside the proposed easement.

TD-HS03

Site type: Historic site

Site Coordinates: 390936E/6790653N

Site Location: The location of TD-HS03 is shown in **Figure 4–42** and **Appendix 4**, **Heritage 11**. Like TD-HS02, this site is west of the easement.

Site Description: TD-HS03 is a pair of fence posts associated with TD-HS02 (**Plate 4–95**). Axe marks are evident and they would appear to date to the same period as TD-HS03 (1950s or earlier). Like TD-HS02, TD-HS03 is to the west of Study Area West and is outside the proposed easement.

Figure 4-42: Map showing the location of TD-HS02 and TD-HS03.

TD-HS04

Site type: Historic site

Site Coordinates: 392164E/6793560N

Site Location: The location of TD-HS04 is shown in **Figure 4–43** and **Appendix 4**, **Heritage 12**.

Site Description: TD-HS04 is a ruined and collapsed farm house along with the ruins of other infrastructure such as a shed, wagons, and fencing. While the floor joists are intact, the roof and walls have fallen and are *in situ* where they have fallen (**Plate 4–96**). The house/hut measures 6m x 5m and is at the centre of a debris field that extends 30m x 30m around the ruin. Artefacts such as a Kalgoorlie safe, roofing materials and tin cans are among the items associated with the house. The site possesses moderate archaeological potential as the ruins and associated infrastructure are relatively undisturbed. TD-HS04 is to the east of Study Area West and is outside the proposed easement.

Figure 4-43: Map showing the location of TD-HS04.

TD-HS05

Site type: Historic site

Site Coordinates: 399579E/6793623N

Site Location: The location of TD-HS05 is shown in **Figure 4–44** and **Appendix 4**, **Heritage 13**.

Site Description: TD-HS05 is a ruined tobacco drying barn constructed from hand-hewn logs. It measures 5m x 4m and has doorways on its north east and south west sides. Considerable soil accumulation has obscured the lower levels of the structure and a semi-mature tree is growing in its interior indicating that it has been abandoned for some time (**Plate 4–97**). The author noted other, better preserved, examples of tobacco drying barns on other nearby properties (**Plate 4–98)**. Comparisons between the well-preserved example and TD-HS05 show that the site possesses high archaeological potential due to the depth of soil accumulation. TD-HS05 is to the south west of Study Area West and is outside the proposed easement. However, it is within 50m of the easement's outer boundary.

TD-HS06

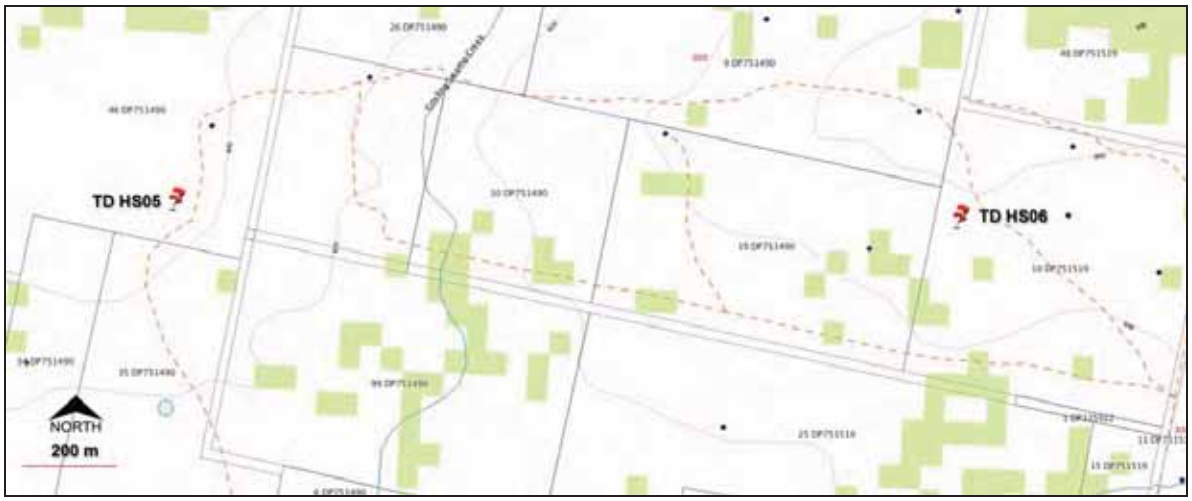
Site type: Historic site

Site Coordinates: 401247E/6793675N

Site Location: The location of TD-HS06 is shown in **Figure 4–44** and **Appendix 4**, **Heritage 13**. It is south and east of the easement, but within 50m.

Site Description: TD-HS06 is ruined hut measuring 6m x 4m. It has cut granite blocks for its fireplace/chimney and portions of stone flooring still *in situ* (**Plate 4–99**). The outline of the original walls is still discernable. In one corner the grass is greener, perhaps indicating greater soil depth than surrounding areas. This may be a pit or such-like feature. No artefacts were observed on the surface but the site appears to be reasonably undisturbed and would possess moderate archaeological potential. TD-HS06 is to the north of Study Area West and is outside the proposed easement. However, it is within 50m of the easement's outer boundary.

Figure 4-44: Map showing the location of TD-HS05 and TD-HS06.



TD-HS07

Site type: Historic site

Site Coordinates: 406846E/6793760N

Site Location: The location of TD-HS07 is shown in **Figure 4–45** and **Appendix 4**, **Heritage 14**.

Site Description: TD-HS07 is closely associated with TD-HS08 and the two should be considered to be part of the same site complex. TD-HS07 is a dry stone wall consisting of 2–3 courses that extends for around two metres (**Plate 4–100**). The wall closes a small gully in the rock outcrop that commands views of a nearby valley. According to the landholder who accompanied the survey team on his property, this area was used by soldiers for training exercises while they were stationed in barracks defending the 'Brisbane Line'. While the barracks and other facilities were located on flatter land to the south, the hilly terrain that contains TD-HS07 was regularly used for training. TD-HS07 has the appearance of a defensive position.

TD-HS08

Site type: Historic site

Site Coordinates: 406845E/6793740N

Site Location: The location of TD-HS08 is shown in **Figure 4–45** and **Appendix 4**, **Heritage 14**.

Site Description: TD-HS08 is closely associated with TD-HS07 and the two should be considered to be part of the same site complex. TD-HS08 is a dry stone wall consisting of 3–4 courses that extends for around three metres (**Plate 4–101**). The wall closes a small gully in the rock outcrop that commands views of a nearby valley. According to the landholder who accompanied the survey team on his property, this area was used by soldiers for training exercises while they were stationed in barracks defending the 'Brisbane Line'. While the barracks and other facilities were located on flatter land to the south, the hilly terrain that contains TD-HS08 was regularly used for training. TD-HS08 has the appearance of a defensive position.

Figure 4-45: Map showing the location of TD-HS07 and TD-HS08.

5.4.2 Landholder input: Easement survey

As the substance of landholder input is considered sensitive information, it will not be detailed here. Suffice to say that many landholders have detailed historic knowledge relating to their properties and the overall local area. When provided to the heritage team, this information has been very useful and has assisted us in identifying sites both within the easement and also outside it. We are grateful to those landholders who have assisted us in this way.

5.4.3 Results from the access tracks surveys

Access tracks survey 1 did not record any items of historic heritage.

Access tracks survey 2 recorded one item of historic heritage. This item is listed in **Table 4–5**.

Table 4-5: Historic heritage items recorded in Study Area East.

Site number (for this report only)	Site designation	GDA Zone 56 Easting	GDA Zone 56 Northing	Comments	Access tracks Survey week
9	LT-HS01	418152	6791932	Modified tree. Located approx. 2m off access track to structure E3	2

LT-HS01

Site type: Modified Tree – European type.

Site Coordinates: 418152E/6791932N

Site Location: Located adjacent to the access track from the Tenterfield Substation to structure E3. The location of LT-HS01 is shown in **Appendix 4**, **Heritage16**.

Site Description: LT-HS01 is located on the top of ridge above Black Swamp Creek and Postmans Creek north of the proposed Tenterfield Substation.

The tree is located 2m south of the formed track that goes to a set of yards.

The tree appears to be a Stringybark species, which exhibits the typical zig-zag scarring at the top of the scar, indicating a European genesis of the scar (**Plate 4–102**). It appears to

have been used to generate a rectangular panel of bark, possibly for use in a shelter for roofing (Long 2003: 16).

4.3. Heritage survey constraints

There were varied constraints to the effective survey of the Study Area. The constraints are listed below in dot-point form.

4.3.1. Constraints in Study Area West

- The greatest constraint to survey coverage across this portion of the Study Area was permission from landowners to access their properties. If denied, this meant that the survey team were denied access to a number of areas that, according to the sensitivity methodology (**Section 3.5**), OzArk would like to have surveyed. Due to landholder sensitivities, easement portions were often walked as vehicles were not permitted. While this is not a constraint to the survey, it did mean long walks in the hot sun (the area being surveyed in December) which may have affected some individuals on the survey team. In some instances a property designated for assessment (and where access permission had been granted) could not be surveyed as the team could not access the property without driving or walking through a neighbour's property.
- In the field the survey team had GPS coordinates of each angle structure (along with maps showing the easement route) and, by using handheld GPS devices, they had to navigate their way from one GPS point to the next. In easement survey week 3 which assessed the western portion of Study Area West, only the GPS coordinates of the angle structures were available and, in some cases, this meant there were several kilometres between 'known' points. This resulted in the survey team criss-crossing the route of the easement as they endeavoured to remain 'on track'. As a consequence, a number of sites were recorded outside the 60m easement but all were in close proximity to the easement route. To add to the difficulties of the survey team in easement survey week 3, the terrain did allow the team to remain in a straight line. In some instances steep hills had to be walked around as it was physically difficult for some of the survey team to climb the steep slopes. Sometimes, in these detours, sites were also encountered. While the archaeologists in the team said that their mandate was to survey the easement only, the Aboriginal community members insisted that the sites be recorded. This also contributed to some sites being recorded off-easement.
- In easement survey week 4, URS and TransGrid were able to provide some intermediate GPS coordinates between the angle structures. This allowed a greater degree of accuracy in determining the route of the easement and the majority of the sites recorded in this week were either within the easement or in close proximity.
- Ground surface visibility was better in Study Area West than in Study Area East. Generally Study Area West is drier and less-intensive grazing takes place. Unlike the improved pastures encountered in Study Area East, the more open nature of the grass cover in Study Area West allowed greater scrutiny of the ground surface.
- Access tracks survey 1 concentrated in Study Area West. Like the constraints for the easement survey noted above, not all access tracks slated for inspection were able to be accessed as the property owners denied access or were not contactable. This required that those access tracks remain unassessed although they display features of having archaeological potential.

- Heavy winter rains in 2010 meant that ground surface visibility for access tracks survey 1 was less than during the easement survey of Study Area West. However, it was assessed that although the ground was more obscured by ground cover that enough bare patches remained to enable adequate assessment to be carried out.

4.3.2. Constraints in Study Area East

- Access to the easement along Study Area East was readily granted by property owners. The terrain, particularly towards the Tenterfield section of the alignment was very rugged and it was extremely hard to follow the easement directly. Investigation across the western end of the existing easement (in the Tabulum area) involved traversing steep hills and it meant that not all of the easement was assessed in its entirety. However, the survey team were able to sight most areas of the easement at least from an elevated vantage point. In the eastern portions of Study Area East (around the Richmond River), the terrain was generally flatter and a greater proportion of the easement was able to be accessed allowing for greater survey coverage.
- Ground surface visibility was low across the Study Area East due to thick grass (in the eastern portions) or native grass and leaf litter in the western portions.
- In access tracks survey 2 some access tracks chosen by the methodology due to proximity to water resources that were in fact through very low-lying areas and these were viewed and discussed between the OzArk representative and the Aboriginal community representative and a determination made as to whether the area held enough archaeological potential to warrant pedestrian survey.
- Not all access tracks slated for inspection were able to be accessed due to creek crossings being in a low flood. This required that those access tracks remain unassessed although they display features of having archaeological potential.

4.4. Effective survey coverage

Due to the constraints outlined in **Section 4.3**, not all of the proposed survey areas were actually assessed and, as outlined in **Section 3.5**, the nature of the landforms necessitated a variety of survey methods to be employed in those areas that were assessed. **Table 4–6** refers to those properties that were identified for proposed assessment according to the survey methodology set out in **Section 3.5**. It details which properties were not able to be accessed (and therefore remain unassessed) and, on those properties that were assessed, the survey method employed. The archaeological sensitivity column in **Table 4–6** refers to the desktop assessment of archaeological potential as set out in **Section 3.5**. It should be noted that this designation was generated prior to the field assessment to inform the survey methodology and does not mean that these properties *actually* hold archaeological potential.

Given the constraints of access outlined in **Section 4.3**, it is calculated that in excess of 55.9% of the combined total area of the Study Area West and Study Area East was actually assessed (as opposed to 61.7% that should have been assessed according to the survey methodology set out in **Section 3.5**). Alternatively this means that 90.6% of the properties designated for assessment were actually assessed. It can therefore be seen that while access was an issue, the vast majority of properties designated for assessment were actually visited and assessed. Maps provided in **Appendix 4** show the areas of the easement that was actually surveyed as part of this assessment.

An estimated 119 person days were spent on the assessment (easement and access tracks surveys). Despite the survey constraints outlined above, it is considered that, within the areas assessed, adequate survey effectiveness was achieved and that all large/major sites were recorded.

Regarding the access track surveys, the smaller subject areas allowed full pedestrian survey of properties that the survey team were granted access. **Table 4–7** lists the properties assessed and the method of assessment. Of the 37 access tracks that were to be surveyed, access was not granted to five properties or 13.5% of the sample. Additionally, three access tracks (or 8%) were not able to be accessed due to weather conditions. This equates to 78.5% of the access tracks slated for assessment actually being assessed. The total length of all access tracks associated with The Project (both on and off easement) is 265,497m. Of this, 7125m or 3% was not able to be accessed either due to the weather conditions or failing to obtain landholder permission for property access. Of the total area of access tracks, 90,534m or 34% was surveyed as part of this assessment.

Table 4-6: Properties zoned as archaeologically sensitive by the easement survey methodology. Properties not assessed are noted.

Property number	Archaeological sensitivity	Survey method	Survey week
468	High	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
466	High	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
465	High	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
465	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
458	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
449	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
446	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
438	Moderate	Inspected, not fully walked.	1
432	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
424	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
420	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
419	High	Drove as close as practical to easement, spot checks at all existing structures and along watercourses	1
417	High	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
411	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
408	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
405	High	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
403	High	Drove as close as practical to easement, spot checks at all existing structures and along watercourses	1
398	Moderate	Full pedestrian survey.	1
395	High	Steep hills, spot checks at sites and at watercourses. Not entirely driven.	1
388	Moderate	Full pedestrian survey.	1
386	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
383	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
382	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
381	Moderate	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
380	High	Drove as close as practical to easement, spot checks at all existing structures and along watercourses.	1
377	High	Full Pedestrian survey.	1
376	High	Drove as close as practical to easement, spot checks at all existing structures and along watercourses. Full pedestrian survey in places.	1

Property number	Archaeological sensitivity	Survey method	Survey week
374	Moderate	Spot checks, very hilly, promising locations fully walked.	1
373	High	Drove as close as practical to easement, spot checks at all existing structures and along watercourses. Full pedestrian survey in places.	1
372	High	Spot checks, landform having low potential for undetected sites.	2
371	High	Combination of vehicle and pedestrian assessment. Pedestrian assessment over areas with higher potential (incl. water courses). Spot checks in areas with lower potential.	2
370	Moderate	As above.	2
363	Moderate	As above.	2
358	Moderate	As above.	2
349	High	As above.	2
348	High	As above.	2
347	High	As above.	2
343	Moderate	As above.	2
337	High	As above.	2
333	High	As above.	2
328	High	As above.	2
326	High	As above.	2
322	High	As Above. Some discrete areas under the transmission line not assessed due to very steep terrain (approximately 15% of the transmission line on this property). These areas had no archaeological potential.	2
320	High	Combination of vehicle and pedestrian inspection. High potential near Sheep Yard Creek – assessed on foot.	2
319	Low (opportunistic sample)	As above.	2
318	High	As above.	2
316	High	As above.	2
312	Low (opportunistic sample)	As above.	2
310	High	As Above.	2
308	High	As Above.	2
305	High	As Above.	2
304	High	As Above.	2
303	Moderate	As Above.	2
7	High	Full pedestrian survey.	3
14	Moderate	Full pedestrian survey.	3
21	High	Full pedestrian survey minus approximately 300m either side of AP6. Very steep mountainside here, all stakeholders agreed survey would be unlikely to record sites.	3
23	High	Full pedestrian survey.	3
28	High	Full pedestrian survey.	3
29	Moderate	Full pedestrian survey.	3
32	Moderate	Full pedestrian survey – location JJ.	3
32	High	Full pedestrian survey – AP12 to location MM.	3
34	High	**Access denied.**	3
36	High	Full pedestrian survey.	3

Property number	Archaeological sensitivity	Survey method	Survey week
39	High	Full pedestrian survey.	3
40	High	**Access denied.**	3
4003	High	75% full pedestrian access, 25% mountain slope assessed by combination of vehicle and pedestrian access.	3
59	High	Full pedestrian survey.	3
063	High	Full pedestrian survey to Gibraltar Rd.	3
063	High	Full pedestrian survey from Gibraltar Rd east.	4
067	Moderate	**Access denied.**	4
068	High	Full pedestrian survey.	4
071	High	**Access denied.**	4
082	Moderate	**Not assessed** (hard to access without crossing other people's land who had denied access).	4
087	Moderate	**Not assessed** (hard to access without crossing other people's land who had denied access).	4
088	High	**Not assessed** (hard to access without crossing other people's land who had denied access).	4
091	High	**Access denied.**	4
099	High	Full pedestrian survey.	4
100	High	Full pedestrian survey.	4
102	High	Full pedestrian survey.	4
3002	High	Full pedestrian survey.	4
3006	High	Full pedestrian survey.	4
3008	High	Full pedestrian survey.	4
3011	High	Full pedestrian survey – Locations YYY and ZZZ	4
3032	High	Full pedestrian survey.	4
1051	Low (opportunistic sample)	Full pedestrian survey.	4
1057	High	Full pedestrian survey.	4
1084	High	Full pedestrian survey.	4
1095?	High	Full pedestrian survey.	4
1098	High	**Access denied.**	4
1100	High	Full pedestrian survey.	4
1105	High	Proposed easement next to road, spot checks.	4
1106	High	Proposed easement next to road, spot checks.	4
1110	High	Full pedestrian survey.	4
1111	High	Full pedestrian survey.	4
1112	High	Full pedestrian survey.	4
Bruxner Highway to proposed substation	High	Full pedestrian survey.	4

Table 4-7: Properties zoned as archaeologically sensitive by the access tracks survey methodology. Properties not assessed are noted.

Property number	Archaeological sensitivity?	Survey method	Survey week
005	yes	Access road A: will not be used and the public road to the Dumaresq Switching Station used instead. Survey on foot examined the access road from the substation along the easement to structure W5.	1
007	yes	Access Rd B: Full pedestrian survey from public road to Beardy River.	1
011	yes	Access Rd C: Full pedestrian survey from Beardy River to structure W15.	1
011	yes	Access Rd D: Full pedestrian survey of access tracks to structure W16 and W17.	1
021	yes	Access Rd E: Full pedestrian survey of access track to structure W36.	1
021	yes	Access Rd F: Full pedestrian survey of access track to structure W37.	1
028	yes	Access Rd G: Full pedestrian survey of access track to structures W44 and W45.	1
029	yes	Access Rd H: Full pedestrian survey of access tracks to structures W50 and W51.	1
036	yes	Access Rd I: Full pedestrian survey of access track to structure W74.	1
036	yes	Access Rd J: Full pedestrian survey of access track to structure W81.	1
039	yes	Access Rd K: **No access granted. Not assessed**.	1
040	yes	Access Rd L: **No access granted. Not assessed**.	1
059	yes	Access Rd M: Full pedestrian survey of access track to structure W114.	1
063	yes	Access Rd N: Full pedestrian survey of access track to structure W124.	1
063	yes	Access Rd O: Full pedestrian survey of access track to structure W125.	1
068	yes	Access Rd P: Full pedestrian survey of access track to structure W134.	1
071	yes	Access Rd Q: Full pedestrian survey of access track between structures W142 and W145.	1
087	yes	Access Rd R: **No access granted. Not assessed**.	1
088	yes	Access Rd S: Full pedestrian survey of access track between structures W152 and W153.	1
3001	yes	Access Rd T: Full pedestrian survey of access track to structure W164.	1
3006	yes	Access Rd U: Full pedestrian survey of access track to structure W169.	1
3011	yes	Access Rd V: Full pedestrian survey of access track to structure W176.	1
1057	yes	Access Rd W: **No access granted. Not assessed**.	1
1066	yes	Access Rd X: Full pedestrian survey of access track to structures W219 and W220.	1
1098	yes	Access Rd Y: **No access granted. Not assessed**.	1
304	yes	Access Rd Z: Full pedestrian survey of access track to structures E2–E6.	2

Property number	Archaeological sensitivity?	Survey method	Survey week
318	yes	Access Rd BB: Full pedestrian survey of access track from Macleods Creek Rd to Sandy Creek, includes structures E20–E23.	2
320	yes	Access Rd CC: Full pedestrian survey of access track from Macleods Creek Rd to Sheep Yard Creek, includes structures E24–E26.	2
328	yes	Access Rd DD: Full pedestrian survey of access track from access road to structure E58, over Plumbago Creek.	2
366	yes	Access Rd EE: Full pedestrian survey of access track from Bruxner Highway (structure 95) to Plumbago Creek (structure 99).	2
376	yes	Access Rd FF: Full pedestrian survey of access track from Clarence River to structure E114.	2
380	yes	Access Rd GG: Full pedestrian survey of access track from Rodgers Rd to Tunglebung Creek, includes structures E120–E121. **Could not access track from structure 123–122 due to creek flood conditions**.	2
385	yes	**Access Rd HH: could not assess due to inability to access.**	2
386	yes	**Access Rd II: could not assess due to inability to access.**	2
395	yes	Access Rd JJ: Full pedestrian survey of access track from Bruxner Hwy to and including Shannon Brook.	2
410	yes	Access Rd KK: Some pedestrian survey of access track from E190–E188. Remainder was deemed to low lying to yield sites and was not walked.	2
421	yes	Access Rd LL: No pedestrian survey of access track Ellems Bridge Rd to structure E200. It was assessed as too low lying to have archaeological potential. There was also very low ground surface visibility.	2

5 Discussion and Heritage Assessment

5.1. Aboriginal Heritage

5.1.1. Aboriginal site distribution

Open Sites

The location of sites recorded during the present assessment overall conform to the predictive model set out in **Section 3.3.5**; i.e. that the majority of sites are likely to be close to watercourses. Most recorded open sites were located close to water sources, albeit some ephemeral ones.

Specifically:

- LT-OS1 is located beside an unnamed waterway containing permanent water in the general vicinity of the Clarence River;
- LT-OS2 is located on an unnamed waterway (ephemeral);
- LT-OS3 is located adjacent to Clear Creek;
- TD-OS1 and TD-OS2 are both located on unnamed tributaries to the Dumaresq River and within proximity to the river;
- TD-OS3 is located above the floodplain of Black Creek;
- TD-OS4 is located above the floodplain of Beardy Creek;
- TD-OS5 is above Gulf Creek;
- TD-OS6 is adjacent to an unnamed ephemeral creek;
- TD-OS8 is adjacent to an unnamed ephemeral creek and in the general vicinity of the Mole River;
- TD-OS9 and TD-OS11 are adjacent to the Mole River;
- TD-OS12 is above Darby Creek;
- TD-OS13 is beside an ephemeral waterway;
- TD-OS14 is beside a second order waterway;
- TD-OS15 is beside the Beardy River;
- TD-OS16 is above the floodplain for the Black Creek billabong;
- TD-OS17 is on the bank of Black Creek;
- TD-OS18 is associated with a first order waterway; and
- TD-OS20 is associated with a spring and waterway.

Only two open sites were located away from the immediate vicinity of waterways: TD-OS7 and TD-OS10. TD-OS7 is part of a group of sites recorded in the general vicinity (also includes TD-OS6, TD-IF1–5). These sites are all located around the headwaters of minor waterways draining into the Dumaresq River from an area of high ground to the east of the river. Examination of **Figure 4–10** shows these sites to cluster along a similar contour and may represent a boundary of two ecological

zones that were exploited by traditional Aboriginals in the area. This may well explain the location of TD-OS7 away from water in that it was a temporary hunting camp rather than a more permanent occupation camp (the low density of artefacts at TD-OS7 tends to support this).

TD-OS10 was recorded in the elevated ridge saddle above the Mole River. This site displayed a lot of cores which would normally indicate a more-permanent camp site which, according to the predictive model, should be located in closer proximity to water. However it should be noted that water sources change (i.e. springs dry up) and that manufacturing sites, as TD-OS10 appears to be, are often located close to the source of raw material. The raw materials present at TD-OS10 appear to be imported, although a full survey of rock sources surrounding TD-OS10 was beyond the scope of this study. Therefore the location of TD-OS10 will remain an anomaly but it does confirm other studies in the region where sites were found more on ridge-lines than beside water (Navin Officer 1990: NB this study is in coastal areas where ridge-lines may be preferred to catch breezes [for summer cooling] and as pathways above the more densely vegetated valleys, but the fact that not *all* sites need be beside water is useful to bear in mind when examining the location of TD-OS10).

The predominance of open sites, which comprise 42% of recorded sites (n = 21), is thought to reflect the enduring nature of Aboriginal stone artefacts in the face of land use practices that can be very deleterious to other site types, e.g. modified trees; stone arrangements, Bora Grounds; as well as the fact that these would have originally been one of the more common of site types.

Modified Trees

The recordings of modified trees (all scarred) conform to the predictive model that these can be located anywhere in a landscape but are more likely to appear adjacent to water. Of the eight recordings of modified trees, only two (TD-ST5 and TD-ST6) were located away from the immediate environs of water.

While modified trees would have originally been a common site type, the large-scale land clearing within the Study Area, has resulted in this site type only representing 16% (n = 8) of the sites recorded in this assessment.

Further, no modified trees recorded in this assessment were assessed as being *Definite Aboriginal Scars* (by the criteria set out in **Appendix 1**) as none displayed features where a definite attribution was possible. Adopting this conservative approach to the assessment of modified trees meant that 50% (n = 4) of the recorded modified trees are seen as containing *Possible Aboriginal Scars* where there is some doubt as to how the scar was created and 50% are assessed as containing *Aboriginal Scars* where there is a stronger likelihood of the scars being Aboriginal in origin. Specifically LTST-1, TD-ST3, TD-ST5 and TD-ST6 are assessed as containing *Aboriginal Scars*, while LD-ST2, TD-ST1, TD-ST2 and TD-ST4 are assessed as containing *Possible Aboriginal Scars*.

Isolated Finds

The predictive model stated that isolated finds could occur anywhere in a landscape but were more likely in disturbed areas at the headwaters of / adjacent to waterways. The current assessment recorded 15 isolated finds (or 30% of the total of sites recorded) and, of these, the majority were located adjacent to minor waterways (TD-IF3–IF13, n = 11), while four were located at a distance to water LT-IF1–2 and TD-IF1–2, n = 4). This pattern therefore conforms to the predictive model that isolated finds may be one-off items that have been stashed or lost on hunting expeditions rather than indicating the presence of a larger site.

Resource Gathering Site

The one resource gathering site recorded (TD-ARG1, 2% of all sites; n=1) was located next to a waterway which conforms to the predictive model that these sites can be located anywhere but are more likely beside water where food resources would have been more plentiful.

Potential Archaeological Deposits

10% of all recorded sites are PADs (n = 5). All PADs are confined to Study Area East. While it is difficult to predict the occurrence of these sites, it was concluded that the very low ground surface visibility in Study Area East prompted the use of this site designation while the more visible surface of landforms in Study Area West allowed a greater degree of accuracy in site designation.

Conclusion

The results from this assessment support the predictive model that states that most sites will be located in proximity to water. Those sites that are located away from water may be anomalies or as a result of unknown factors such as changing water sources.

It is also interesting to note that more Aboriginal sites were recorded in Study Area West when compared with Study Area East. This also conforms to previous studies that suggest that the thick forests that would have once covered much of Study Area East were not preferred occupation zones for traditional Aboriginal groups (Piper 1997: 19). Additionally a greater percentage of Alignment West is in proximity to water courses when compared to Alignment East. The ETL in Alignment West somewhat parallels the Dumaresq River for approximately 40km and, while away from the river, the transmission line bisects many of the tributaries flowing north to the Dumaresq River. Further east, Alignment West bisects the Mole River, an area where previous archaeological recordings demonstrate Aboriginal occupation. In the east of Alignment West, the transmission line somewhat parallels Tenterfield Creek for much of its length between structure W114 and structure W222.

In Alignment East the Study Area intersects several large water courses including the Clarence and Richmond Rivers. However, the Study Area does not parallel these river systems. Instead the Study Area only includes a limited portion of river bank in areas that are intensively used for agriculture and often offer no ground surface visibility. As a consequence, the probability of locating Aboriginal sites in Study Area East is diminished when compared to Study Area West.

5.1.2. Survey approach in light of results

As discussed in **Section 3.5**, the methodology of this assessment attempted to access a suite of areas determined through desktop modelling to have archaeological potential. Given the constraints of access outlined in **Section 4.3**, it is calculated that in excess of 55.9% of the total length of the easement survey area was actually assessed (as opposed to 61.7% that should have been assessed according to the survey methodology set out in **Section 3.5**). Alternatively this means that 90.6% of the properties designated for assessment were actually assessed.

As noted above (**Section 5.1.1**) the majority of sites recorded were located along waterways even though the immediate environs of waterways only comprised a small percentage of all landforms assessed. It therefore supports the assumption behind the survey methodology that areas holding the greatest archaeological potential are located in the vicinity of water.

Overall, it is considered that the heritage assessment has surveyed areas of the easement that through modelling are most likely to contain Aboriginal sites and areas where sites are likely to be

large and/or complex. While OzArk cannot definitively state that all cultural material along the proposed easement has been identified, it is considered likely that the majority of large Aboriginal sites have been recorded (acknowledging that several properties deemed as requiring survey were not accessible; **Table 4–6**, **Table 4–7**). Consequently, the sites recorded to date are likely to comprise the bulk of the Aboriginal heritage resource along the easement.

Regarding the access tracks methodology, it was noted that a greater survey effort was placed on Study Area West following the results of the easement survey. The results of the access track surveys tend to support this approach in that 11 Aboriginal sites were recorded in Study Area West and none in Study Area East. As was noted in regards to the easement survey, this is probably due to a range of factors including: higher ground surface visibility in Study Area West; greater proportion of Alignment West in proximity to water courses when compared to Alignment East and the observation that the terrain of the former 'Big Scrub' in Alignment East was not widely occupied by Aboriginal people. In addition, all Aboriginal sites recorded during the access tracks surveys were located within 100m of some form of water course. While a range of landforms were included in the access tracks surveys, this bias of sites towards water sources supports the survey methodology of particularly focusing survey efforts on those landforms close to water. Thirty four percent of the total area of access tracks was able to be assessed during the surveys.

5.1.3. Assessment of heritage significance

Introduction

The appropriate management of cultural heritage items is usually determined on the basis of their assessed significance as well as the likely impacts of any proposed developments. Cultural, scientific and public significance are identified as baseline elements of significance assessment and it is through the combination of these elements that the overall cultural heritage values of a site, place or area are resolved.

Cultural significance

This area of assessment concerns the importance of a site or features to the relevant cultural group - in this case the Aboriginal community. Aspects of cultural significance include assessment of sites, items and landscapes that are traditionally significant or that have contemporary importance to the Aboriginal community. This importance involves both traditional links with specific areas as well as an overall concern by Aboriginal people for their sites generally and the continued protection of these. This type of significance may not be in accord with interpretations made by the archaeologist - a site may have low scientific significance but high Aboriginal significance, or *vice versa*.

The significance of the archaeological sites located within the study area was addressed during each survey with the Aboriginal community representatives who accompanied the survey team.

Scientific significance

Assessing a site in this context involves placing it into a broader regional framework, as well as assessing the site's individual merits in view of current archaeological discourse. This type of significance relates to the ability of a site to answer current research questions and is also based on a site's condition (integrity), content and representativeness.

The overriding aim of cultural heritage management is to preserve a representative sample of the archaeological resource. This will ensure that future research within the discipline can be based on a valid sample of the past. Establishing whether or not a site can contribute to current research also

involves defining 'research potential' and 'representativeness'. Questions regularly asked when determining significance are: can this site contribute information that no other site can? Is this site representative of other sites in the region? In general terms, any Aboriginal object has the ability to either add to our knowledge about an area's Aboriginal history, comment on the technological developments of a people or may act as potential markers for subsurface deposits.

Modified Trees

Modified trees are assessed on the basis of the known local context of this site type (i.e. are there many, some or no such features known locally). In general terms, modified trees do not tend to increase our understanding of the area's prehistory, except in situations where past land-use practices have resulted in the total clearance of trees. In these circumstances, modified trees become more significant due to the overall degradation of this resource. Modified trees also increase in scientific significance when they remain extant in stands where a great many exist in the one area or in relationship with other sites.

Open Sites

The scientific significance of open sites is extremely variable and dependent upon several factors relating to:

- Preservation: Their integrity and potential to be conclusively proven to be Aboriginal in origin;
- Representativeness: Is this the type of site one may expect in this landscape (i.e. does it relate back to the predictive model?); Do many such sites occur nearby?; and
- Are there artefacts or other sites present (material, types or combinations thereof) that are rare in the area or unusual concentrations/or rarity for the area?

Many open sites recorded in the current assessment were considered to have PADs of varying quality, as discussed in **Section 4. 1**.

PADs

It is always challenging to determine the significance of PADs as there may be no site material (if there are no associated surface artefacts) or soil data to assess. Consequently, should impact to PADs be unavoidable, test excavation is recommended to investigate the presence, extent, nature and integrity of any possible archaeological deposits such that the PAD's significance can be assessed and appropriate management recommendations devised.

Public significance

Sites that have public significance do so because they can educate people about the past. By reducing ignorance about why sites are important to the Aboriginal and scientific community, important sites can be protected from ignorant or inadvertent destruction. Educating the public to understand the need for site preservation should increase the likelihood of maintaining an archaeological resource into the future. For a site to have high public significance it should contain easily identifiable and interpretable elements, and be relatively easily accessed. If an artefact scatter is in some way outstanding (either in terms of spatial size or artefact density) it may be recognisable by the lay person and hence interpretable, but if not, this site type is usually assessed as having low public significance.

Modified trees are easily appreciated due to their obvious visual manifestation, but unless a modified tree is in some way outstanding (i.e. located in an area where such site types are rare, a very obvious

canoe or toe hold tree or an unusual species to carry scarring), and depending on the condition of the tree, this site type is usually assessed as having moderate–low public significance.

PADs are generally very difficult for the lay person to appreciate without interpretative aids.

5.1.4. Assessed significance of the recorded sites

Cultural significance

Conversations held with the representatives of the Registered Stakeholder groups (see **Table 1–2**) determined that all site types are culturally significant to the Aboriginal community because they provide physical evidence of Aboriginal occupation of the local area. However, no sites recorded as part of this assessment were held to be highly significant as the site type and manifestation did not warrant such a high rating. Generally open sites and modified trees were held by the Aboriginal representatives as holding **moderate–high cultural significance** as they had manifest attributes that could be identified by present-day Aboriginals with the past presence of their people. Sites such as PADs, at the present stage of our knowledge, were seen as holding **unknown cultural significance** although this would change if future investigation demonstrated that cultural material was, in fact, present.

Scientific significance

The overall location of sites discovered during the current assessment conforms to the general archaeological settlement pattern that has already been established throughout the broader region.

Only five sites, LT-OS1, TD-OS9, TD-OS 17, TD-OS19 and TD-OS20, displayed artefact densities greater than one per square metre and none displayed artefact types or raw materials that were unusual or rare in the general vicinity. This fact diminishes the scientific significance of many of the recorded sites as they are unlikely to substantially add to our knowledge concerning Aboriginal occupation or ways of life in the region.

The open sites recorded were in varying states of disturbance, which also impacts upon their scientific significance because it is a limiting factor in the amount of information they may be able to provide. **Table 5–1** provides a summary of disturbance, archaeological potential and scientific significance for each site. Each site has been assessed according to levels of disturbance (low, moderate or high) to the archaeological deposits or site manifestations that comprise each site. Ranking has also been accorded to sites based on their assessed archaeological potential. With regards to sites described as possessing a PAD, this refers to the likelihood of the site having associated subsurface deposits. In the case of simple open sites or isolated finds, this column refers to the likelihood of further surface artefacts being present or some degree of likelihood that subsurface material may occur, although potentially not within intact archaeological deposits. The assessments in this column have been arrived at through overlaying the overall sensitivity of the landform (from the predictive model) with assessed levels of disturbance so as to arrive at their archaeological potential. The final column details the assessed scientific significance of the recorded sites. For sites with PAD, this assessment is only preliminary, as not enough information on the site is really available from a pure surface recording.

Table 5-1: Scientific assessment of sites recorded during this survey.

Site Designation	Type of Site	Disturbance Levels	Archaeological Potential	Preliminary Scientific Significance
LT-IF1	Isolated Find	Moderate	Low	Low
LT-IF2	Isolated Find	Moderate	Low	Low
LT-OS1 with PAD	Open Site with PAD	Low-Moderate	Moderate	Moderate
LT-OS2 with PAD	Open Site with PAD	Low	Low-moderate	Low
LT-OS3	Open Site	Moderate	Moderate	Low
LT-PAD1	Potential Archaeological Deposit	Low	Moderate?	Unknown
LT-PAD2	Potential Archaeological Deposit	Moderate	Moderate?	Unknown
LT-PAD3	Potential Archaeological Deposit	Moderate	Moderate?	Unknown
LT-PAD4	Potential Archaeological Deposit	Low	Moderate?	Unknown
LT-PAD5	Potential Archaeological Deposit	Low	Moderate?	Unknown
LT-ST1	Modified Tree	Low	Low	Low
LT-ST2	Modified Tree	Low	Low	Low
TD-IF1	Isolated Find	Low	Low	Low
TD-IF2	Isolated Find	Low	Low	Low
TD-IF3	Isolated Find	Low	Low	Low
TD-IF4	Isolated Find	Low	Low	Low
TD-IF5	Isolated Find	Low	Low	Low
TD-IF6	Isolated Find	Low	Low	Low
TD-IF7	Isolated Find	Low	Low	Low
TD-IF8	Isolated Find	High	Low	Low
TD-IF9	Isolated Find	High	Low	Low
TD-IF10	Isolated Find	Moderate	Low	Low
TD-IF11	Isolated Find	Moderate	Low	Low
TD-IF12	Isolated Find	High	Low	Low
TD-IF13	Isolated Find	High	Low	Low
TD-OS1	Open Site	Low	Low-moderate	Low
TD-OS2	Open Site	Low	Low-moderate	Low
TD-OS3 with PAD	Open Site with PAD	Low	Moderate	Moderate
TD-OS4 with PAD	Open Site with PAD	Moderate	Moderate	Moderate
TD-OS5 with PAD	Open Site with PAD	Low-moderate	Low	Low-moderate
TD-OS6	Open Site	See TD-OS20 with PAD*	See TD-OS20 with PAD	See TD-OS20 with PAD
TD-OS7	Open Site	Low	Low	Low
TD-OS8	Open Site	Low	Low	Low
TD-OS9 with PAD	Open Site with PAD	Low	Moderate	Moderate
TD-OS10	Open Site	Low	Low-moderate	Low
TD-OS11 with PAD	Open Site with PAD	Moderate	Moderate	Moderate

Site Designation	Type of Site	Disturbance Levels	Archaeological Potential	Preliminary Scientific Significance
TD-OS12	Open Site	Moderate	Low	Low-moderate
TD-OS13	Open Site	Moderate	Low	Low-moderate
TD-OS14	Open Site	Moderate	Low-moderate	Low-moderate
TD-OS15	Open Site	See TD-OS4 with PAD*	See TD-OS4 with PAD	See TD-OS4 with PAD
TD-OS16	Open Site	Moderate	Low-moderate	Low-moderate
TD-OS17	Open Site	Low-moderate	Moderate	Moderate
TD-OS18	Open Site	High	Low	Low
TD-OS19 with PAD	Open Site with PAD	Low-moderate	Low-Moderate	Moderate
TD-OS20 with PAD	Open Site with PAD	Moderate-high	High	Moderate
TD-ST1	Modified Tree	Low	Low	Low
TD-ST2	Modified Tree	Low	Low	Low
TD-ST3	Modified Tree	High	Low	Low
TD-ST4	Modified Tree	Low	Low	Low
TD-ST5	Modified Tree	High	Low	Low
TD-ST6	Modified Tree	Low	Low	Low
TD-ARG1	Aboriginal resource gathering site	Low	Low	Low

* TD-OS15 will be recorded as part of TD-OS4 with PAD and TD-OS6 will be recorded as part of TD-OS20 with PAD.

Public significance

All the recorded open sites (OS), isolated finds (IF) and potential archaeological deposits (PADs) located during the present survey are assessed as having **low public significance** due to their manifestations as low to moderately dense artefact scatters located on privately held land that makes them inaccessible to the general public. Sites such these are difficult for the lay person to interpret or access. The modified tree sites are accorded **low–moderate public significance** as they are easier for the lay person to interpret, although being on private land, they are inaccessible for the public to visit.

Table 5–2 summarises the cultural, scientific and public significance of the sites recorded during this assessment.

Table 5-2: Summary of heritage significance.

Site Designation	Type of Site	Cultural Significance	Scientific Significance	Public Significance
LT-IF1	Isolated Find	Moderate	Low	Low
LT-IF2	Isolated Find	Moderate	Low	Low
LT-OS1 with PAD	Open Site with PAD	Moderate-High	Moderate	Low
LT-OS2 with PAD	Open Site with PAD	Moderate-High	Low	Low
LT-OS3	Open Site	Moderate-High	Low	Low
LT-PAD1	Potential Archaeological Deposit	Low	Unknown	Low
LT-PAD2	Potential Archaeological Deposit	Low	Unknown	Low
LT-PAD3	Potential Archaeological Deposit	Low	Unknown	Low
LT-PAD2	Potential Archaeological Deposit	Low	Unknown	Low

Site Designation	Type of Site	Cultural Significance	Scientific Significance	Public Significance
LT-PAD4	Potential Archaeological Deposit	Low	Unknown	Low
LT-PAD5	Potential Archaeological Deposit	Low	Unknown	Low
LT-ST1	Modified Tree	Moderate-High	Low	Low-Moderate
LT-ST2	Modified Tree	Moderate-High	Low	Low-Moderate
TD-IF1	Isolated Find	Moderate	Low	Low
TD-IF2	Isolated Find	Moderate	Low	Low
TD-IF3	Isolated Find	Moderate	Low	Low
TD-IF4	Isolated Find	Moderate	Low	Low
TD-IF5	Isolated Find	Moderate	Low	Low
TD-IF6	Isolated Find	Moderate	Low	Low
TD-IF7	Isolated Find	Moderate	Low	Low
TD-IF8	Isolated Find	Moderate	Low	Low
TD-IF9	Isolated Find	Moderate	Low	Low
TD-IF10	Isolated Find	Moderate	Low	Low
TD-IF11	Isolated Find	Moderate	Low	Low
TD-IF12	Isolated Find	Moderate	Low	Low
TD-IF13	Isolated Find	Moderate	Low	Low
TD-OS1	Open Site	Moderate-High	Low	Low
TD-OS2	Open Site	Moderate-High	Low	Low
TD-OS3 with PAD	Open Site with PAD	Moderate-High	Moderate	Low
TD-OS4 with PAD	Open Site with PAD	Moderate-High	Moderate	Low
TD-OS5 with PAD	Open Site with PAD	Moderate-High	Low-moderate	Low
TD-OS6	Open Site	See TD-OS20 with PAD*	See TD-OS20 with PAD	See TD-OS20 with PAD
TD-OS7	Open Site	Moderate-High	Low	Low
TD-OS8	Open Site	Moderate-High	Low	Low
TD-OS9 with PAD	Open Site with PAD	Moderate-High	Moderate	Low
TD-OS10	Open Site	Moderate-High	Low	Low
TD-OS11 with PAD	Open Site with PAD	Moderate-High	Moderate	Low
TD-OS12	Open Site	Moderate-High	Low-moderate	Low
TD-OS13	Open Site	Moderate-High	Low-moderate	Low
TD-OS14	Open Site	Moderate-High	Low-moderate	Low
TD-OS15	Open Site	See TD-OS4 with PAD*	See TD-OS4 with PAD	See TD-OS4 with PAD
TD-OS16	Open Site	Moderate-High	Low-moderate	Low
TD-OS17	Open Site	Moderate-High	Moderate	Low
TD-OS18	Open Site	Moderate-High	Low	Low
TD-OS19 with PAD	Open Site	Moderate-High	Moderate	Low
TD-OS20 with PAD	Open Site	Moderate-High	Moderate	Low
TD-ST1	Modified Tree	Moderate-High	Low	Low-Moderate
TD-ST2	Modified Tree	Moderate-High	Low	Low-Moderate

Site Designation	Type of Site	Cultural Significance	Scientific Significance	Public Significance
TD-ST3	Modified Tree	Moderate-High	Low	Low-Moderate
TD-ST4	Modified Tree	Moderate	Low	Low-Moderate
TD-ST5	Modified Tree	Moderate	Low	Low-Moderate
TD-ST6	Modified Tree	Moderate	Low	Low-Moderate
TD-ARG1	Aboriginal resource gathering site	Moderate	Low	Low-Moderate

* TD-OS15 will be recorded as part of TD-OS4 with PAD and TD-OS6 will be recorded as part of TD-OS20 with PAD.

5.2. Historic Heritage

5.2.1. Discussion

The majority of historic items recorded as part of this assessment are representative of items to be readily located across the broader region. The majority of sites are ruined farm houses and their related infrastructure (TD-HS01, TD-HS02, TD-HS-03, TD-HS04 and TD-HS06). While interesting on a local level, these sites are replicated frequently across rural Australia and none of the sites recorded here displayed features such as uniqueness or intactness and nor can they contribute greatly to our understanding of the region's history. All house sites are heavily ruined and are not obvious manifestations in the landscape. While they may hold archaeological potential, the information gained from an archaeological investigation is likely to be minimal.

Three sites are somewhat different to the house ruins mentioned above. TD-HS05 is a ruined tobacco drying barn. While more-intact examples of this item exist in the general vicinity (**Plate 4–98**), these sheds do preserve a memory of different agricultural practices to those practiced in the region today. TD-HS05 also displays local building techniques in the hand-hewn logs used in its construction.

TD-HS07 and TD-HS08 are two dry-stone walls perhaps used during military exercises in World War Two. It was impossible to determine a date of the walls by inspection and, given the terrain, this information is unlikely to be gained from archaeological investigation as the walls have been constructed on rock outcrops that preclude soil deposits which, if present, could help date the walls. Therefore their attribution to World War Two will remain conjectural. However, given the local knowledge provided by the landowner, the possibility that they date to the use of the 'Brisbane Line' during the war should not be dismissed. While these items do not manifest themselves obviously in the landscape they do have the potential to build up a picture of the life for the troops stationed in this area; especially when taken into account with other relics in the area dating to this period. As the period of the Second World War was of vital importance to the history and character of present-day Australia, these relics, no matter how seemingly insignificant, can provide concrete evidence of the military strategy employed during war-time Australia and of the lives of the men (and their families) whose task it was to defend the country from a feared invasion.

5.2.2. Assessment of significance – general principals

Significance assessment of historic sites is conducted in accordance with *NSW Heritage Act 1977* requirements and is guided by the Heritage Council of NSW manual *Assessing Heritage Significance* (Heritage Council of NSW 2001).

The significance assessment process is a three-stage process:

- Step 1: Investigate significance;

- Step 2: Assess significance; and
- Step 3: Manage significance.

Significance assessments are carried out on the basis that decisions about the future of heritage items must be informed by an understanding of these items' heritage values. Four categories of heritage value are recognised in the Australia ICOMOS *Burra Charter* (Australia ICOMOS 1999):

- Historic significance;
- Aesthetic significance;
- Scientific significance; and
- Social significance.

Under the Heritage Council of NSW guidelines (2001), these values have been adjusted to conform to seven criteria for assessment:

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);

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);

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);

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;

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);

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);

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.

Items are categorised as having Local or State level significance. The level of significance is assessed in accordance with the geographical extent of the item's value. An item of State significance is one that is important to the people of NSW whilst an item of Local significance is one that is principally important to the people of a specific Local Government Area (LGA).

In addition to a level of significance, items are assessed as having one of the following grades of significance (Heritage Office of NSW 2001):

- **Exceptional:** an item whose elements are rare or outstanding and contribute directly to its heritage value;
- **High:** an item that retains a high level of original fabric and where the significance is not reduced by alterations;

- **Moderate:** an item whose elements are not themselves of heritage value but which contribute to the overall significance of the item; contains alterations and modifications;
- **Low:** an item that is difficult to interpret and whose altered/modified elements detract from significance; or
- **Intrusive:** an item whose elements damage its heritage value.

Thus, an item may be said to hold High State significance if it satisfies one or more of the above criteria, is important to the people of NSW as a whole and retains most of its original fabric.

5.2.3. Assessment of significance of historic items

Nine Historic sites were recorded as a result of the current assessment. **Table 5–3** summarises the assessment of significance of each recorded historic site according to the seven criteria set out in **Section 5.2.2.**

Table 5-3: Assessment of significance of recorded historic sites.

Item	Criterion A	Criterion B	Criterion C	Criterion D	Criterion E	Criterion F	Criterion G
TD-HS01	no	no	no	no	no	no	no
TD-HS02	no	no	no	no	no	no	no
TD-HS03	no	no	no	no	no	no	no
TD-HS04	no	no	no	no	no	no	no
TD-HS05	no	no	no	no	**yes**	**yes**	no
TD-HS06	no	no	no	no	no	no	no
TD-HS07	**yes**	no	no	no	no	**yes**	no
TD-HS08	**yes**	no	no	no	no	**yes**	no
LT-HS01	no	no	no	no	no	no	no

As can be seen in **Table 5–3**, only TD-HS05, TD-HS07 and TD-HS08 satisfy any of the criteria set out to assess heritage significance.

TD-HS05 (ruined tobacco drying barn) satisfies Criteria E and F as it a reasonably rare feature within the region and it has the ability to inform us about past cultural practices that have vanished from the region today. Due to its relatively intact nature and because archaeological deposits are likely to exist at the site, TD-HS05 is graded as holding **high** significance at a **local** level.

TD-HS07 and OS8 (dry stone walls) satisfies Criteria A and F as it a reasonably rare feature within the region and it has the ability to inform us about the history of New South Wales. Due to its fragile nature, unremarkable manifestation (i.e. it is difficult for the lay person to find and/or interpret) and because archaeological deposits are unlikely to exist at the site, TD-HS07 is graded as holding **low** significance at a **State** level.

6 Management Options

6.1. Aboriginal Heritage

6.1.1. Likely impacts on Aboriginal heritage from The Project

Impact Avoidance

Throughout the assessment process, there have been changes made to the easement, pole and access track locations in an attempt to avoid impacts to the Aboriginal heritage sites.

The proposed alignment has been developed following consideration of environmental constraints, route options, and line design requirements, as well as on-going discussions with property owners, the community and other key stakeholders and avoidance of impacts to heritage sites was a key consideration.

It is noted that 50 Aboriginal sites were recorded with a further 11 sensitive landforms identified, however only 12 are likely to be directly impacted by the proposed works; therefore, almost 80% of the recorded sites have been avoided.

Project constraints prevent avoidance of every site and due to the nature and scale of the project, each time a change is made to the impact footprint, this may either jeopardise previously avoided sites, or shift impacts into areas not previously assessed and therefore possibly containing other constraints.

Easement survey

Table 6–1 shows the relationship between the recorded Aboriginal sites and the assessed impact arising from the proposed works of The Project. **Table 6–1** lists sites in groups that will later be used to inform the management of these sites (**Section 6.1.2**). The sites are categorised as part of Groups A–D according to the following criteria:

- **Group A** sites are likely to be directly impacted by The Project as they are located at structure locations or on access tracks that would likely be used by The Project. These sites would have to be actively managed as part of The Project;
- **Group B** sites are located within the proposed easement, or very close to its boundary, but are either spanned by the transmission line or avoided by access tracks. These sites may be inadvertently impacted by The Project and mitigative management recommendations should be formulated;
- **Group C** sites are located a distance from the easement and are unlikely to be impacted by The Project. No further management of these sites is required; and
- **Group D** sites are located on the proposed location of access tracks that are yet to be built. This allows a degree of flexibility in locating the access tracks to avoid many of these sites. Group D sites would need to be monitored and appropriate management recommended once the definite location of access tracks is known (see **Section 6.1.7**).

Table 6-1: Identified sites and Project impact (easement survey).

Site	Level of potential impact
LT-IF1	Group A
LT-IF2	Group B
LT-OS1 with PAD	Group B
LT-OS2 with PAD	Group B
LT-OS3	Group C
LT-PAD1	Group A
LT-PAD2	Group A
LT-PAD3	Group A
LT-PAD4	Group B
LT-PAD5	Group C
LT-ST1	Group C
LT-ST2	Group C
TD-IF1	Group B
TD-IF2	Group B
TD-IF3	Group C
TD-IF4	Group C
TD-IF5	Group C
TD-IF6	Group B
TD-IF7	Group A
TD-IF8	Group B
TD-IF9	Group A
TD-OS1	Group D
TD-OS2	Group B
TD-OS3 with PAD	Group C
TD-OS4 with PAD	Group D
TD-OS5 with PAD	Group D
TD-OS6	see TD-OS20 (**Table 6–2**)
TD-OS7	Group A
TD-OS8	Group C
TD-OS9 with PAD	Group A
TD-OS10	Group D
TD-OS11 with PAD	Group D
TD-OS12	Group D
TD-OS13	Group A
TD-ST1	Group C
TD-ST2	Group A
TD-ST3	Group A
TD-ST4	Group C
TD-ST5	Group B
TD-ST6	Group B
TD-ARG1	Group C

Impacts to heritage potentially present within the sections of the easement that have not been surveyed are at this point unknown. Once property access issues are resolved, potential impacts at these structure locations on these easement sections may be ground-truthed and further impact

assessment of these areas may occur preconstruction using both desktop and/or field investigations in partnership with the Aboriginal community.

Access tracks survey

Potentially all sites recorded during the access tracks surveys could be impacted by the placement of the access track in their vicinity. However, this impact has more flexibility than those listed above and it is the author's understanding that the Proponent would endeavour to avoid, where possible, most of the sites in the field. In reality this would mean micro-managing the placement of the access track in the field so as to avoid impact to heritage sites. **Table 6–2** notes the potential impacts to the sites recorded during the access tracks surveys. Here it is assumed that the access tracks would be placed in their most obvious/currently assessed location that would intersect with the site, or, such as in the case of TD-OS18 or TD-OS19, the site spans a farm track that would probably be utilised as an access track. However, as noted above, it is expected that many of the sites may be avoided by careful placement of the access tracks in the field.

Table 6-2: Identified sites and Project impact (access tracks survey).

Site Designation	Is the site within the impact footprint of The Project?
TD-OS14	Group D
TD-OS15	see TD-OS4 (**Table 6–1**)
TD-OS16	Group D
TD-OS17	Group D
TD-OS18	Group D
TD-OS19	Group D
TD-OS20	Group D
TD-IF10	Group D
TD-IF11	Group D
TD-IF12	Group D
TD-IF13	Group C

Impacts to heritage potentially present within the access tracks that have not been surveyed are at this point unknown. Once property access issues are resolved, potential impacts along these tracks may be ground-truthed and further impact assessment of these areas may occur preconstruction using both desktop and/or field investigations in partnership with the Aboriginal community.

6.1.2. Management Options

Appropriate management of cultural heritage items is primarily determined on the basis of their assessed significance as well as the likely impacts of the proposed development. **Section 5.1.3** describes the significance of the recorded sites from a cultural, scientific and public-interest perspective, while **Section 6.1.1** lists the recorded sites that would be impacted by the project impacts known to date. The following management options are based on general principles, in terms of best practice and desired outcomes.

> **Option 1:** Avoid impact by altering the development proposal or designing around the locations of known sites. If this can be done, then a suitable curtilage around the recorded sites must be determined so as to ensure their protection both during the short term construction phase of development and in the long term use of the area. Specific mitigative measures may be designed to minimise potential adverse impacts. If plans are altered, care must be taken to ensure that sites previously assessed as not impacted, remain so. This may be facilitated where necessary through the fencing off of sites during construction so as to minimise inadvertent impacts.
>
> **Option 2:** If impact is unavoidable: Under Part 3A of the EP & A Act, which the Dumaresq to Lismore project is to be assessed under, the AHIPs[12] that are required for impacts to Aboriginal heritage under the NP&W Act, are not applicable. Instead, a Statement of Commitments (SoC) is presented within Part 3A project applications, which then form the basis for the Minister's approval. This approval would usually contain a series of Conditions, including a requirement for the preparation of an Aboriginal Heritage Management Plan (AHMP) as part of the Construction Environment Management Plan (CEMP) for the project. These conditions include similar checks and balances as required by the NPW processes,

[12] Aboriginal Heritage Impact Permit

such as excavation programmes or site destruction mitigation development etc., however, without the requirement to obtain permits.

The AHMP would be developed in consultation with the Aboriginal stakeholders for the project and would include measures for site conservation as well as detailing methods for the management of sites to be impacted. The management would depend on many factors including the assessed significance of the sites. Sites of moderate to high significance and/or potential may require either test or salvage excavation, or more detailed recording, as part of the AHMP.

Sites of low significance may be removed/destroyed with no further archaeological assessment being required, or with an approved salvage/monitoring programme. The local Aboriginal communities may wish to collect or relocate artefacts, whether temporarily or permanently, and such issues are also required to be covered off in the AHMP.

The AHMP is to be developed in consultation with OEH and the Aboriginal community stakeholders for the project and in accordance with the *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (DEC for Department of Planning, 2005 Draft). In reference to consultation, these guidelines then relate back to the DEC 2005 *Interim Community Consultation Requirements* (ICCRs) as a guide as to how the consultation should be undertaken.

6.1.3. Management options for recorded sites and Potential Archaeological Deposits

As a result of the heritage assessment for The Project, 50 Aboriginal sites were recorded, as well as eleven sensitive archaeological landforms. For the purpose of site management in the face of potential project impacts, sites have been grouped according to the anticipated impacts as a result of the project. These management measures would provide the basis for the Statement of Commitments related to heritage. It is important to note that impact management after Project Approval would become embodied in an AHMP and that this document would be developed in consultation with the Aboriginal community stakeholders for the project and with OEH and DoP.

Of the 50 recorded sites:

- Twelve are likely to be directly impacted by the proposed works;
- Twelve require mitigative measures to ensure their protection;
- Thirteen sites are outside project impacts and do not require mitigation against inadvertent disturbance; and
- Thirteen sites are located in the vicinity of access tracks and may be impacted depending on the precise location of the access track.

The categorising of these sites into groups according to recommended management simplifies the presentation of the devised management strategies and mitigative measures.

These groups and recommendations are summarised as follows.

The following twelve sites (**Group A**) are located within the easement close to structure locations and/or already built access tracks. These sites would be directly impacted by the proposed works and would require active management in the face of potential impacts:

- LT-IF1, LT-PAD1, LT-PAD2, LT-PAD3, TD-IF7, TD-IF9, TD-OS7, TD-OS9 with PAD, TD-OS13, TD-OS20 with PAD, TD-ST2, TD-ST3.

The following twelve sites (**Group B**) are either closely adjacent to the proposed easement or an access track or are within the easement but would be spanned by the transmission line. These sites should be revisited by a qualified archaeologist and project engineer to determine that the sites are, in fact, going to be avoided and the sites fenced off/flagged to ensure no inadvertent impacts:

- LT-IF2, LT-OS1 with PAD, LT-OS2 with PAD, LT-PAD4, TD-IF1, TD-IF2, TD-IF6, TD-IF8, TD-OS2, TD-OS11 with PAD, TD-ST5, TD-ST6.

The following thirteen sites (**Group C**) are located over c. 50m from the proposed easement and do not require any management options at present:

- LT-OS3, LT-PAD5, LT-ST1, LT-ST2, TD-IF3, TD-IF4, TD-IF5, TD-IF13, TD-OS3, TD-OS8, TD-ST1, TD-ST4, TG-ARG1.

The following thirteen sites (**Group D**) are located in the vicinity of yet to be built access tracks and may be directly or inadvertently impacted by the proposed works:

- TD-IF10, TD-IF11, TDIF12, TD-OS1, TD-OS4 with PAD, TD-OS5 with PAD, TD-OS10, TD-OS12, TD-OS14, TD-OS16, TD-OS17, TD-OS18, TD-OS19 with PAD.

6.1.4. Management options for Group A sites

12 sites: LT-IF1, LT-PAD1, LT-PAD2, LT-PAD3, TD-IF7, TD-IF9, TD-OS7, TD-OS9 with PAD, TD-OS13, TD-OS20 with PAD, TD-ST2, TD-ST3.

The sites of **Group A** are located within the easement close to structure locations, or on already built access tracks and require active management in the face of potential impacts. This group can be further subdivided into three sub-groups in terms of the management currently proposed. It is important to note that the management documented here is based on impacts as they are currently known. If there is scope for sites to be managed more conservatively or avoided completely, i.e. by moving access tracks or intermediate pole locations, then the management measures should be adjusted to reflect the lessened impact. It is envisaged that this method of active management should be achievable through the development of the AHMP, with Aboriginal community input, and the translation of this into the CEMP, the latter of which is a 'live' document and able to be updated as minor project details change. The fate of any collected/salvaged Aboriginal objects will also be addressed in the project AHMP, including the requirements for any Care and Control permits.

Three types of management are proposed for Group A sites as follows:

<u>Sub-Group A1: Artefact Collection</u>

4 sites: LT-IF1, LT-PAD2, TD-IF7, TD-IF9.

The collection/relocation of artefacts is proposed at four locations (**Table 6–3**). If collection is opted for by the Aboriginal community during the AHMP development then a Care and Control permit would be provided to the group that wishes to hold the artefacts. If no group wishes to keep these items, then they may be relocated to the Australian Museum, a nearby location agreed on by the registered stakeholders or reburied outside the zone of impact. The fate of these artefacts should be advised to OEH in writing through forwarding an Aboriginal Site Impact Record form (ASIR) so that site information on the OEH AHIMS may be updated.

Table 6-3: Management for sub-group A1 sites – Collection.

Site	Reason for action	Action required
LT-IF1	Located in the middle of the easement between structure E125 and structure E126 with potential impact from construction and/or maintenance access. As the access track exists, and its location is known, this site is in sub-group A1 rather than subgroup D1. See **Appendix 4**, **Heritage 23**.	As LT-IF1 is located on a proposed access track and is an isolated artefact, it should be removed from impact to a safe place mutually agreed to by the Registered Stakeholders. This consultation should form part of the AHMP.
LT-PAD2	Located on an existing access track between structure E96 and E97. See **Appendix 4**, **Heritage 21**.	This site is on an existing access track that is shown as needing low ground surface disturbance. If this is the case, the area should be reinspected and any surface artefacts (should any be present) recorded and collected. Should ground disturbing works be required in the area of LT-PAD2, then appropriate management would include a limited salvage excavation within the impact footprint.
TD-IF7	Located in the immediate vicinity of structure W116. See **Appendix 4**, **Heritage 7**.	As TD-IF7 is located at the site of structure W116 and is an isolated artefact, it should be removed from impact to a safe place mutually agreed to by the Registered Stakeholders. This consultation should form part of the AHMP.
TD-IF9	Located on the access track and creek crossing between structure W226 and structure W227. As the site is close to a creek crossing where less flexibility of access track placement is possible, this site is in sub-group A1 rather than subgroup D1. See **Appendix 4**, **Heritage 15**.	As TD-IF9 is located on a proposed access track and is an isolated artefact, it should be removed from impact to a safe place mutually agreed to by the Registered Stakeholders. This consultation should form part of the AHMP.

Sub-Group A2: Salvage Excavation

Six sites: LT-PAD1, LT-PAD3, TD-OS7, TD-OS9 with PAD, TD-OS13, TD-OS20 with PAD.

Salvage excavations are proposed at six locations along the transmission line easement (**Table 6–4**). These locations have all been assessed as having the potential to bear intact archaeological deposits. An indication of the number of pits and their potential depth is provided within this table. The number of pits relates to the extent and type of impact. The likely 4–8 pits in **Table 6–4** are based on the nature of the footing excavations required and the possible need for construction areas and/or earth straps. The number of pits would need to be refined at an individual site level based on the impacts at each structure. Certainly impacts should be minimised in any way feasible at each of these sites.

Pit depth, the density of material recovered, the discovery of *in situ* features etc. may all impact on the time required for the excavations at each location. Hence a degree of flexibility is required in terms of planning. A written report would be required at the completion of salvage works to place the excavated material into a regional archaeological context.

All salvage and recording works should be undertaken prior to the commencement of construction and would require the impact footprints to be clearly marked.

Table 6-4: Management for sub-group A2 sites – Salvage Excavation.

Site	Reason for action	Action required
LT-PAD1	Located very close to proposed structure AP51. See **Appendix 4**, **Heritage 23**.	Salvage excavation in direct impact footprint. 4–8 1m x 1m pits depending on the size of the impact footprint.
LT-PAD3	Located very close to proposed structure E25. See **Appendix 4**, **Heritage 18**.	Salvage excavation in direct impact footprint. 4–8 1m x 1m pits depending on the size of the impact footprint.
TD-OS7	Located very close to structure W52 and within the easement. See **Appendix 4**, **Heritage 3**.	Salvage excavation in direct impact footprint. 4–8 1m x 1m pits depending on the size of the impact footprint.
TD-OS9 with PAD	Located very close to structure W80. Site area is also impacted by the access track to structure W81. See **Appendix 4**, **Heritage 5**.	Salvage excavation in direct impact footprint of the structure and access track. 4–8 1m x 1m pits depending on the size of the impact footprint. The collection of surface artefacts where visible in the general area of W80 and the access track to W81 should be considered given the likelihood of general disturbance from vehicles across the area.
TD-OS13	Located very close to structure W138 the access track to W138. The site is located within the easement. See **Appendix 4**, **Heritage 8**.	Salvage excavation in direct impact footprint of structure and access track. 4–8 1m x 1m pits, number depending on size of impact footprint.
TD-OS20 with PAD (incorporating TD-OS6)	Located very close to structure W51 and the access track to structure W52. See **Appendix 4**, **Heritage 3**.	Salvage excavation in direct impact footprint of structure W51. 4–8 1m x 1m pits, number depending on size of impact footprint. Salvage excavation on either side of creek crossing between structure W51 and structure W52. 4–8 1m x 1m pits, number depending on size of impact footprint.

Once salvage excavations are complete, additional mitigation measures (fencing and inductions) may then be required at these sites to ensure that construction crews remain within the assessed and salvaged areas and that extant portions of these sites are protected.

Sub-Group A3: Modified tree mitigation

Two sites: TD-ST2, TD-ST3.

Two sites are likely to be impacted by vegetation clearing within the easement (**Table 6–5**). These sites would need to be reinspected by both a qualified archaeologist and project engineer to determine if the sites can be avoided by The Project (i.e. the trees can be left standing). If the sites can be avoided, they should be temporarily fenced and signed before vegetation clearing takes place within the easement. If they are not able to be avoided and the trees need to be cut, discussions could take place as to appropriate management such as: re-recording the site and allowing its destruction; lopping the tree but leaving the tree with scar *in situ* or cutting the tree and removing it to a safe location. The final selection of the most appropriate management options can occur within the development of the AHMP.

Table 6-5: Management for sub-group A3 sites – Mitigation measures.

Site	Reason for action	Action required
TD-ST2	Located on the edge of the northern boundary of the easement close to AP15. In danger of being impacted as part of vegetation clearing within easement. See **Appendix 4**, **Heritage 5**.	TD-ST2 would have to be inspected prior to vegetation clearing within the easement to ascertain if the site can be avoided. If it can be avoided, the site should be fenced during transmission line construction. If the site cannot be avoided, then appropriate management recommendations should be included in the AHMP. These could include cutting and moving the tree to a safe location or, if possible, lopping the tree above scar height and allowing the remainder of the tree to stay *in situ*.
TD-ST3	Located in a gully between structure W121 and structure W122. In danger of being impacted as part of vegetation clearing within easement. See **Appendix 4**, **Heritage 7**.	TD-ST3 would have to be inspected prior to vegetation clearing within the easement to ascertain if the site can be avoided. If it can be avoided, the site should be fenced during transmission line construction. If the site cannot be avoided, then appropriate management recommendations should be included in the AHMP. These could include cutting and moving the tree to a safe location or, if possible, lopping the tree above scar height and allowing the remainder of the tree to stay *in situ*.

6.1.5. Management options for Group B sites

12 sites: LT-IF2, LT-OS1 with PAD, LT-OS2 with PAD, LT-PAD4, TD-IF1, TD-IF2, TD-IF6, TD-IF8, TD-OS2, TD-OS11 with PAD, TD-ST5, TD-ST6.

Sites comprising Group B incur no direct impact from the proposed works. These sites are either located within the easement but would be spanned by the transmission line (LT-IF2, LT-OS1 with PAD, LT-OS2 with PAD, LT-PAD4, TD-OS11 with PAD, TD-IF1, TD-IF2, TD-OS2, TD-IF6, TD-IF8) or they are located within close proximity to the easement (TD-ST5, TD-ST6). However, their close proximity to the area of direct impact may mean that they are inadvertently damaged through vehicle movements or tree clearing that goes beyond the easement boundaries. Therefore the following management recommendations are made for Group B sites (**Table 6–6**):

- the Proponent should clearly identify all Group B sites on site plans and maps;
- all workers in the vicinity of these sites should be made aware of the site's location and informed that the sites are to remain undisturbed;
- sites LT-IF2, LT-OS1 with PAD, LT-OS2 with PAD, LT-PAD4, TD-IF1, TD-IF2, TD-IF6, TD-IF8, TD-OS2, TD-OS11 with PAD should be revisited by a qualified archaeologist and project engineer prior to any disturbance within the easement to ascertain if, indeed, the sites are still being avoided and, if they are being avoided, then the site boundaries should be clearly fenced for the duration of the transmission line construction works; and
- the boundary of the easement in the vicinity of TD-ST5 and TD-ST6 should be temporarily fenced in the vicinity of these sites during the construction phase to ensure that all personnel and vehicles remain within the assessed easement.

Table 6-6: Management for sub-group B sites – Mitigation measures.

Site	Reason for action	Action required
LT-IF2	Located in the middle of the easement. Spanned by transmission line between E122 and structure E123. See **Appendix 4, Heritage 23**.	The location of LT-IF2 should be revisited by a qualified archaeologist prior to any disturbance within the easement to ascertain if, indeed, the site is still being avoided and, if it is being avoided, then the artefact should be clearly marked with a stake and sign for the duration of the transmission line construction works. Impact to the site would then be avoided. If the archaeologist determines that impact will in fact occur to the site due to the placement of structures and/or access tracks, then appropriate management recommendations could be formulated at that point.
LT-OS1 with PAD	Located on the southern edge of the easement. Spanned by transmission line between AP50 and structure E114. See **Appendix 4, Heritage 22**.	LT-OS1 with PAD should be revisited by a qualified archaeologist prior to any disturbance within the easement to ascertain if, indeed, the site is still being avoided and, if it is being avoided, then the site boundaries should be clearly fenced for the duration of the transmission line construction works. Impact to the site would then be avoided. If the archaeologist determines that impact will in fact occur to the site due to the placement of structures and/or access tracks, then appropriate management recommendations could be formulated at that point.
LT-OS2 with PAD	Located on the southern edge of the easement. Spanned by transmission line between structure E3 and structure E4. See **Appendix 4, Heritage 16**.	LT-OS2 with PAD should be revisited by a qualified archaeologist prior to any disturbance within the easement to ascertain if, indeed, the site is still being avoided and, if it is being avoided, then the site boundaries should be clearly fenced for the duration of the transmission line construction works. Impact to the site would then be avoided. If the archaeologist determines that impact will in fact occur to the site due to the placement of structures and/or access tracks, then appropriate management recommendations could be formulated at that point.
LT-PAD4	Located on the southern edge of the easement. Spanned by transmission line between structure E1 and structure E2. See **Appendix 4, Heritage 16**.	LT-PAD4 should be revisited by a qualified archaeologist prior to any disturbance within the easement to ascertain if, indeed, the site is still being avoided and, if it is being avoided, then the site boundaries should be clearly fenced for the duration of the transmission line construction works. Impact to the site would then be avoided. If the archaeologist determines that impact will in fact occur to the site due to the placement of structures and/or access tracks, then appropriate management recommendations could be formulated at that point.
TD-IF1	Located in the middle of the easement. Spanned by transmission line between structure W52 and structure W53. See **Appendix 4, Heritage 3**.	The location of TD-IF1 should be revisited by a qualified archaeologist prior to any disturbance within the easement to ascertain if, indeed, the site is still being avoided and, if it is being avoided, then the artefact should be clearly marked with a stake and sign for the duration of the transmission line construction works. Impact to the site would then be avoided. If the archaeologist determines that impact will in fact occur to the site due to the placement of structures and/or access tracks, then appropriate management recommendations could be formulated at that point.

Site	Reason for action	Action required
TD-IF2	Located in the middle of the easement. Spanned by transmission line between structure W52 and structure W53. See **Appendix 4, Heritage 3**.	The location of TD-IF2 should be revisited by a qualified archaeologist prior to any disturbance within the easement to ascertain if, indeed, the site is still being avoided and, if it is being avoided, then the artefact should be clearly marked with a stake and sign for the duration of the transmission line construction works. Impact to the site would then be avoided. If the archaeologist determines that impact will in fact occur to the site due to the placement of structures and/or access tracks, then appropriate management recommendations could be formulated at that point.
TD-IF6	Located in the middle of the easement. Spanned by transmission line between structure AP16 and structure W94. See **Appendix 4, Heritage 6**.	The location of TD-IF6 should be revisited by a qualified archaeologist prior to any disturbance within the easement to ascertain if, indeed, the site is still being avoided and, if it is being avoided, then the artefact should be clearly marked with a stake and sign for the duration of the transmission line construction works. Impact to the site would then be avoided. If the archaeologist determines that impact will in fact occur to the site due to the placement of structures and/or access tracks, then appropriate management recommendations could be formulated at that point.
TD-IF8	Located in the middle of the easement. Spanned by transmission line between structure W163 and structure W164. See **Appendix 4, Heritage 10**.	The location of TD-IF8 should be revisited by a qualified archaeologist prior to any disturbance within the easement to ascertain if, indeed, the site is still being avoided and, if it is being avoided, then the artefact should be clearly marked with a stake and sign for the duration of the transmission line construction works. Impact to the site would then be avoided. If the archaeologist determines that impact will in fact occur to the site due to the placement of structures and/or access tracks, then appropriate management recommendations could be formulated at that point.
TD-OS2	Located in the middle of the easement. Spanned by transmission line between structure W25 and structure W26. See **Appendix 4, Heritage 2**.	TD-OS2 should be revisited by a qualified archaeologist prior to any disturbance within the easement to ascertain if, indeed, the site is still being avoided and, if it is being avoided, then the site boundaries should be clearly fenced for the duration of the transmission line construction works. Impact to the site would then be avoided. If the archaeologist determines that impact will in fact occur to the site due to the placement of structures and/or access tracks, then appropriate management recommendations could be formulated at that point.
TD-OS11 with PAD	Located in the middle of the easement. Spanned by transmission line between structure W97 and AP17. See **Appendix 4, Heritage 6**.	TD-OS11 with PAD should be revisited by a qualified archaeologist prior to any disturbance within the easement to ascertain if, indeed, the site is still being avoided and, if it is being avoided, then the site boundaries should be clearly fenced for the duration of the transmission line construction works. Impact to the site would then be avoided. If the archaeologist determines that impact will in fact occur to the site due to the placement of structures and/or access tracks, then appropriate management recommendations could be formulated at that point.
TD-ST5	Located just beyond the western boundary of the easement near structure W177. See **Appendix 4, Heritage 12**.	The western boundary of the easement in the vicinity W177 should be temporarily fenced during the construction phase to ensure that all personnel and vehicles remain within the assessed easement. Impact will be avoided.
TD-ST6	Located just beyond the eastern boundary of the easement near structure W177. See **Appendix 4, Heritage 12**.	The eastern boundary of the easement in the vicinity W177 should be temporarily fenced during the construction phase to ensure that all personnel and vehicles remain within the assessed easement. Impact will be avoided.

6.1.6. Management options for Group C sites

13 sites: LT-OS3, LT-PAD5, LT-ST1, LT-ST2, TD-IF3, TD-IF4, TD-IF5, TD-IF13, TD-OS3, TD-OS8, TD-ST1, TD-ST4, TG-ARG1.

Group C sites are located at least 50m from the boundary of the proposed easement. Therefore no further management of these sites is required regarding the construction and maintenance of the easement (**Table 6–7**).

Table 6-7: Management for sub-group C sites.

Site	Location	Action required
LT-OS3	Located east of the easement in the vicinity of structure E18. See **Appendix 4, Heritage 17**.	As the site is located outside of the likely impact footprint of The Project, no action is required. Site location should be taken into consideration when designing future works associated with the transmission line to ensure that the site is not impacted.
LT-PAD5	This site is within the existing 132kV easement but west of the point where the proposed Tenterfield Substation takes the line to the north. Hence it is not plotted on the **Appendix 4** figures.	As the site is located outside of the likely impact footprint of The Project, no action is required.
LT-ST1	This site is located well away from the transmission line and does not appear on the maps in **Appendix 4**.	As the site is located outside of the likely impact footprint of The Project, no action is required.
LT-ST2	This site is located well away from the transmission line and does not appear on the maps in **Appendix 4**.	As the site is located outside of the likely impact footprint of The Project, no action is required.
TD-IF3	Located east of the easement between structure W53 and structure W54. See **Appendix 4, Heritage 4**.	As the site is located outside of the likely impact footprint of The Project, no action is required. Site location should be taken into consideration when designing future works associated with the transmission line to ensure that the site is not impacted.
TD-IF4	Located east of the easement in the vicinity of structure W55. See **Appendix 4, Heritage 4**.	As the site is located outside of the likely impact footprint of The Project, no action is required. Site location should be taken into consideration when designing future works associated with the transmission line to ensure that the site is not impacted.
TD-IF5	Located east of the easement in the vicinity of structure W55. See **Appendix 4, Heritage 4**.	As the site is located outside of the likely impact footprint of The Project, no action is required. Site location should be taken into consideration when designing future works associated with the transmission line to ensure that the site is not impacted.
TD-IF13	Located adjacent to the Washpool Fire Trail that may be used to access structure E219. See **Appendix 4, Heritage 14**.	As the site is located outside of the likely impact footprint of The Project, no action is required. Site location should be taken into consideration when designing future works associated with the transmission line to ensure that the site is not impacted.
TD-OS3	Located north of the easement between structure W36 and structure W37. See **Appendix 4, Heritage 3**.	As the site is located outside of the likely impact footprint of The Project, no action is required. Site location should be taken into consideration when designing future works associated with the transmission line to ensure that the site is not impacted.
TD-OS5 with PAD	Located north of the easement between structure W36 and structure W37. See **Appendix 4, Heritage 3**.	As the site is located outside of the likely impact footprint of The Project, no action is required. Site location should be taken into consideration when designing future works associated with the transmission line to ensure that the site is not impacted.

Site	Location	Action required
TD-OS8	Located north of the easement in the vicinity of structure W59. See **Appendix 4, Heritage 4**.	As the site is located outside of the likely impact footprint of The Project, no action is required. Site location should be taken into consideration when designing future works associated with the transmission line to ensure that the site is not impacted.
TD-ST1	Located north of the easement in the vicinity of structure W38. See **Appendix 4, Heritage 3**.	As the site is located outside of the likely impact footprint of The Project, no action is required. Site location should be taken into consideration when designing future works associated with the transmission line to ensure that the site is not impacted.
TD-ST4	Located east of the easement in the vicinity of structure W169. See **Appendix 4, Heritage 11**.	As the site is located outside of the likely impact footprint of The Project, no action is required. Site location should be taken into consideration when designing future works associated with the transmission line to ensure that the site is not impacted.
TG-ARG1	Located north of the easement in the vicinity of structure W38. See **Appendix 4, Heritage 3**.	As the site is located outside of the likely impact footprint of The Project, no action is required. Site location should be taken into consideration when designing future works associated with the transmission line to ensure that the site is not impacted.

6.1.7. Management options for Group D sites

13 sites: TD-IF10, TD-IF11, TDIF12, TD-OS1, TD-OS4 with PAD, TD-OS5 with PAD, TD-OS10, TD-OS12, TD-OS14, TD-OS16, TD-OS17, TD-OS18, TD-OS19 with PAD.

These sites potentially could be impacted directly or inadvertently by the placement of the access track. In most cases, the placement of the access track 100m from the designed location would avoid a site altogether.

Therefore, with regards to Group D sites, the most prudent management option is that these sites are revisited by a qualified archaeologist, a representative of the Aboriginal community stakeholder groups and a project engineer at a time when the exact location of the access tracks is known. This micromanaging of the final access track placement could be done as part of the other site visits recommended for the AHMP.

While the general location of access tracks is reasonably certain at present, their design remains flexible which should be taken advantage of to avoid any impacts where possible.

If the sites cannot be avoided by the access tracks, the following management strategies are recommended.

<u>Group D1: Sites requiring a surface collection of artefacts</u>

6 sites: TD-IF10, TD-IF11, TD-IF12, TD-OS1, TD-OS10, TD-OS18

Due to the disturbed nature of the site (TD-OS18), low scientific significance (TD-OS1, TD-OS10) or the fact that there are no associated archaeological deposits (TD-IF10, TD-IF11, TDIF12), artefacts associated with these sites should be collected to avoid damage (**Table 6–8**). If collection is opted for by the Aboriginal community during the AHMP development then a Care and Control permit would be provided to the group that wishes to hold the artefacts. If no group wishes to keep these items, then they may be relocated to the Australian Museum, a nearby location agreed on by the registered

stakeholders or reburied outside the zone of impact. The fate of these artefacts should be advised to OEH in writing so that site information on the OEH AHIMS may be updated.

Table 6-8: Management for sub-group D1 sites – surface artefact collection.

Site	Reason for action	Action required
TD-IF10	Located on the access track to structure W32. See **Appendix 4, Heritage 2**.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of the site. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site has been assessed as holding low scientific significance, a collection of the artefact should take place. The artefact collected should be recorded in a brief report to preserve the findings.
TD-IF11	Located on the access track to structure W32. See **Appendix 4, Heritage 2**.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of the site. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site has been assessed as holding low scientific significance, a collection of the artefact should take place. The artefact collected should be recorded in a brief report to preserve the findings.
TD-IF12	Located on the access track to structure W164. See **Appendix 4, Heritage 10**.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of the site. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site has been assessed as holding low scientific significance, a collection of the artefact should take place. The artefact collected should be recorded in a brief report to preserve the findings.
TD-OS1	Located on the access track to structure W25. See **Appendix 4, Heritage 2**.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of structure W25. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site has been assessed as holding low scientific significance, a recording and collection of surface artefacts should take place. The artefacts collected should be recorded in a report to preserve the findings.
TD-OS10	Located on the access track to structure W90. See **Appendix 4, Heritage 5**.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of structure W90. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site has been assessed as holding low scientific significance, a recording and collection of surface artefacts should take place. The artefacts collected should be recorded in a report to preserve the findings.

Site	Reason for action	Action required
TD-OS18	Located on the access track to structure W43. See **Appendix 4, Heritage 3**.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of structure W90. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site has been assessed as holding low scientific significance, a recording and collection of surface artefacts should take place. The artefacts collected should be recorded in a report to preserve the findings.

Group D2: Sites requiring salvage excavation

7 sites: LT-PAD2, TD-OS4 with PAD, TD-OS12, TD-OS14, TD-OS16, TD-OS17, TD-OS19 with PAD

If the following sites are not able to be avoided by The Project, salvage excavations are proposed at seven locations along various access tracks (**Table 6–9**). These locations have all been assessed as having the potential to bear intact archaeological deposits. An indication of the number of pits and their potential depth is provided within this table. The number of pits relates to the extent and type of impact.

Table 6-9: Management for sub-group D2 sites – Salvage excavation.

Site	Reason for action	Action required
LT-PAD2	Located across the access track between structure E96 and structure E97. See **Appendix 4, Heritage 21**.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of structures E96 and E97. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site is expected to have subsurface deposits, limited salvage excavation (4–8 1m x 1m pits) should take place in the direct impact footprint of the access track to determine the nature of these deposits. The results of the salvage excavation could inform future management recommendations.
TD-OS4 with PAD (incorporating TD-OS15)	Located across the access track to structure W14. See **Appendix 4, Heritage 1**.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of structure W14. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site is expected to have subsurface deposits, limited salvage excavation (4–8 1m x 1m pits) should take place in the direct impact footprint of the access track to determine the nature of these deposits. The results of the salvage excavation could inform future management recommendations.
TD-OS12	Located on the access track to structure W133. See **Appendix 4, Heritage 8**.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of structure W133. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site has been assessed as holding low–moderate scientific significance, limited salvage excavation (4–8 1m x 1m pits) should take place in the direct impact footprint of the access track to determine the nature of these deposits. The results of the salvage excavation could inform future management recommendations.

Site	Reason for action	Action required
TD-OS14	Located across the access track to structure W4. See **Appendix 4, Heritage 1**. Although the access track appears to avoid the site in the figures, the surveyors were told in the field that the site would be impacted by the access track.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of structure W4. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site has been assessed as holding low–moderate scientific significance, limited salvage excavation (4–8 1m x 1m pits) should take place in the direct impact footprint of the access track to determine the nature of these deposits. The results of the salvage excavation could inform future management recommendations.
TD-OS16	Located across the access track to structure W32. See **Appendix 4, Heritage 1**.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of structure W32. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site has been assessed as holding low–moderate scientific significance, limited salvage excavation (4–8 1m x 1m pits) should take place in the direct impact footprint of the access track to determine the nature of these deposits. The results of the salvage excavation could inform future management recommendations.
TD-OS17	Located across the access track to structure W37. See **Appendix 4, Heritage 2**.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of structure W37. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site has been assessed as holding moderate scientific significance, limited salvage excavation (4–8 1m x 1m pits) should take place in the direct impact footprint of the access track to determine the nature of these deposits. The results of the salvage excavation could inform future management recommendations.
TD-OS19 with PAD	Located across the access track to structure W145. See **Appendix 4, Heritage 9**.	The site should be revisited by a qualified archaeologist before any ground disturbing works take place in the vicinity of structure W145. The archaeologist should determine the precise location of the access track in relation to the site and determine if the site will be impacted. If the site can not be avoided by the access track, and as the site has been assessed as holding moderate scientific significance, limited salvage excavation (4–8 1m x 1m pits) should take place in the direct impact footprint of the access track to determine the nature of these deposits. The results of the salvage excavation could inform future management recommendations.

6.1.8. Management options for Sensitive Archaeological Landforms

SALs have been identified as areas along the proposed easement that occupied suitable landforms where poor ground surface visibility prevented a full assessment to take place. Furthermore, SALs were designated in areas where there was a high likelihood that any archaeological deposits had undergone previous disturbance, or where there were indications of shallow soils. Therefore the management options relating to SALs are less rigorous than those relating to sites and PADs.

The management options relating to all SALs (listed in **Table 4–2**) are as follows:

Option 1: Avoid locating any ground disturbing works, placement of work compounds, placement of re-fuelling areas, parking of vehicles and placement of access tracks within the identified SALs. If option 1 is followed, no further action is required.

Option 2: If avoidance is not practical,

- Design work to limit impact to the area of the SAL as much as is practical;
- The Proponent should clearly identify all SALs on site plans and maps and require that anyone who works in these areas receive a higher level of Cultural Awareness Training in their Induction (including printed information to aid the recognition of Aboriginal cultural material) and ensure that documentation exists to show that these measures were implemented in the field;
- Use only a flagged access track through the SAL to limit vehicle movement to one corridor; and
- Should Aboriginal relics be noticed, then work should cease and advice sought from the project archaeologist / OEH / DoP on how to best proceed.

6.1.9. Management options for properties yet unassessed

Areas modelled as having moderate to high archaeological sensitivity (easement survey)

The few properties, where the survey methodology designated that survey should take place but where access was not made available to the survey team, would have to be assessed when access is resolved. As these properties contain areas of archaeological potential, they may contain additional sites. Any sites identified once access is granted would be subject to the same suite of management recommendations as outlined in this report.

Areas modelled as having low archaeological sensitivity (easement survey)

According to **Section 4.4**, approximately 44.1% of the total easement area has not been assessed as it was designated in the survey methodology to hold low archaeological potential. While the results of heritage assessment confirm the applicability of the methodology (**Section 5.1.1**) in that very few sites were recorded in areas away from water, it is always possible that cultural material exists in areas that have not been assessed. Therefore the following management options should be adopted:

- all work crews during construction should be informed of the possibility of encountering items of cultural heritage during the course of their work;
- printed material should be provided to work crews to enable them to recognise the major site types that could be encountered: artefacts (open sites, isolated finds) and modified trees; and
- if any items of cultural heritage are recognised, then work should cease in the area of the find and advice sought from OEH on how best to proceed.

Areas modelled as having archaeological sensitivity (access tracks survey)

The few properties (3% of the total area), where the survey methodology designated that survey should take place but where access was not made available to the survey team, would have to be assessed when access is resolved. As these properties contain areas of archaeological potential, they may contain additional sites. Any sites identified once access is granted would be subject to the same suite of management recommendations as outlined in this report.

6.2. Historic Heritage

All recorded historic sites are either located outside the proposed easement, or on the very extremity of the easement.

Those sites recorded away from the easement (TD-HS02, TD-HS03 and TD-HS04) are beyond the impact of the proposed works and do not form part of the management recommendations set out below. However, their location should be noted and the sites should be avoided during the design of access tracks.

The management options for those sites either within the proposed easement, or in close proximity to the easement's boundary (TD-HS01, TD-HS05, TD-HS06, TD-HS07, TD-HS08 and LT-HS01) are outlined in **Table 6–10**.

Table 6-10: Management options for recorded historic sites.

Site	Management options
TD-HS01	Located adjacent to t access track to structure W36. The site should be avoided by the access track and the site temporarily fenced for the duration of the transmission line construction.
TD-HS05	Located off-easement to the south west. Fence off the boundary of the easement in the vicinity of the site and avoid.
TD-HS06	Located off-easement to the north. Fence off the boundary of the easement in the vicinity of the site and avoid.
TD-HS07	Located on the southern edge of the easement. Spanned by proposed structures. Fence off to avoid inadvertent damage. Ensure all access tracks are located on the northern side of the easement.
TD-HS08	Located on the southern edge of the easement. Spanned by proposed structures. Fence off to avoid inadvertent damage. Ensure all access tracks are located on the northern side of the easement.
LT-HS01	Located adjacent to an access track to structure E3. The site should be fenced and signed for the duration of construction and it should be avoided by the access track.

Should workers employed during the construction phase of The Project notice any further historic relics during the course of their work, work should cease in the area and the NSW Heritage Office be consulted on how to best proceed.

References

Atchison 1977 — Atchison, J. F. 1977. Prehistoric Settlement. In D. Lea, J. Pigram & L. Greenwood (Eds.) *An Atlas of New England – Vol 2 – The Commentaries.* Published by The Geography Department: University of New England, Armidale, N.S.W.

Belshaw 1978 — Belshaw, J. 1978. Population distribution and the pattern of seasonal movement in northern NSW. In I. McBryde (Ed.) *Records of Times Past*. Australian Institute of Aboriginal Studies, Canberra.

Binns and McBryde 1972 — Binns, R., McBryde, I. 1972. *A petrological analysis of ground edge artefacts from Northern New South Wales*. AIAS, Canberra.

Black 1941 — Black, L. 1941. *Burial Trees*. Robertson and Mullens, Melbourne.

Bowdler 1983 — Bowdler, S. 1983. *Aboriginal sites on the Crown timber lands of NSW*. Report to the Forestry Commission of NSW.

Campbell 1978 — Campbell, I.C. 1978. Settlers and Aborigines: The pattern of contact on the New England Tableland 1832-1860. In I. McBryde (Ed.), *Records of Times Past*. Australian Institute of Aboriginal Studies, Canberra.

Chevally 1946 — Chevally, L. 1946. *Letter to R.C. Law*. Manuscript, Clarence River Historical Society.

Collins 1994 — Collins, J.P. 1994. *Proposed rural residential subdivision at Moonee, NSW north coast: archaeological survey for Aboriginal sites*. Report to Gutteridge Haskins and Davey.

Collins 2002 — Collins, J.P. 2002. *Coffs Harbour highway planning. Sapphire to Woolgoolga. Working paper No 11, Aboriginal heritage assessment*. Report to Connell Wagner.

Connell Wagner 2006 — Connell Wagner 2006. *Dumaresq to Tenterfield 330kV Transmission Line Route Feasibility Study*. Report to TransGrid.

Creamer and Kelly 1973–74 — Creamer, H., Kelly, R. 1973–74. Preliminary information on the sites in the Tabulum area collected by Terry Crowley.

Creamer 1978 — Creamer, H 1978. Investigation of Wellington Rock Woolool Wooloolni and the proposal to declare the site an Aboriginal Place.

DEC 2005 — Department of Environment and Conservation (DEC) for the Department of Planning. 2005 Draft. *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation*.

DEC 2005 — Department of Environment and Conservation (DEC) for the Department of Planning. 2005 Draft. *Interim Community Consultation Requirements for Applicants.*

DECCW 2010 — Department of Environment, Climate Change and Water (DECCW) *Aboriginal Cultural Heritage Consultation Requirements.*

England 1976 — England, G. 1976. *The Coffs Harbour Story*. Central North Coast Newspaper Co Ltd, Coffs Harbour.

Gardiner 2007 — Gardiner, J. 2007. *Richmond Valley Council, Community Based Heritage Study*.

Haglund 1985 — Haglund, L. 1985. *Preliminary Assessment of Archaeological Potential of Proposed Transmission Line Routes Between Coffs Harbour and Grafton, NSW*. Report to TransGrid.

Halliday 2004 — Halliday, K. 2004. *A thematic history of Tenterfield Shire, Located in the New England region of NSW*.

HO and DUAP 1996 — Heritage Office and Department of Urban Affairs and Planning. *Regional Histories*.

Horton 1996 — Horton, D. 1996. *Aboriginal Australia* [cartographic material]; produced by the Australian Surveying and Land Information Group.

Kelly 1987 — Kelly, G. 1987. Memoirs. In *Introduction and History of Karangi*. Upper Orara-Karangi Centenary Association, Karangi.

Koettig 1985 — Koettig, M. 1985. *Assessment of Aboriginal sites in the Dubbo City area*. Report to Dubbo City Council.

Lampert 1971 — Lampert, R. J. 1971. Coastal aborigines of southeastern Australia in J. Mulvaney and J. Golsen (Eds,) *Aboriginal man and environment, Australia*. Australian National University Press, Canberra: 114–132.

Lismore 2009 — Lismore City Council Website. Accessed 2009.

Long 2003 — Long, A. 2003. Scarred R=Trees: An Identification and Recording Manual. Report to the Dept of Aboriginal Affairs, Victoria.

Mathews 1896 — Mathews, R.H. 1896. *The keeparra ceremony of Initiation*. Anthropological Institute of Great Britain and Ireland.

Maitland Mercury — Maitland Mercury & Hunter River General Advertiser. 1843–1893. Sat 19th August 1848.

McBryde 1974 — McBryde, I. 1974. *Aboriginal Prehistory in New England - An Archaeological Survey of Northeastern New South Wales*, Sydney University Press.

McDonald 1990 — McDonald Cultural Heritage Management PTY LTD. 1990. *Sydney Basin Aboriginal Heritage Study: Engravings and shelter art sites. Stage 3, Volume 1*. Report to NSW NPWS.

McDonald 1997 — McDonald Cultural Heritage Management PTY LTD. 1997. *Interim Heritage Management report: ADI Site St Marys. Volume 1.* Report to Lend Lease.

McDonald 1999 — McDonald Cultural Heritage Management PTY LTD. 1999. *Aboriginal and European Heritage Assessment: the proposed Gerringong-Gerroa Sewage Treatment Plant and associated sewage pumping stations and pipeline routes Gerringong and Gerroa, NSW*.

NPWS 1997 — National and Parks and Wildlife Service 1997 *Aboriginal cultural heritage standards & guidelines kit*.

Navin Officer 1990 — Navin Officer Heritage Consultants. 1990. *Archaeological Survey of Proposed 330Kv Transmission Line from Coffs Harbour to Koolkhan*. Report for the Electricity Commission of NSW.

Navin Officer 1998 — Navin Officer Heritage Consultants. 1998. *Pacific Highway Bonville Deviation Environmental Impact Statement – Aboriginal Archaeological Component*. Report to Rust PPK.

OzArk 2006 — OzArk Environmental and Heritage Management PTY LTD. 2006. *Aboriginal Heritage Assessment: Report on Selected impact locations for upgrade of electricity Transmission line No. 966 (Armidale to Koolkhan).* Report to TransGrid.

OzArk 2007 — OzArk Environmental and Heritage Management PTY LTD. 2007. *Ecological/Aboriginal Heritage Assessment: Proposed South Boambee 132kV Electricity Transmission Line Tee, Coffs Harbour, NSW*. Report to TransGrid.

OzArk 2009a — OzArk Environmental and Heritage Management PTY LTD. 2009. *Aboriginal Heritage Assessment: Uprating of the Armidale to Coffs Harbour 132kV Transmission Line No. 96C*. Report to TransGrid.

OzArk 2009b — OzArk Environmental and Heritage Management PTY LTD. 2009. *Indigenous & Non-Indigenous Heritage Review: Identification of Constraints and Preferred Corridor Assessment*. *Dumaresq–Lismore 330kV electricity Transmission line.* Report to URS Australia.

Paton 1995 — Paton, R. 1995. *An archaeological investigation of a proposed transmission line between Armidale NSW and Qld*. Report to TransGrid.

Pearson 1981 — Pearson, M. 1981. *Seen through different eyes: changing land use and settlement patterns in the Upper Macquarie River region of NSW from prehistoric times to 1860*. PhD Thesis, Department of Prehistory and Anthropology, Australian National University, Canberra.

Piper 1997 — Piper, A. 1997. *An Archaeological Survey at Survey Street, Lennox Heads, NSW*. Report prepared for Jim Glazebrook & Associates, Murwillumbah, NSW.

Quinlan 1985 — Quinlan, E. 1985. AHIMS site card information.

Rich and Rosen 1991 — Rich, E., Rosen, S.1991. *Preliminary Archaeological Survey for Mole River Dam Options*.

Secomb 1986 — Secomb, M. 1986. *Red Gold to Green Grass. The Early History of the Upper Orara Valley*. Upper Orara-Karangi Centenary Association, Karangi.

Starr 1978 — Starr, J. 1978. *Pioneering New England*. Rigby, Adelaide.

Tenterfield 2005 — Tenterfield Shire Council. 2005. *State of the Environment Report*.

Tindale 1974 — Tindale, N.B. 1974. *Aboriginal Tribes of Australia*. University of California Press, Berkeley.

URS — URS Pty Ltd. *Preliminary Environmental Assessment: Dumaresq Substation to Lismore 330 kV Transmission Line and Associated Works*. Report to TransGrid.

Wyndham 1889 — Wyndham, W.T. 1889. *The Aborigines of Australia (Ucumble* (sic) *Tribe of western New England*. *The Royal Society of NSW*. Vol.XXIII.

Plates

Plate 2–1: Landscape at the Lismore end of Study Area East. Note the near total absence of ground surface visibility.

Plate 2–2: Landscape near the Clarence River. Note the easement cutting through regenerating woodland in the distance.

Plate 2–3: Example of the landform and levels of disturbance around structure E79 looking west.

Plate 2–4: Example of typical disturbance within the State Forest around Drake. The landform consisted of very steep hills with all trees on either side commercially harvested within the past 10–20 years.

Plate 2–5: Typical landscape to the east of Gibraltar Rd.

Plate 2–6: A pocket of regenerating vegetation to the west of Mt Lindsay Rd.

Plate 2–7: Steep, undulating landforms typical in the area from Reedy Creek Rd to the Mole River.

Plate 2–8: An example of the typical environment in the western portion of Study Area West where much of the terrain was cleared and grazed.

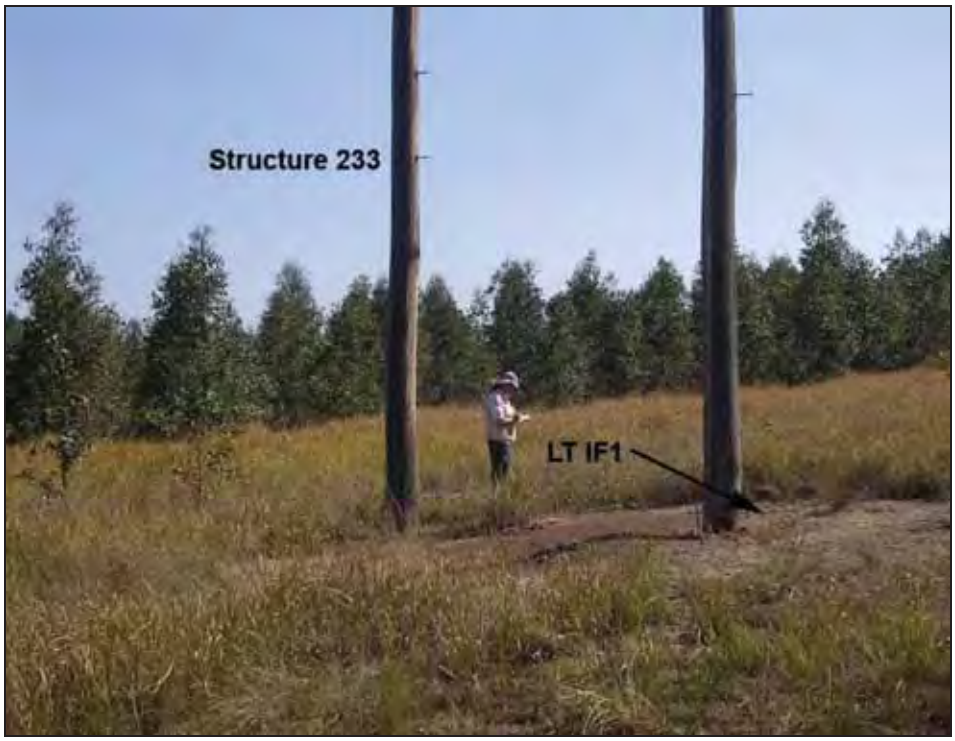


Plate 4–9: **LT-IF1**: Location of site.

Plate 4–10: **LT-IF1**: Detail of artefact. Ventral view.

Plate 4–11: **LT-IF2**: Location of site.

Plate 4–12: **LT-IF2**: Detail of artefact. Dorsal view.

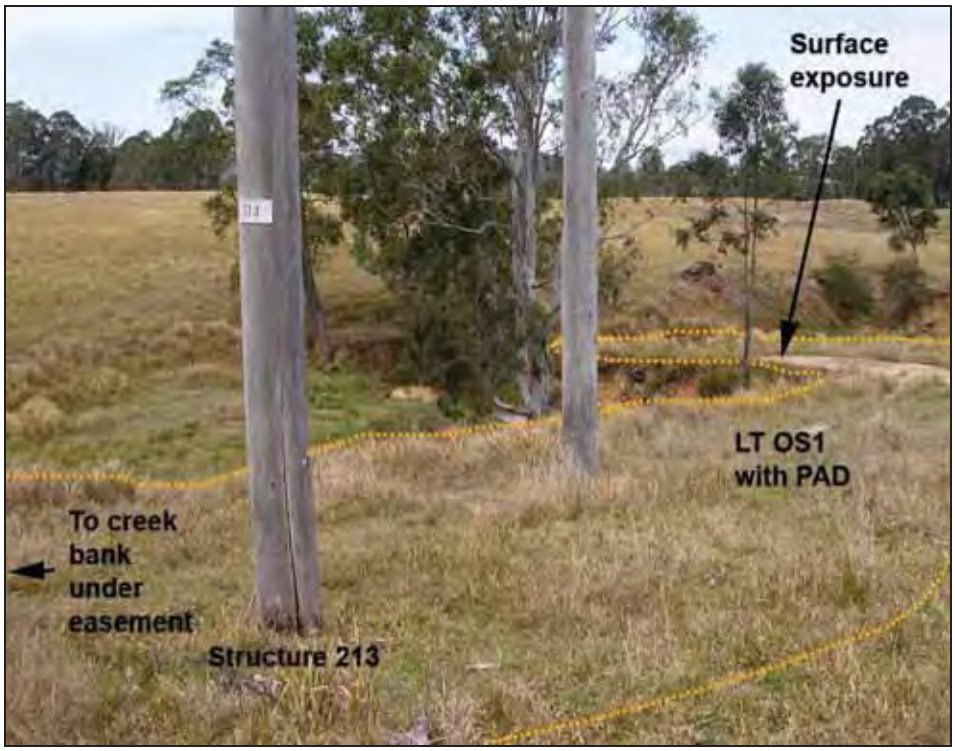


Plate 4–13: **LT-OS1 with PAD**. Location of site.

Plate 4–14: **LT-OS1 with PAD**: Detail of the large ant-hill that has exposed the artefacts at LT-OS1.

Plate 4–15: **LT-OS1 with PAD**: Selection of artefacts from the site. Clockwise from top left: Milk quartz bladelet core, artefacts *in situ* showing the size and density of artefacts at the site, stone anvil, selection of artefacts, artefacts *in situ* showing the size and density of artefacts at the site, milk quartz blade.

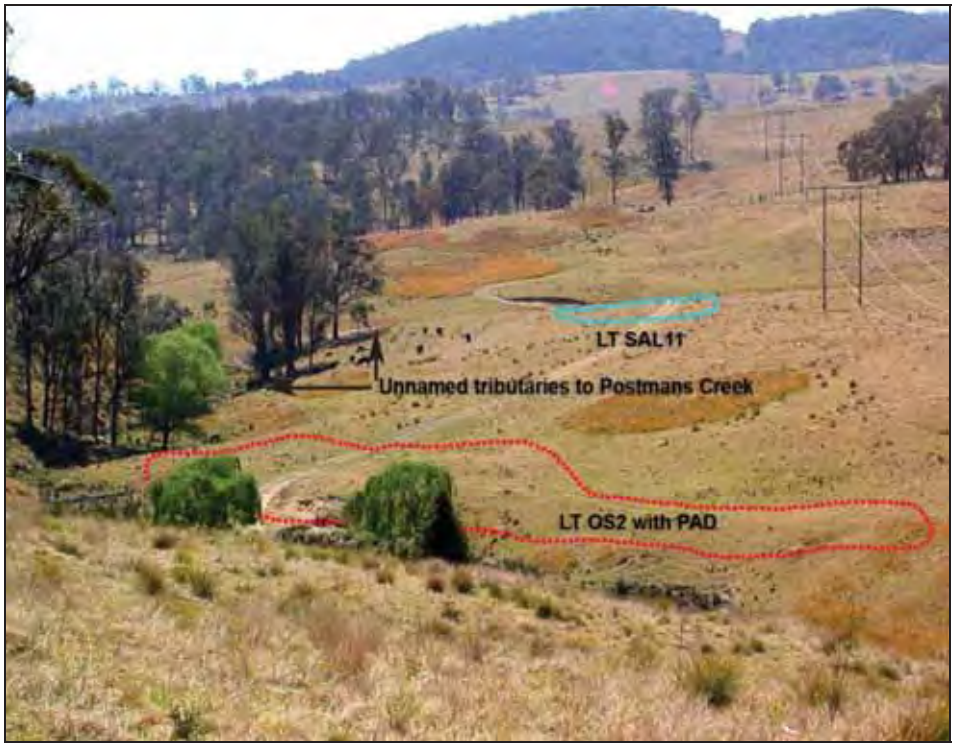


Plate 4–16: **LT-OS2**. View East.

Plate 4–17: **LT-OS2**. Artefacts. Top: Basalt and milk quartz flakes. Bottom: grey quartzite and milk quartz flakes.

Plate 4–18: **LT-OS3**. Artefacts. Grey Quartzite flake (left), Milk Quartz blade (right).

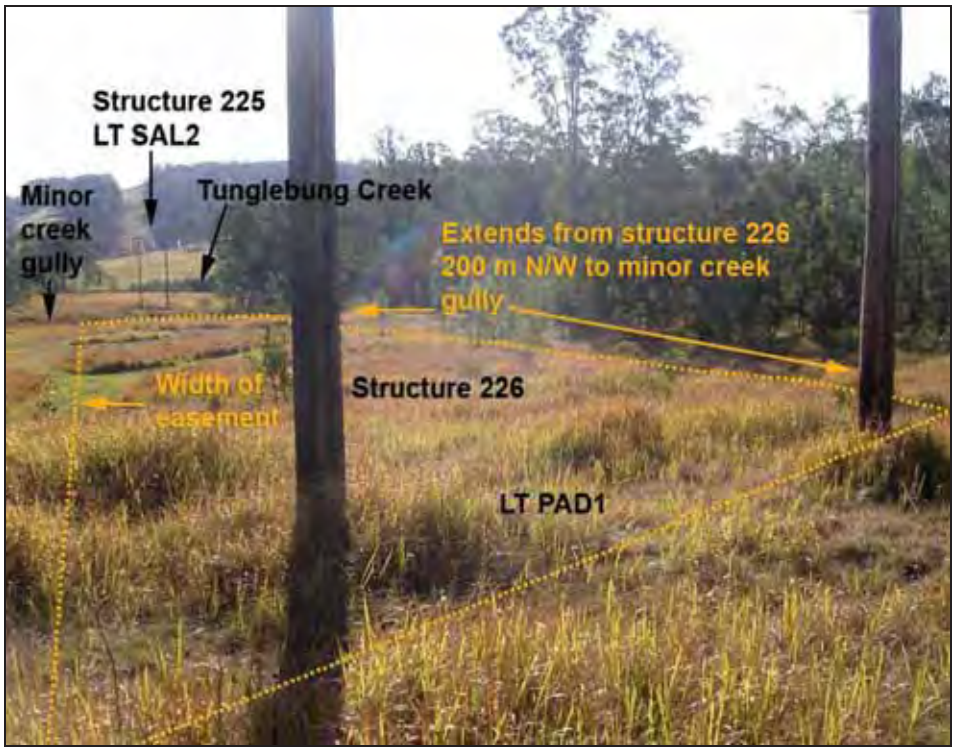


Plate 4–19: **LT-PAD1**: Location and extent of the PAD.

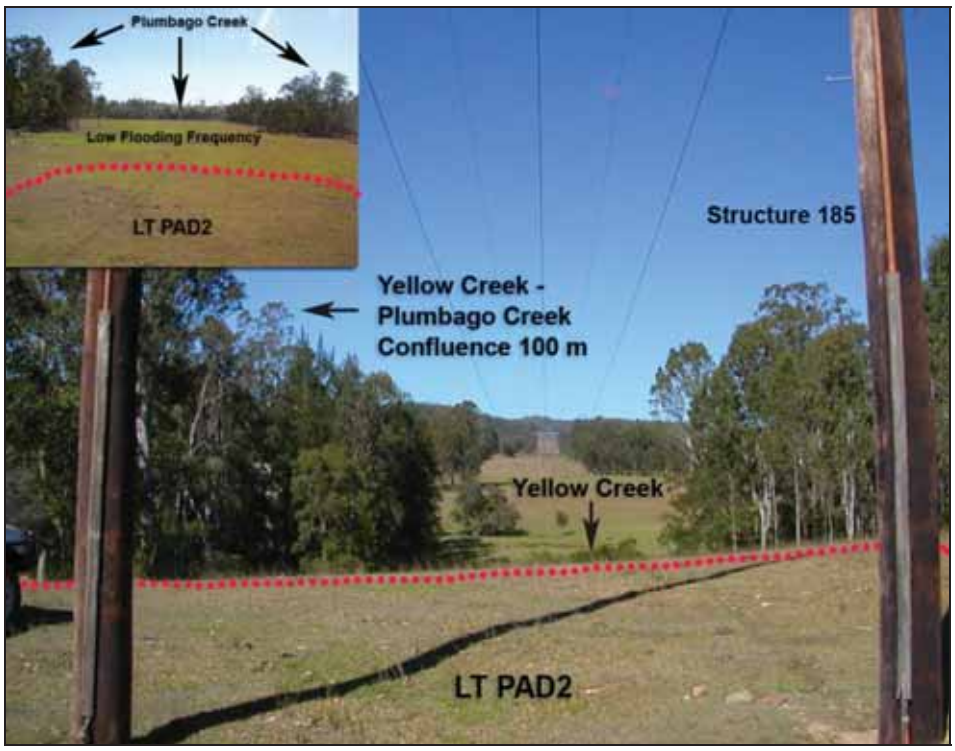


Plate 4–20: **LT-PAD2**. View west. Insert: view east.

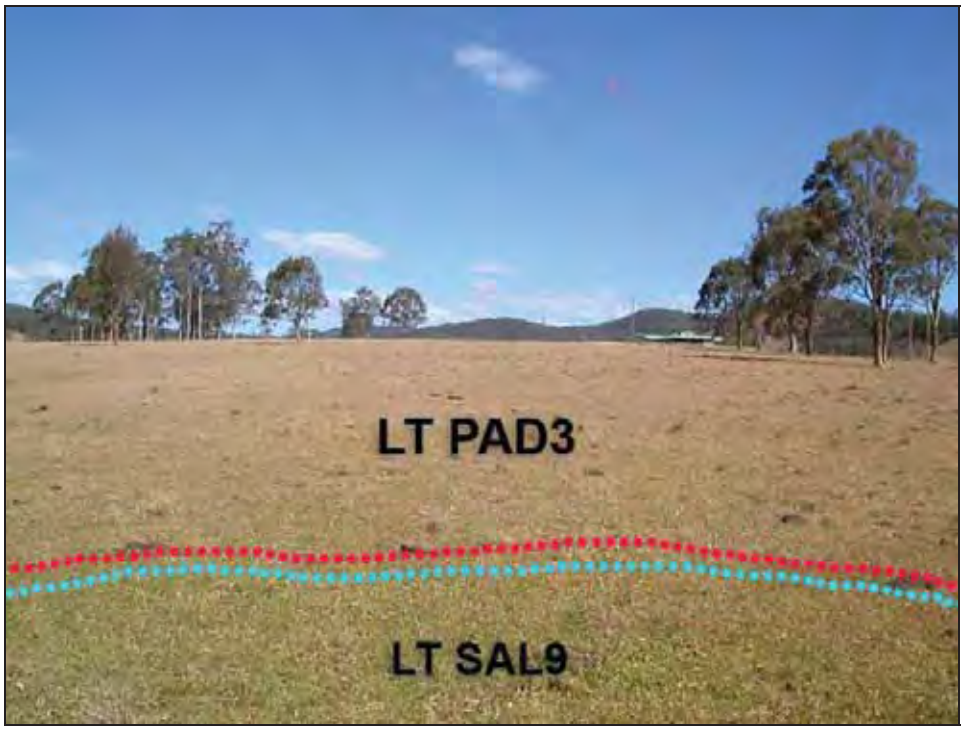


Plate 4–21: **LT PAD3**. View south.

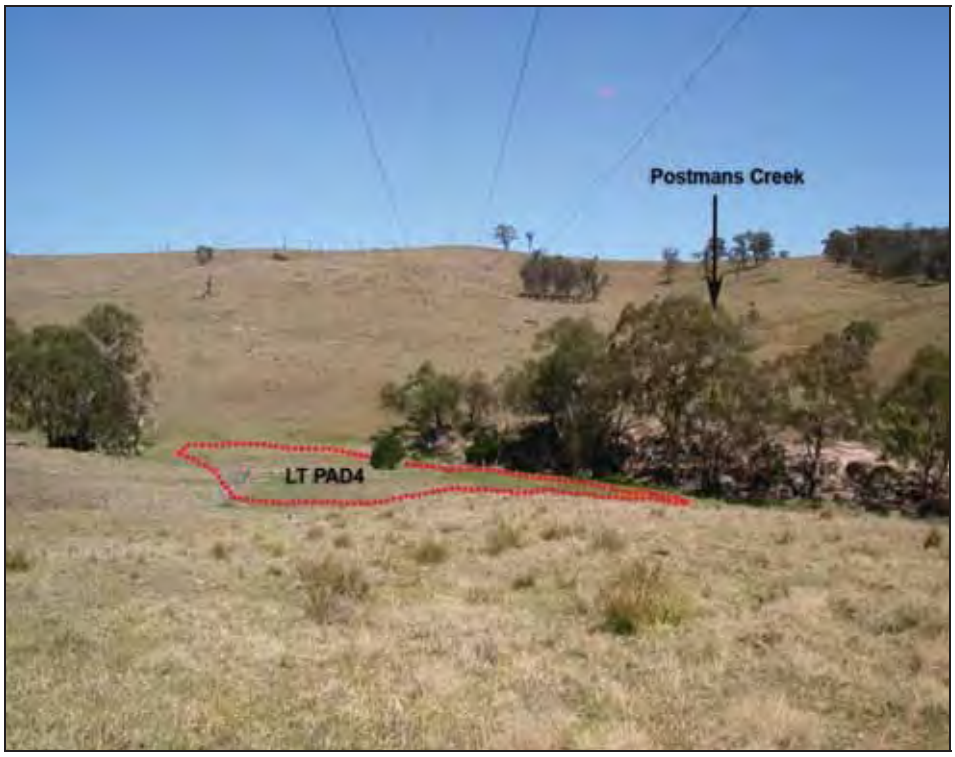


Plate 4–22: **LT-PAD4**. View east.

Plate 4–23: Views north west (top) and north east (lower). **LT-PAD5** shown in upper image on the knoll overlooking the Cataract River.

Plate 4–24: **LT-ST1** (bottom) and **LT-ST2** (top).

Plate 4–25: **TD-IF1**: a possible granite hammerstone.

Plate 4–26: **TD-IF3**: fine-grained siliceous axe blank.

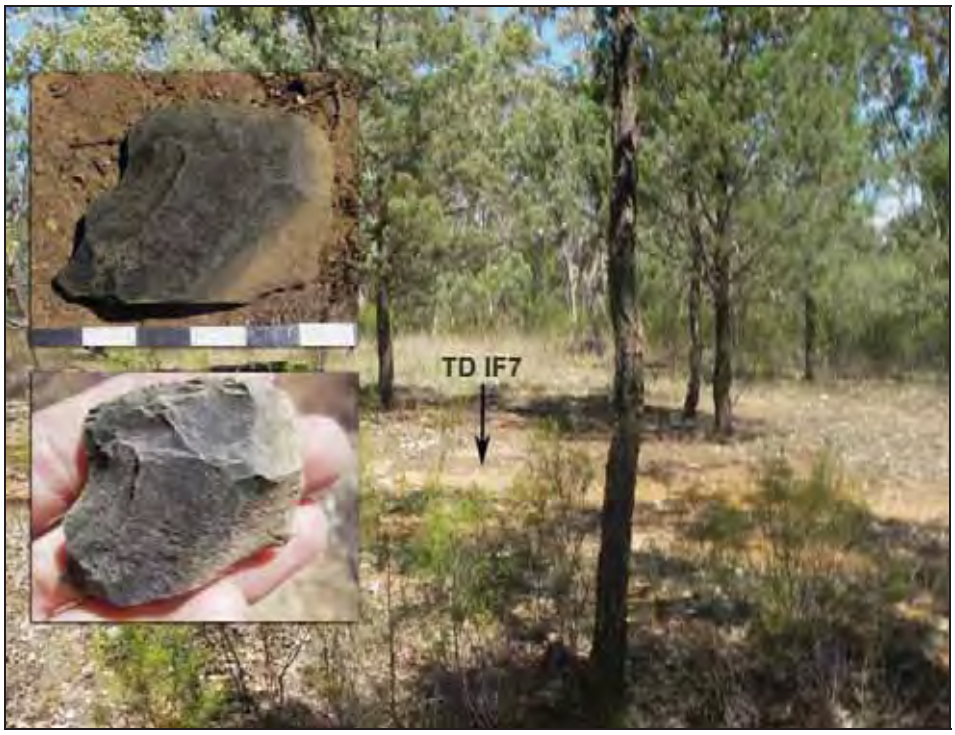


Plate 4–27: **TD-IF7**: Weathered coarse-grained basalt flake.

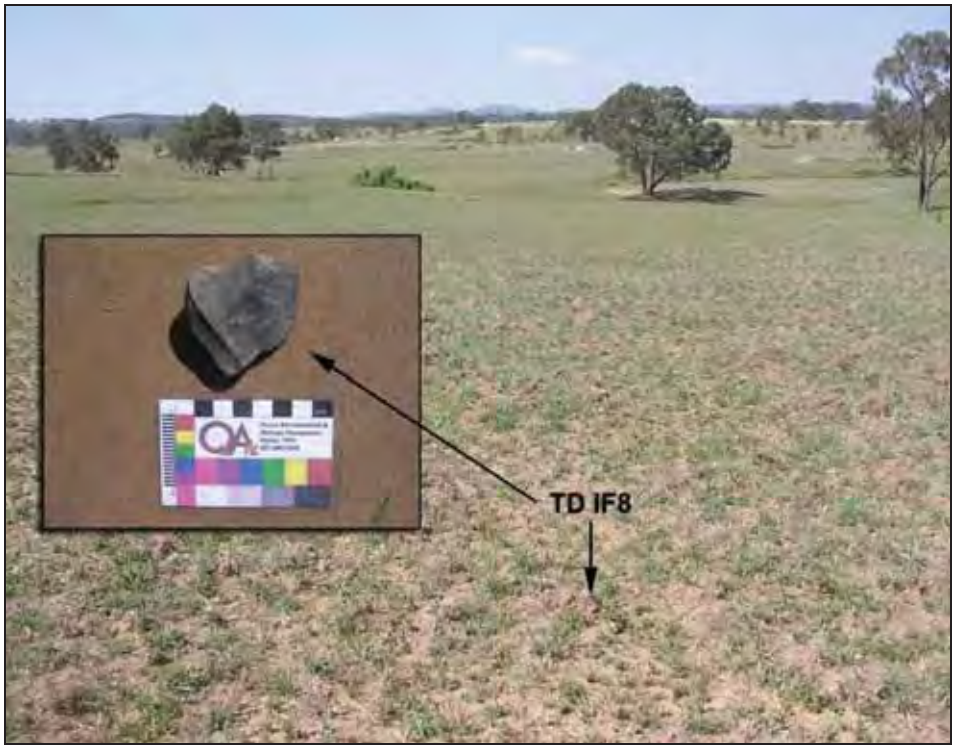


Plate 4–28: **TD-IF8** showing the location and a detail of the artefact (insert).

Plate 4–29: **TD-IF9** showing the location and detail of the artefact (insert).

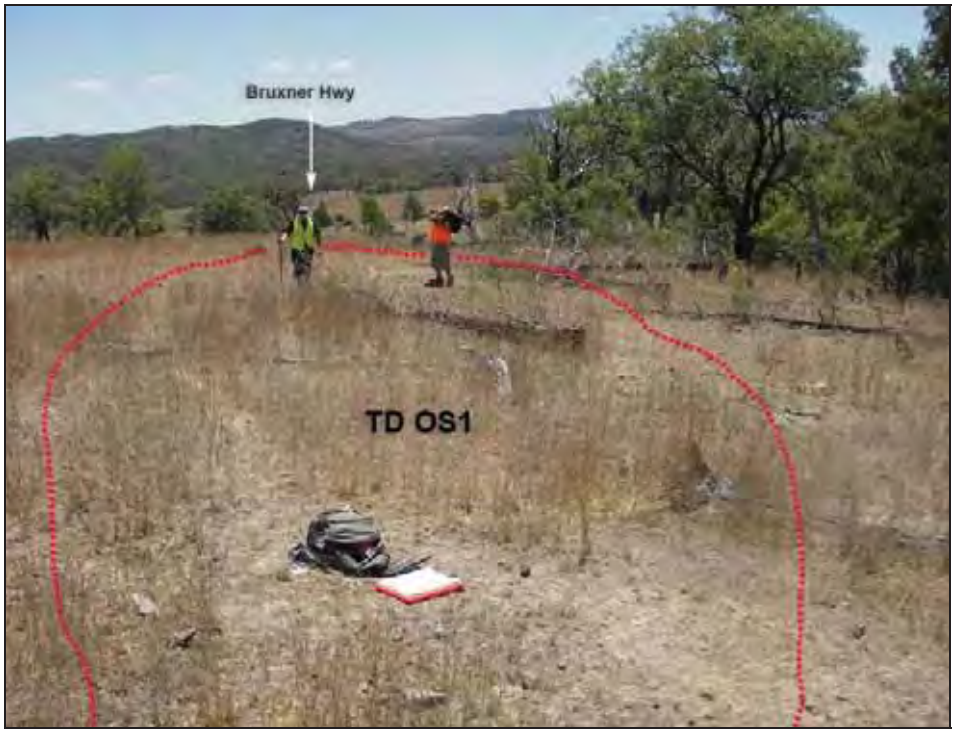


Plate 4–30: **TD-OS1** looking towards the Bruxner Highway.

Plate 4–31: **TD-OS1**: Artefacts. Basalt (top left), Milk Quartz (top right), Chert (bottom left), grey Quartzite (bottom right).

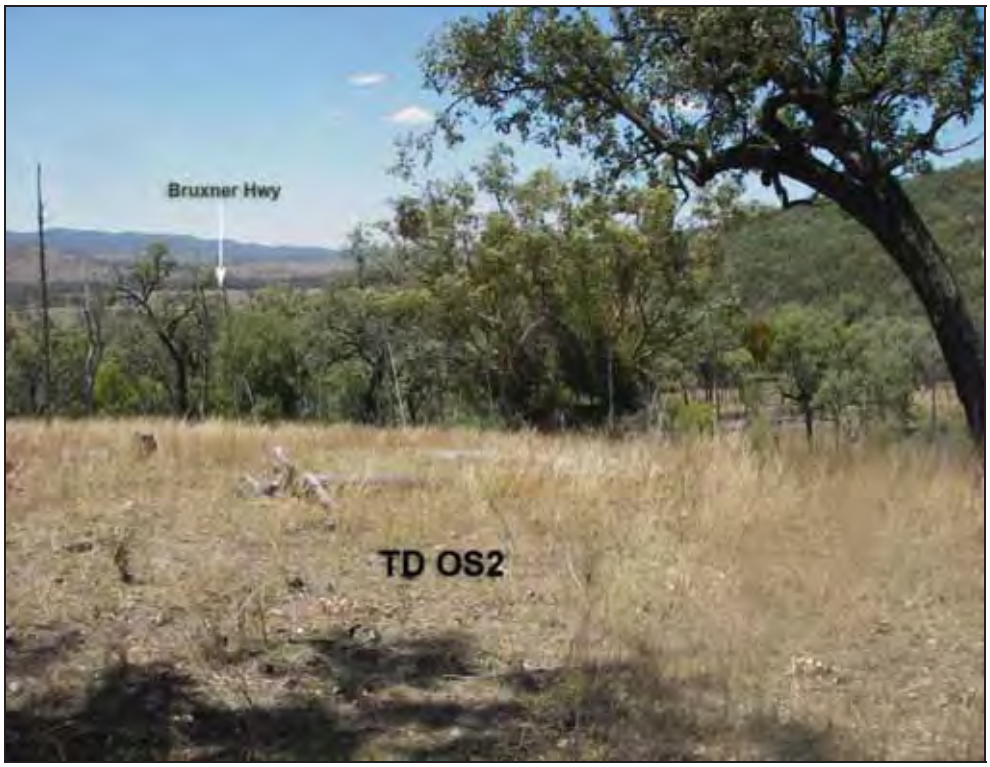


Plate 4–32: **TD-OS2** looking towards the Bruxner Highway.

Plate 4–33: **TD-OS2**. Artefacts. Grey quartzite (left and top right), indurated mudstone, chert and milk quartz (bottom right).

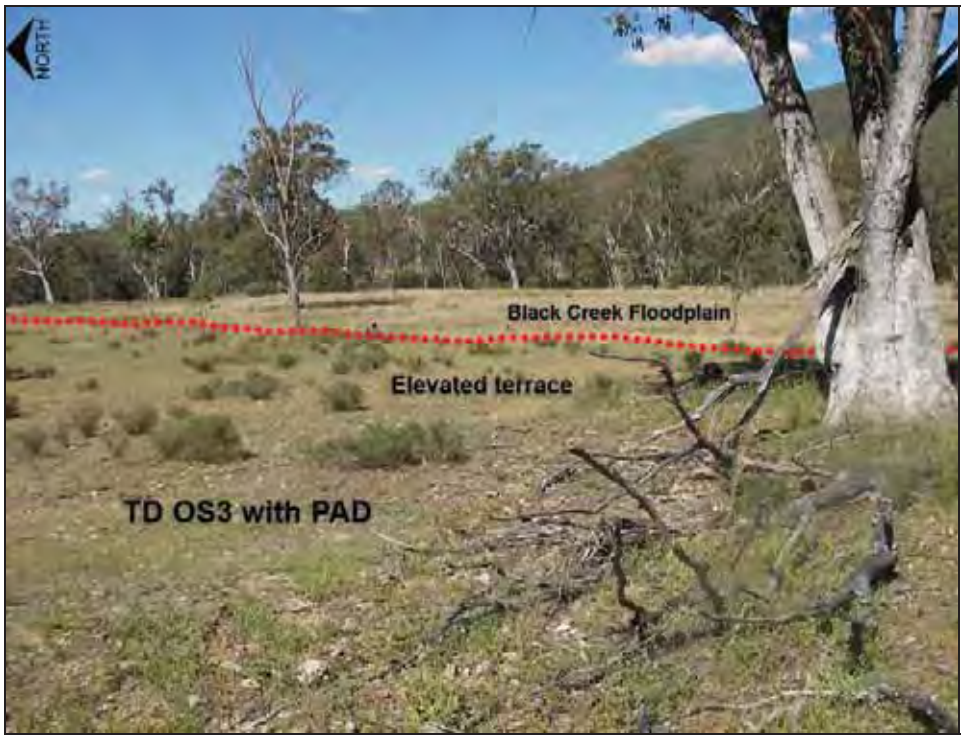


Plate 4–34: **TD-OS3 with PAD**.

Plate 4–35: Site **TD-OS3**. Above shows artefacts: Flakes (Milk Quartz and grey Quartzite with axes below.

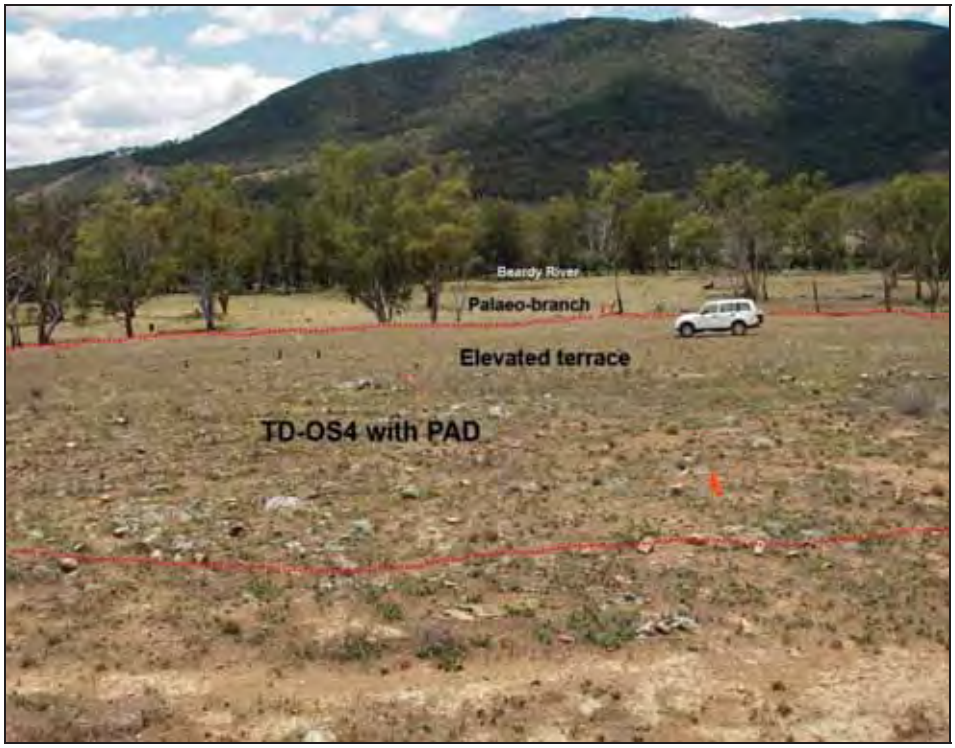


Plate 4–36: **TD-OS4 with PAD**.

Plate 4–37: **TD-OS4 with PAD**. Artefacts. Top left: basalt axe, Top right, middle and bottom right: grey quartzite flakes and core, Bottom left: milk quartz flake.

Plate 4–38: **TD-OS5 with PAD**. Artefacts. All fine-grained basalt. Top left: broken blade, Top right: flake, Bottom: Scraper (left = ventral, right = dorsal).

Plate 4–39: **TD-OS6**. Site location and a detail of two artefacts from the site (insert).

Plate 4–40: **TD-OS7**. Artefacts. Top: Grey quartzite axe (same artefact despite colour shift), Bottom left: Possible greywacke flake, Bottom right: fine-grained basalt flake.

Plate 4–41: **TD-OS8**. Artefacts. A selection of three grey quartzite flakes from the site.

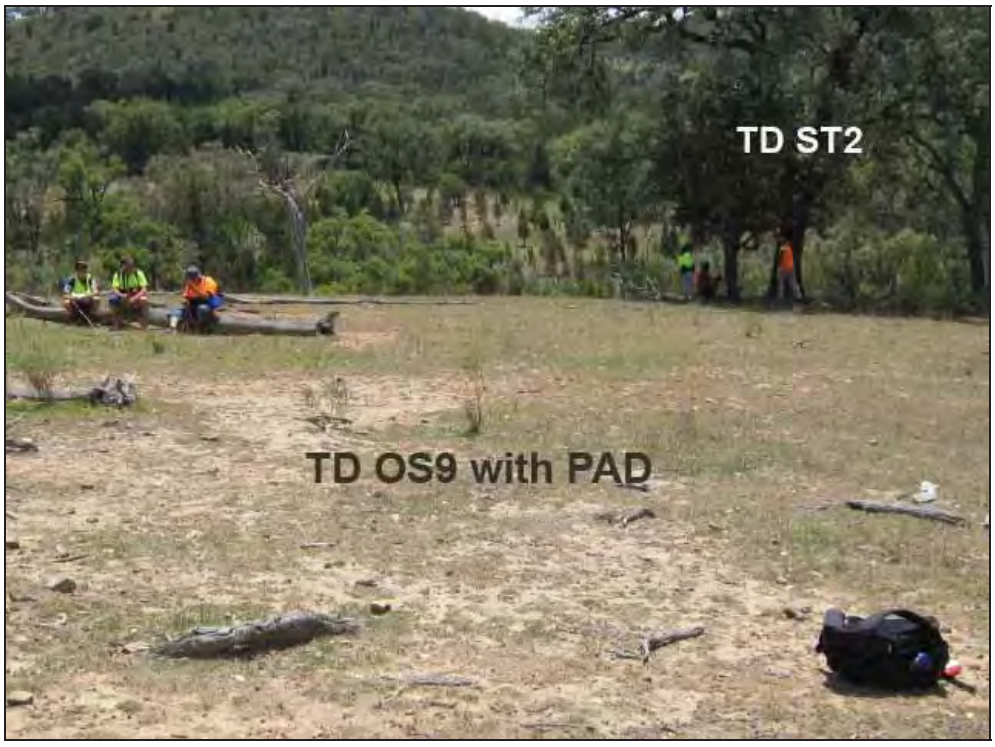


Plate 4–42: **TD-OS9 with PAD** and **TD-ST2**.

Plate 4–43: **TD-OS9**. Artefacts. A range of chert, milk quartz, quartzite and indurated mudstone flakes.

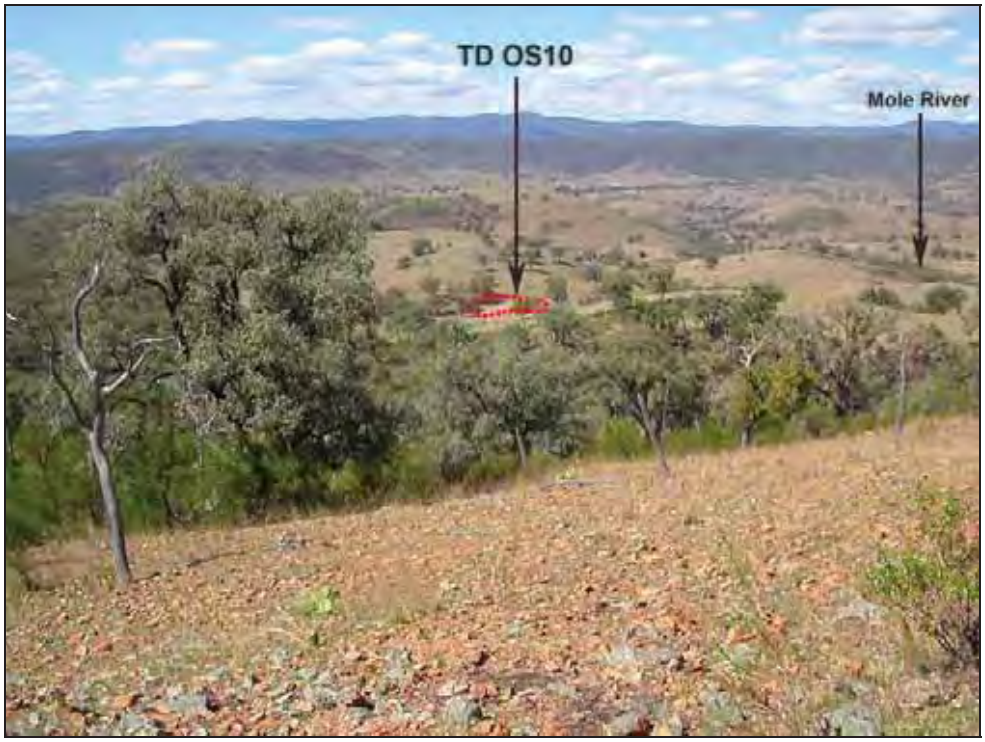


Plate 4–44: **TD-OS10**. Location of the site. View east.

Plate 4–45: TD-OS10. Artefacts. Left: cores, Right: flakes.

Plate 4–46: **TD-OS11 with PAD** looking towards the Mole River.

Plate 4–47: **TD-OS11 with PAD**. Artefacts. Grey quartzite, sandstone, milk quartz and fine-grained basalt flakes.

Plate 4–48: **TD-OS12**: location of the site on a knoll. Black backpack in the middle distance indicates where the artefacts are located.

Plate 4–49: **TD-OS12**: Artefacts.

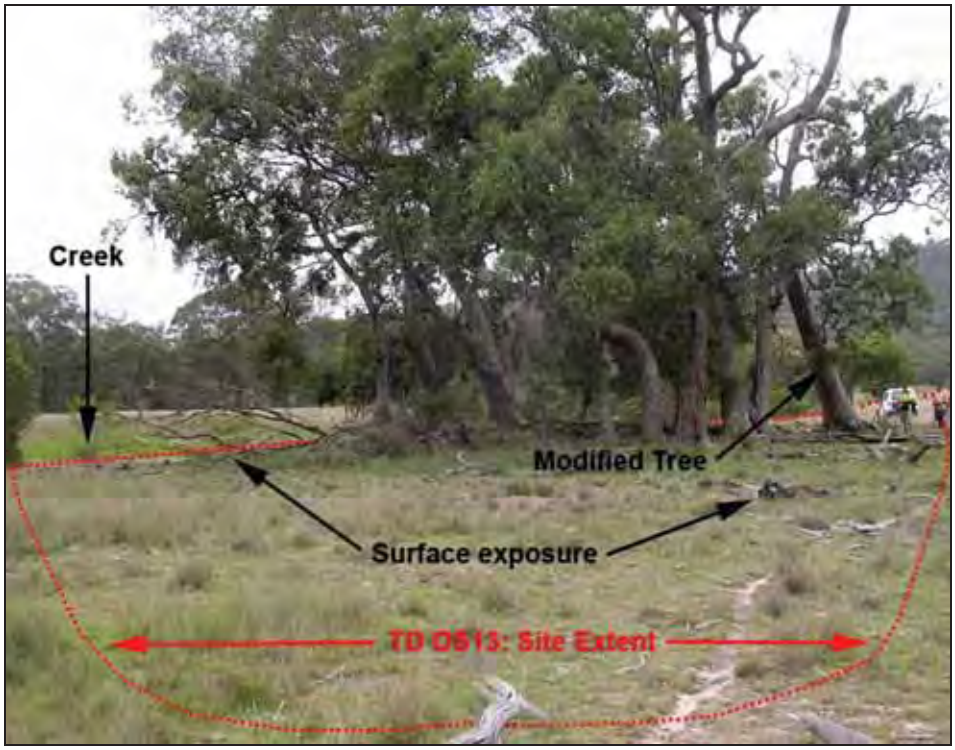


Plate 4–50: **TD-OS13**: location of site.

Plate 4–51: **TD-OS13**: Artefacts. Backed and truncated chert blade on left.

Plate 4–52: **TD-OS13**: Modified tree within TD-OS13.

Plate 4–53: **TD-ST1**: Possible Aboriginal Modified (scarred) Tree.

Plate 4–54: **TD-ST2** with the Aboriginal community representatives who accompanied the survey team on that day.

Plate 4–55: **TD-ST3** showing the scar and the location of the scar on the dead and fallen tree.

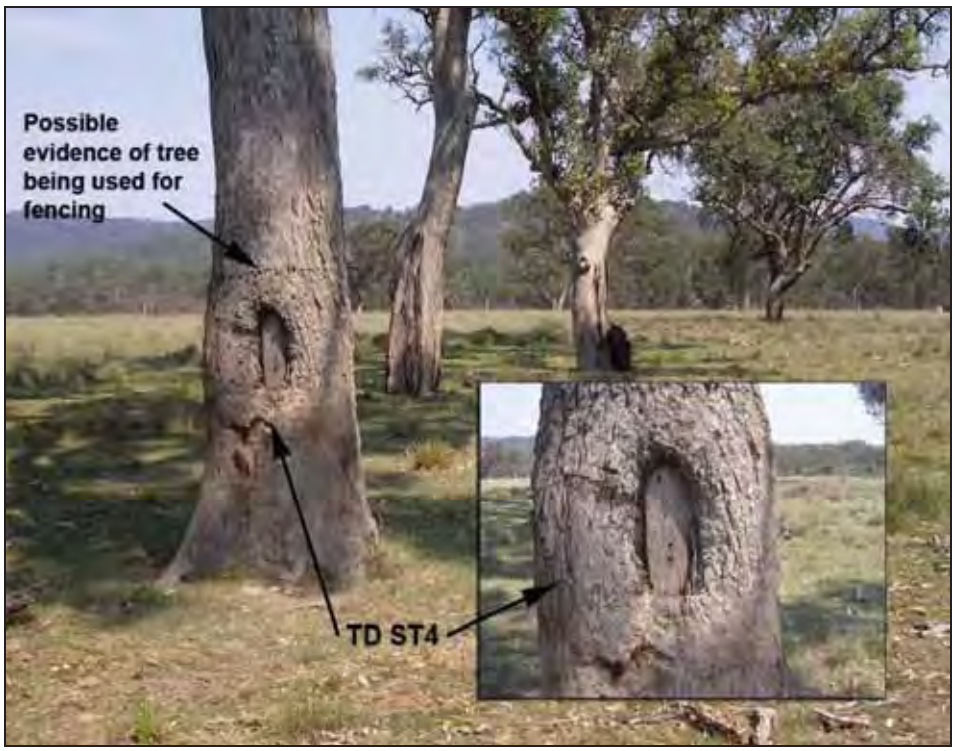


Plate 4–56: **TD-ST4** showing the location and a detail of the scar (insert).

Plate 4–57: **TD-ST5**.

Plate 4–58: **TD-ST6**: Detail of the scar.

Plate 4–59: **TD-ARG1**: Three views of the one item showing the cut made in the hollow log.

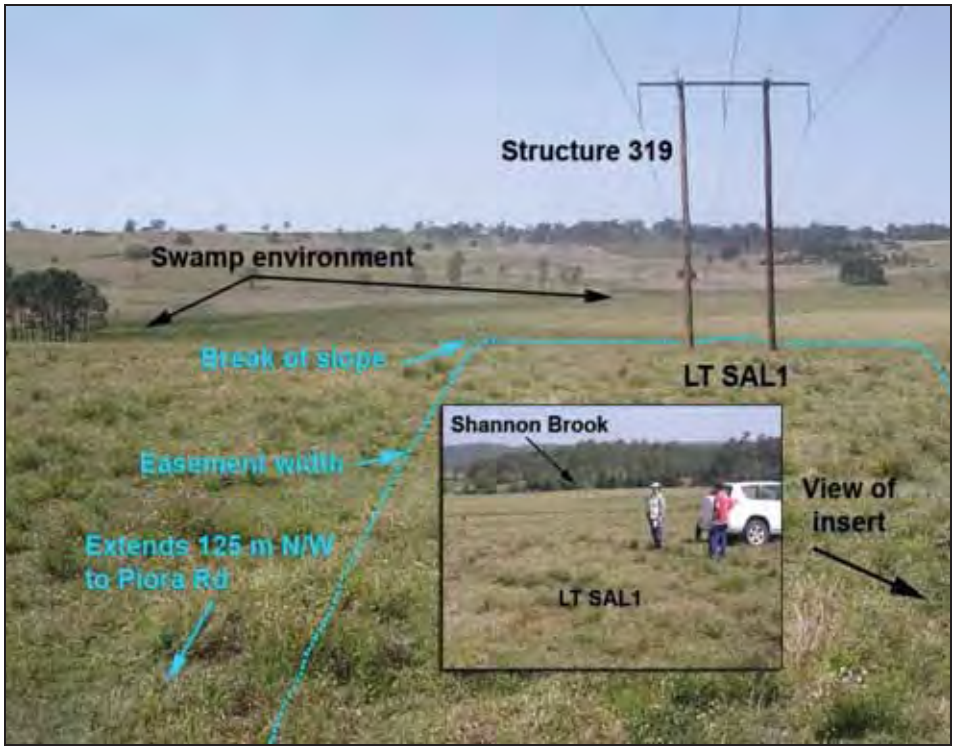


Plate 4–60: **LT-SAL1** showing the extent and location of LT-SAL1.

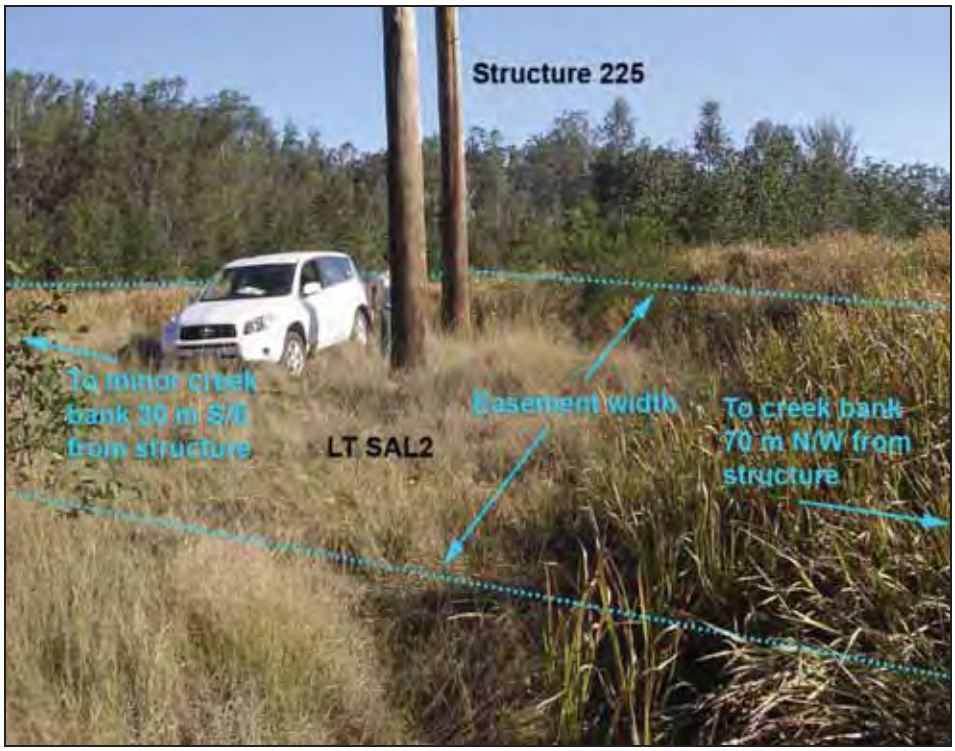


Plate 4–61: **LT-SAL2** showing the extent and location of the SAL.

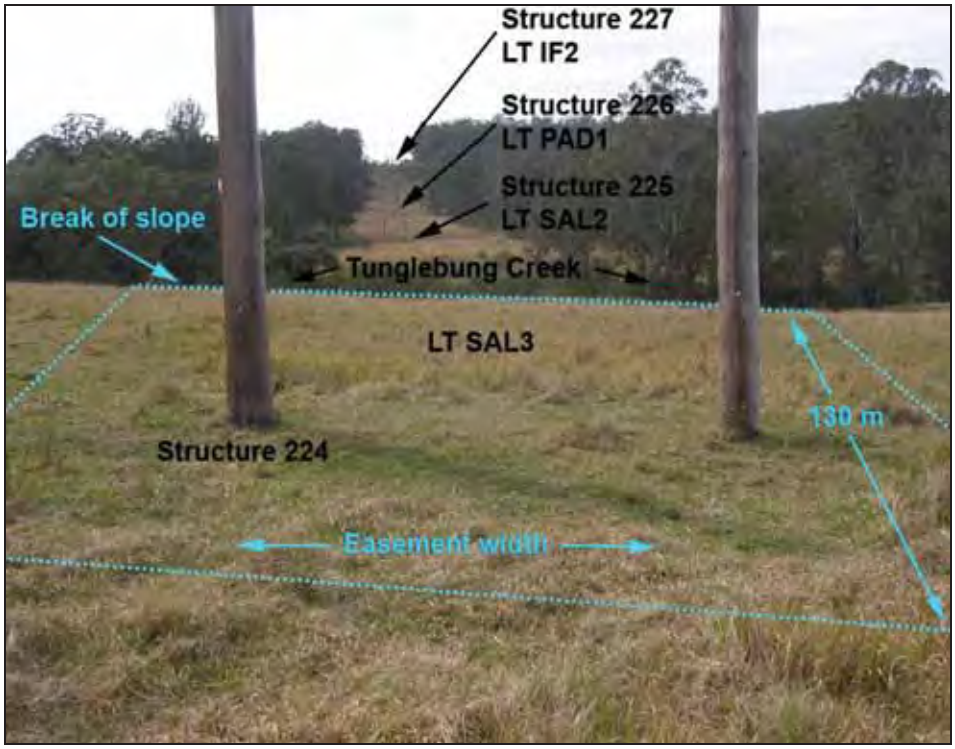


Plate 4–62: **LT-SAL3** showing the extent and location of the SAL.

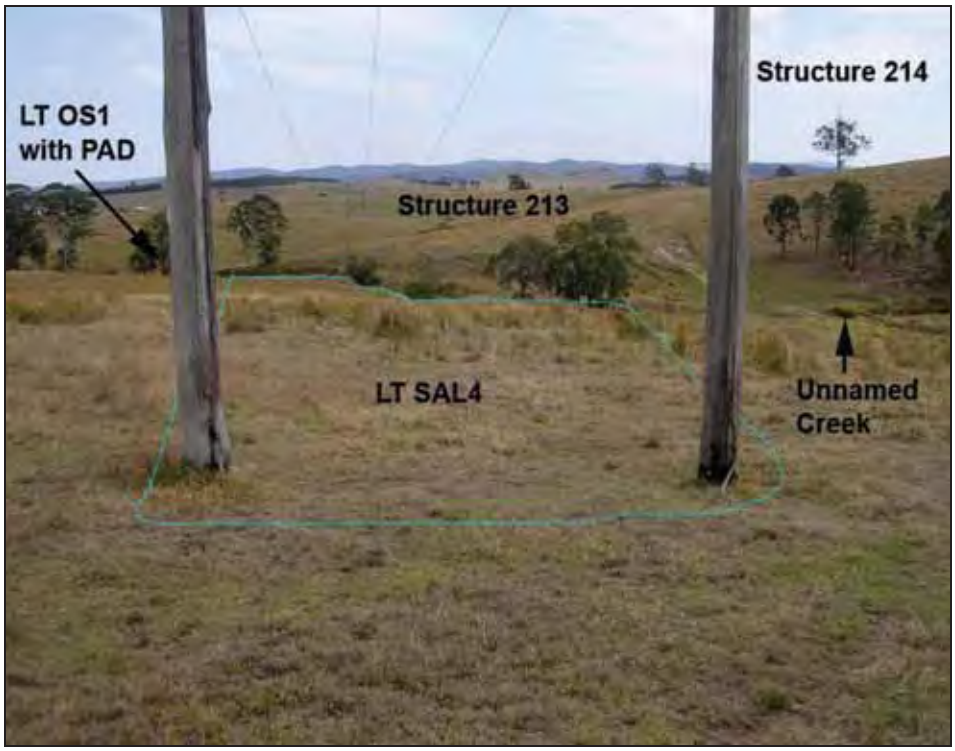


Plate 4–63: **LT-SAL4** showing the extent and location of the SAL.

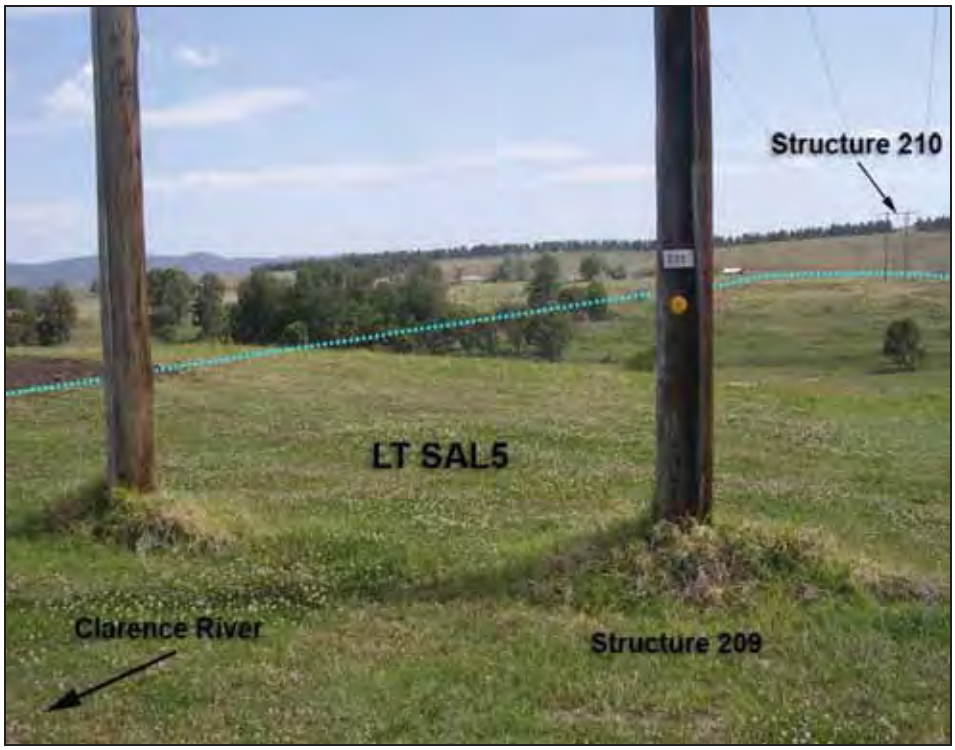


Plate 4–64: **LT-SAL5** showing the extent and location of the SAL.

Plate 4–65: **LT-SAL6** showing the extent and location of the SAL.

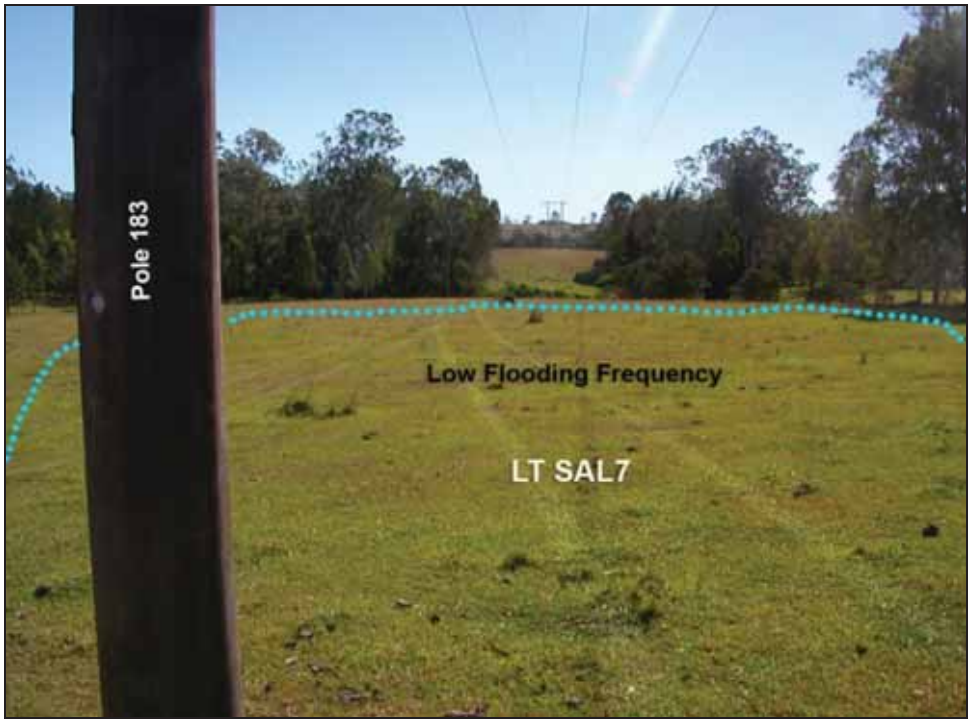


Plate 4–66: **LT-SAL7**. View east.

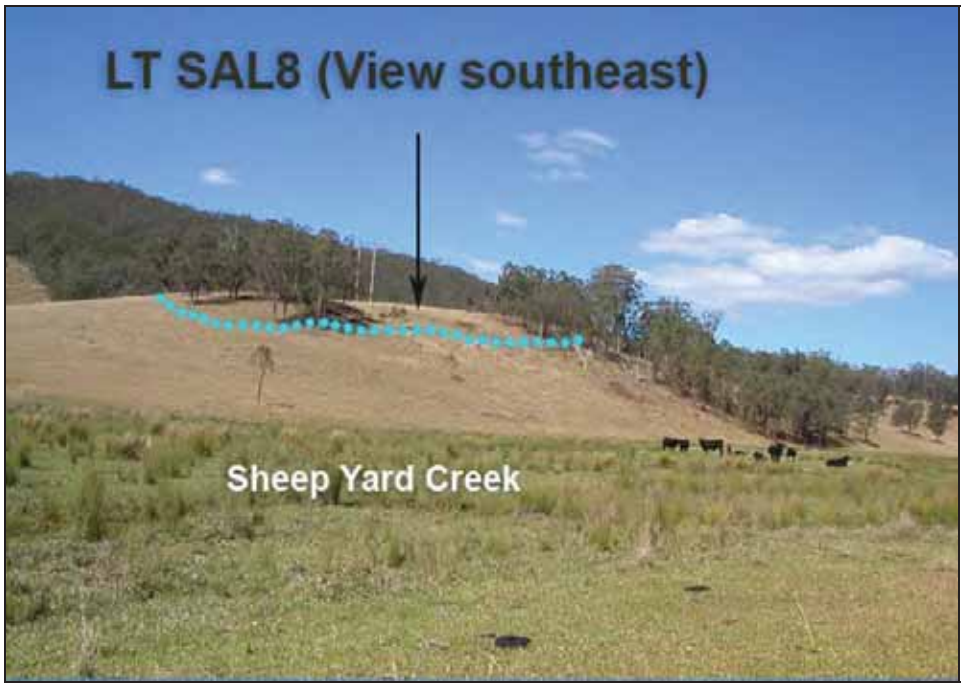


Plate 4–67: **LT-SAL8** showing the extent and location of the SAL.

Plate 4–68: **LT-SAL9** showing the extent and location of the SAL.

Plate 4–69: **LT-SAL10**. View west.

Plate 4–70: **LT-SAL11** showing the extent and location of the SAL.

Plate 4–71: Two trees bearing scars that were not considered to be of Aboriginal origin (see Section 4.1.4).

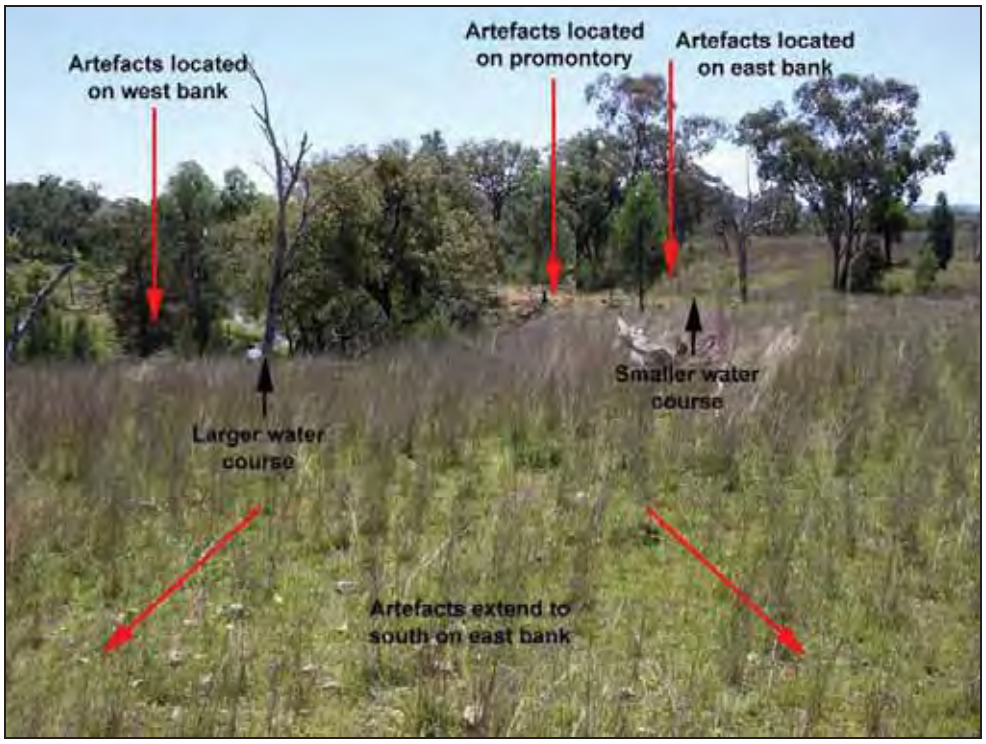


Plate 4–72: View of **TD-OS14** looking to the north.

Plate 4–73: Artefacts recorded at **TD-OS14**. Axe blank (top left), chert flake (top right), quartzite flake (bottom left) and a chert flake *in situ* (bottom right: note the high level of other, natural, stone at TD-OS14).

Plate 4–74: A possible Aboriginal scar in a dead tree within the site extent of **TD-OS14**.

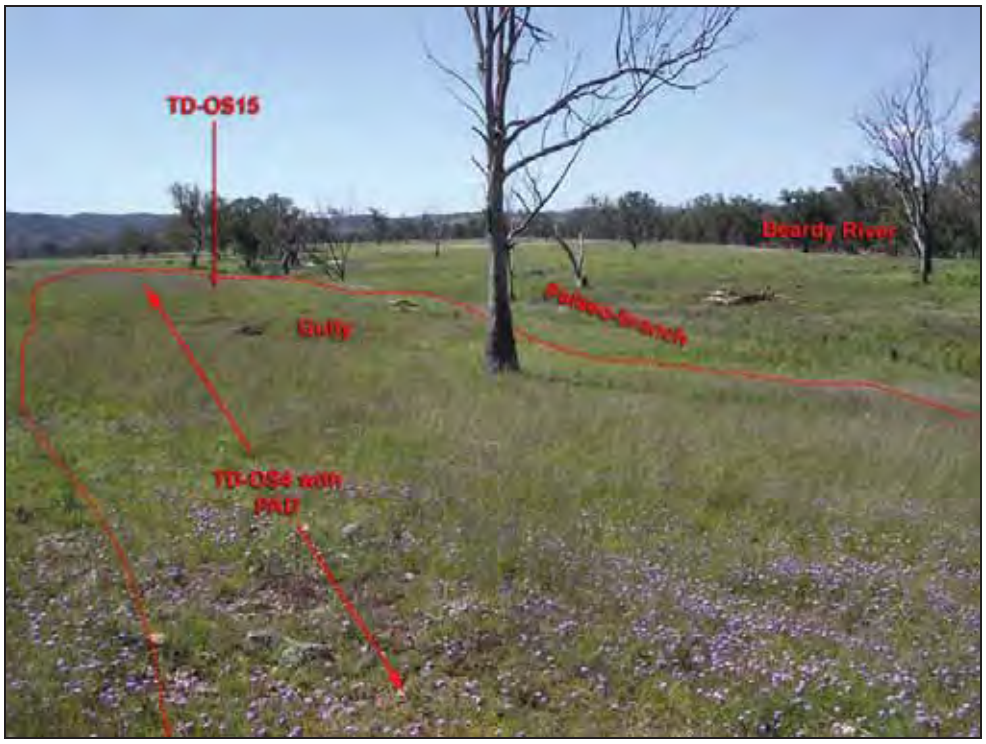


Plate 4–75: View to north of site **TD-OS15**. This site is included within the larger site TD-OS3 with PAD. (Comparison with **Plate 4–36** will show the changed climatic conditions between the transmission line and access tracks surveys that affected conditions such as ground surface visibility).

Plate 4–76: Selection of artefacts from **TD-OS15** (TD-OS4 with PAD) including chert, quartzite, basalt and milk quartz flakes.

Plate 4–77: View of **TD-OS16** looking north west. The site occupies the knoll in the foreground while the Black Creek billabong system can be seen in the background. The backpack marks the find spot of the axe blank seen in Plate **4–78**.

Plate 4–78: Selection of artefacts from **TD-OS16** including an axe blank (top left), a basalt scrapper (top right), milk quartz flake (bottom left) and a greywacke core.

Plate 4–79: **TD-OS17** occupies the shallow knoll (centre of site marked by the back pack) overlooking Black Creek that can be seen in the background.

Plate 4–80: Selection of artefacts from **TD-OS17** including quartz, quartzite and basalt flakes.

Plate 4–81: **TD-OS18** was recorded from the bulldozer scrape where the back pack is located to the farm track where the cars are located.

Plate 4–82: Selection of artefacts from **TD-OS18** including a quartzite flake and milk quartz flakes from the western bank of the gully (top row) and quartzite and quartz flakes from the eastern side of the gully (bottom).

Plate 4–83: **TD-OS19** was located on either side of the farm track that runs along Deadmans Creek that can be seen (by the vegetation) in the background.

Plate 4–84: Selection of artefacts from **TD-OS19** including quartzite flakes (top left), basalt blade (top right), banded chert core (bottom left) and a fine-grained volcanic flake (bottom right).

Plate 4–85: View of **TD-OS20 with PAD** from the north. The location of the spring can be seen by the darker vegetation. Artefacts were located on both the near and far bank over the entire area where the figures stand.

Plate 4–86: **TD-OS20 with PAD** showing the severe erosion that is impacting the site that is located right along the southern bank (shown here to right). Artefacts were recorded from the top break of slope to a distance of 30m away from the creek.

Plate 4–87: A selection of artefacts from **TD-OS20 with PAD**. These include basalt axe blanks (top row), quartzite core (bottom left) and a basalt bladelet core (bottom right).

Plate 4–88: A selection of unaltered flakes from **TD-OS20 with PAD**. Basalt and quartz flakes such as these dominated the assemblage at TD-OS20.

Plate 4–89: Relationship of **TD-IF10** to TD-OS16. Insert: TD-IF10; a river cobble with evidence of pitting.

Plate 4–90: **TD-IF11**, a milk quartz core, is located in the foreground near the back pack. Site TD-OS16 can be seen in the distance. Site TD-IF10 is located up hill to the photographer's right.

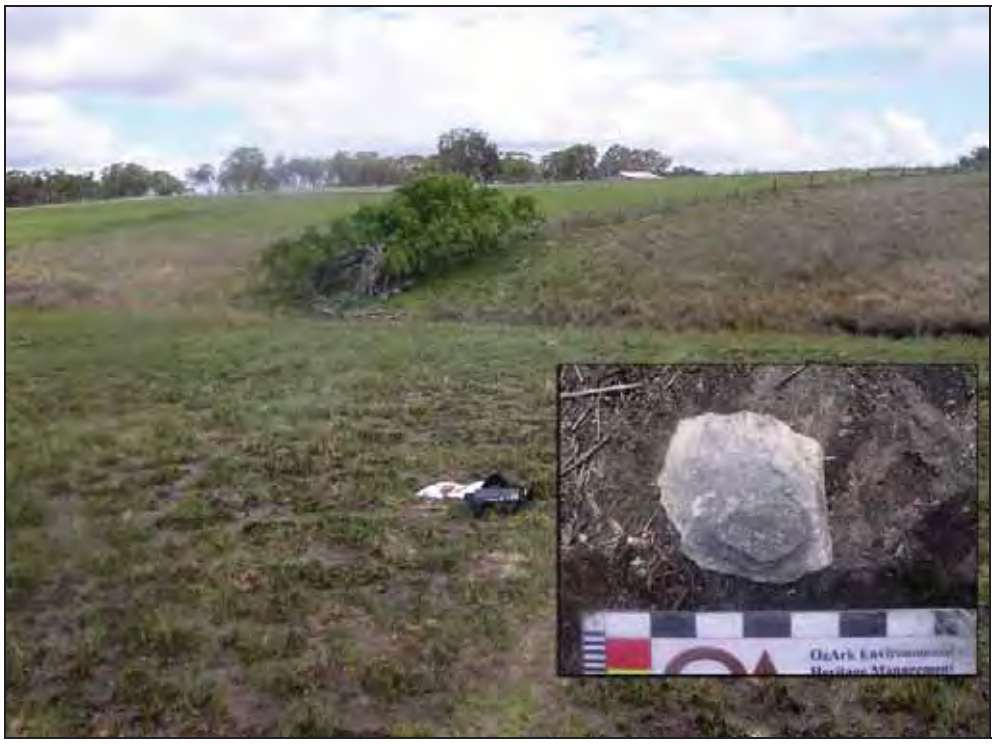


Plate 4–91: The location of **TD-IF12** is indicated by the back pack. Insert: TD-IF12; a basalt flake.

Plate 4–92: The location of **TD-IF13** is indicated by the back pack. The cars are parked on the Washpool Creek Fire Trail. Insert: TD-IF13; a quartz flake.

Plate 4–93: **TD-HS01**. Group of ruined farm buildings.

Plate 4–94: **TD-HS02**: Ruined farm house/shepherd's house.

Plate 4–95: **TD-HS03**. Fence posts associated with TD-HS02.

Plate 4–96: **TD-HS04**. House ruins.

Plate 4–97: **TD-HS05**. Ruined tobacco drying shed.

Plate 4–98: An example of a well-preserved tobacco drying barn from a property well outside the Study Area. Comparisons between this and Plate 4–97 demonstrate how much soil has accumulated around TD-HS05.

Plate 4–99: **TD-HS06**. Ruined house with stone built chimney. The blue dotted line displays the extent of the house/hut. In the corner closest to the photographer, portions of a stone floor are extant. The greener grass in this area may indicate greater soil depth than surrounding areas (possibly a pit).

Plate 4–100: **TD-HS07**: Dry stone wall possibly dating to the Second World War.

Plate 4–101: **TD-HS08**. Dry stone wall possibly dating to the Second World War.

Plate 4–102. **LT-HS1**. Insert shows a detail of the zig-zag cut.

Appendix 1: Aboriginal Site Descriptions

Open Sites

Often called stone artefact scatters, these sites (for the purposes of the OEHOEH AHIMS database) were in the past defined by the presence of two or more stone artefacts located within 50 m of one another. Current guidelines, however, delineate no hard and fast determinations on requisite artefact numbers, more loosely describing these campsites as places exhibiting evidence of past human activity. This can be, and is most frequently, in the form of stone artefacts, but may also include other evidence such as hearths or midden material. Such sites provide evidence for the range of activities that may have been undertaken at a particular place, including the production of stone tools and the preparation of food including the butchering of animals or grinding of seeds. However, the distinction between a single, isolated artefact versus a place where numerous artefacts have been recorded together provides a necessary division in terms of the possible information that a site can reveal about past activities. Further information recorded about open sites includes assessments of the sites' integrity (how intact the site is) and subsequently whether sub-surface deposits are thought to be present.

Isolated Finds

An artefact, usually of stone, but possibly of other materials, that is located but has no relationship to other identifiable archaeological features.

Modified Trees

Any tree that has undergone physical alteration by Aboriginal people is referred to as a modified tree. These traditionally include tress scarred for the removal of bark to make implements (coolamons, shields, cradles or canoes — see scarred trees below), but can also include trees that have been impacted in the gathering of resources such as scars in the base of the tree for digging out grubs; scars used as toeholds for tree climbing, areas cut into a hollow tree to smoke out food resources etc. Also included in this group are trees marked or carved as boundary or grave markers or Bora Ground carved tees.

Scarred Trees

This site type results from the deliberate removal of bark (and sometimes wood) from trees, for the purpose of obtaining raw material for the manufacture of various items of material culture – i.e. shields, coolamons, shelters, canoes, and cradles. They may also result from foraging and hunting; for instance, toe holes cut in trees to allow access to upper branches and hollows, and axe marks around natural hollows for the extraction of small tree-living fauna (such as possums or birds) or honey.

The identification and interpretation of a scar as being Aboriginal in origin can often be difficult, as bark can be removed from trees by a variety of means e.g. animal and bird foraging, the natural breaking off of tree limbs, lightning strikes to the tree, the result of machinery damage to trunks and the removal of bark by Europeans to define land boundaries. To assist archaeologists in the accurate identification of Aboriginal scarred trees, the OEHOEH Western region provides a set of criteria against which each scar must be assessed.

These diagnostic criteria are as follows:

- *The scar must not touch the ground* — (scars resulting from fire, fungal attack or lightning nearly always reach the ground). Such a termination does not necessarily preclude an Aboriginal origin. Ethno-historic accounts of canoe

manufacture occasionally demonstrate scarring to ground level. If the scar does run to the ground, the sides must be relatively parallel (i.e. not triangular). It must be noted that discussion with Aboriginals from other areas suggests that scars may indeed extend to the ground, especially when the bark is planned for use in a shelter. This information is derived from oral histories recorded in Dubbo and observations from further afield;

- *The ends of the scar should be squared off or evenly tapered* — Different shapes at the top and bottom (e.g. pointed at top, squared at bottom; round at top, flaring at bottom) are suggestive of natural processes (e.g. branch loss);
- *The sides of the scar should be parallel or symmetrical* — Few natural scars are likely to have these properties, with the possible exception of fire scars which may be symmetrical but are usually wider at their base. Modern surveyors' marks are typically triangular and often adzed. These also (regardless of shape) usually have a number carved in the wood within the scar;
- *The length of the scar must be on the same axis as the tree and not oblique or slanting across the tree or the branch* — Scars which are natural in origin tend to have irregular outlines, sometimes have irregular regrowth and may occur against the axis of the tree.
- *The tree should be reasonably old – i.e. over 100 years* — The tree upon which the scar is found should be old enough (i.e. of sufficient age) to have been used by Aboriginal people in (at least) a semi-traditional manner. This means the tree should be at least approximately 100 years old. The age of the scar should also be reflected in the thickness of the regrowth. Young scars (e.g. some natural scars caused by branches falling or birds or horses gnawing, have characteristically thin regrowth);
- *There must be no obvious natural or other artificial cause* — such as a branch rip, lightening strike, cockatoo chewed bark or healed bark tears from machinery damage or car impact. Any signs that the scar may not be Aboriginal should be carefully assessed; and,
- *The tree must not be an introduced species* — For obvious reasons, the tree upon which the scar is found should be endemic to the region. This excludes historic (exotic) plantings.

Also helpful in scarred tree identification, but not within the OEHOEH criteria are the following points:

- *Axe or adze marks* — A scar with cut marks on the original wood is likely to be anthropogenic in nature (i.e. as a result of human actions). The location and shape/size may lend support to the scar's origin. For example stone axe marks would indicate an Aboriginal origin, while steel axe marks post-date the arrival of Europeans. These of course could still have been made by an Aboriginal person in the post-contact era; and,
- *The presence of epicormal growth* — Many scars of Aboriginal origin tend to have an epicormal shoot originating at the base of the scar. This is a new branch shooting from the point of damage and is part of the trees self preservation mechanism.

As noted in the OEHOEH criteria, any tree that does not fit these rules cannot be accepted as likely to be of Aboriginal origin. This may mean that a few authentic scars are omitted from the Aboriginal Sites register, but it is the only means to establish consistency in identification.

However, even when applied, the above criteria cannot always provide a definitive classification and a natural origin for the scar cannot be ruled out. For this reason interpretations of Aboriginal origin are qualified by the recorder's degree of certainty. The following categories are used:

DEFINITE ABORIGINAL SCAR

This is a scar which conforms to all of the criteria stated above and/or has in addition a feature or characteristic that provides definitive identification, such as diagnostic axe or adze marks, or a historical identification. All conceivably natural causes of the scar can be reliably discounted.

ABORIGINAL SCAR

This is a scar which conforms to most of the criteria, and where an Aboriginal origin is considered to be the most likely. Despite this, a natural origin cannot be completely ruled out.

POSSIBLE ABORIGINAL SCAR

This is a scar which conforms to most of the criteria but where an Aboriginal origin would appear unlikely.

Carved Trees

The graves of some individuals were marked by carved trees. These had a section of the bark removed from the trunk and geometric designs carved into the exposed wood. The designs resemble rectilinear or curvilinear motifs which were also found decorating wooden weapons and skin cloaks. It is possible that these motifs signified totemic or kinship affiliations of the deceased. Very few such trees remain due to the wholesale land clearance since the advent of European land-use practices. These trees are most common in the territory of the Wiradjuri and Kamilaroi, although a few are found further afield.

Trees were also carved around Bora Grounds or as boundary markers.

Natural Mythological Sites

Natural mythological sites can be any natural feature and like a cultural/spiritual are not detectable without the traditional knowledge of specific areas.

Axe Grinding Grooves

Aboriginal axe heads were usually made from very hard igneous rock which was first flaked roughly to the appropriate shape and then pecked or ground to an even surface. To keep the edges of these axes sharp, they were ground on the surface of a relatively softer stone (usually sandstone). As the axe is rubbed repeatedly in the same location a groove forms to fit the shape of the axe. This groove has a roughly elliptical shape and a smooth, regular surface along its base. Spearheads may also have been sharpened in grooves, which generally appear narrower and deeper.

Grinding groove sites are most often located on the floodplains of rivers and creeks, although they can be in elevated positions above water as well. Sometimes, sandstone flats near water may exhibit hundreds of such grooves and it is thought that once an axe blank has its edge ground in a groove, then it can only be sharpened in the same groove. Hence, if the owner of the axe is away from its

place of origin, then a new groove has to be created for the sharpening of that particular axe head[13]. Grooves are also frequently recorded in smaller groups, especially along more ephemeral water courses.

Grooves may also be found in association with larger ground areas that may have been used to grind foodstuffs, seeds, tubers etc.

Burials

Human skeletal remains can occur as either single individual burials or as cemeteries containing multiple individuals. Several have been recorded in the local region (Section 4.3). Individuals may be buried either in a standing or sitting position, often oriented to the east and sometimes marked by carved trees.

Rockshelter Sites

Rockshelters occur as weathered overhangs or recesses in sandstone cliffs or boulder outcrops. To have archaeological potential they should be sheltered (i.e. dry inside), large enough for people to sit or stand and possess a reasonably flat floor. Occupation deposits, stone tools, food remains and hearths may build up as a layer on the floor depending on the length or frequency of occupation. Burials may also occur in rock shelter sites. A suitable shelter with a build up of deposit but without visible Aboriginal artefacts is known as a shelter with Potential Archaeological Deposit (PAD). Paintings, drawings or stencils may be found on the walls or roofs of rockshelters, usually where the stone is smooth and provides an appropriate surface.

Ceremonial – Bora Grounds

Bora grounds are ceremonial areas usually consisting of large, ring-shaped mounds where Aborigines of south-eastern Australia performed religious ceremonies called *Bora*. Carved trees surround some of the grounds. Aborigines participated in the *Bora* ceremonies throughout their lives, starting with their initiation (ceremony of acceptance into the adult group) as teenagers. Most descriptions of the Bora Grounds (also called Bora rings) and ceremonies come from non-Aboriginal observers of the 1800s. Although Aborigines no longer perform the *Bora* ceremonies, many believe the grounds remain sacred.

[13] As read at the Terramungamine Reserve grinding groove interpretation sign.

Appendix 2: Aboriginal Community Correspondence Log

Lismore -Dumaresq ETL - URS				
ICCR - YES				
STAGE 1, NOTIFICATION & REGISTRATION				
AD FOR LOCAL PRESS	***DATE AD WRITTEN***	***DATE AD APPEARING***	***DATE CLOSURE EOI***	
Free Times		11.06.09	**29.06.09**	
Northern Star		06.06.09 & 13.06.09 (Saturday/weekend edition)	**29.06.09**	
LETTERS SENT	***Date sent***	***Contact details of who the letter was sent to***	***Date reply required***	**ALL LETTERS POSTED 09.06.09 / 10.06.09**
Office of Registrar	09.06.09	Megan Mebberson Office of the Registrar ALRA 11-13 Mansfield Street Glebe NSW 2037	25.06.09	19.06.09 Received reply from Courtney Field recommending we contact *Casino LALC *Moombahlene LALC *Jubullum LALC *Ngulingah LALC. OzArk has previously contacted these organisations.
DECC - NWB	09.06.09	Mr P Houston DECC PO Box 2111 Dubbo NSW 2380	25.06.09	24.06.09 Received response recommending we should contact numerous groups, as listed further in table
DECC - NEB	09.06.09	Mr B Nudd DECC - NE Branch Federation House 24 Moonee St Coffs Harbour NSW 2450	25.06.09	22.06.09 Received response recommending we should contact numerous groups, as listed further in table
Inverell Shire Council	09.06.09	General Manager Inverell Shire Council PO Box 138 Inverell NSW 2360	25.06.09	
Kyogle Shire Council	09.06.09	General Manager Kyogle Shire Council PO Box 11 Kyogle NSW 2474	25.06.09	
Lismore City Council	09.06.09	General Manager Lismore City Coucil PO Box 23A Lismore NSW 2480	25.06.09	16.06.09 Leanne Emzin phoned to confirm Lismore CC had received Stage 1 letter & recommended we contact *Ngulingah LALC *Bundjalung Elders Council Aboriginal Corp. PO Box 528, Lismore ph: 6681 6847
Richmond Valley Council	09.06.09	General Manager Richmond Valley Council Locked Bag 10 Casino NSW 2470	25.06.09	
Tenterfield Shire Council	09.06.09	General Manager Tenterfield Shire Council PO Box 214 Tenterfield NSW 2372	25.06.09	
Casino LALC	09.06.09	Chairperson Casino LALC 110 Walker St (PO Box 1047) Casino NSW 2470	25.06.09	

Ngulingah LALC	09.06.09	Chairperson Ngulingah LALC 53 Conway St (PO Box 981) Lismore NSW 2480	25.06.09	Dear Cheryl, RE: Aboriginal Heritage Assessment for the proposed Far North Coast NSW Transmission Line Upgrade between Bonshaw and Lismore. Ngulingah Local Aboriginal Land Council reccomend that Native Title Determination application NSD6019/01 Widjabul Aboriginal People (NC01/7) also be advised of the above works, contact person address Murray John Roberts Snr 8 Gundurimba Rd, Gundurimba, 2480. Thank you for the notice. Yours Truly Murray John Roberts Snr. Sites Officer Ngulingah LALC. 53 Conway Street, PO Box 981 Lismore NSW 2480 Tel: (02) 6621 5541 Fax: (02) 6621 5068
Jubullum LALC	09.06.09	Chairperson Jubullum LALC Jubullum St/Jubullum Village via Tabulam NSW 2469 Ph 66661337	25.06.09	19.06.09 Received e-response from JLALC Dear Cheryl Your letter of 4/6/2009 refers. On behalf of Jubullum LALC, I acknowledge receipt of the correspondence and formally register interest in being part of the Registered Stakeholder Group. Regards Ross James CEO
Moombahlene LALC	09.06.09	Mr P Harmond Moombahlene LALC Po Box 70 Tenterfield NSW 2372	25.06.09	19.06.09 Received formal response from MLALC confirming receipt of our correspondence and formally accepting the offer to be part of the Registered Stakeholder group. MLALC suggested we contact Jubullum LALC to advise them of the project
Northern Rivers CMA	09.06.09	Aboriginal Reference Group Northern Rivers CMA PO Box 1417 Coffs Harbour NSW 2450	25.06.09	16.06.09 e response from Michael Pitt (GM Northern Rivers CMA) with list of recommended contacts * Casino Boolangle LALC *Ngulingah LALC *Bogal LALC *Jali LALC *Muli Muli LALC *Gugin Guddaba LALC *Glen Innes LALC
NTSCORP	09.06.09	Administration/Notification Team NTSCORP PO Box 2105 Strawberry Hills NSW 2012	25.06.09	

Bandjalang People	10.06.09	Members – Bandjalang People c/- NTSCORP Ltd Attn: Philippe Savidis PO Box 2105 Strawberry Hills NSW 2012 psavidis@ntscorp.com.au	25.06.09 Dianne Drake | SENIOR CASE MANAGER National Native Title Tribunal | New South Wales and Australian Capital Territory Registry (spoke to Dianne who emailed contact details for the Native Title Claimant groups)	
Widajabul Aboriginal People	10.06.09	Members – Widajabul Aboriginal People c/- Blackshield & Co Attn: Simon Blackshield Level 57, MLC Centre 19-29 Martin Place Sydney NSW 2000 'simon@blackshield.net'	25.06.09 Dianne Drake | SENIOR CASE MANAGER National Native Title Tribunal | New South Wales and Australian Capital Territory Registry (spoke to Dianne who emailed contact details for the Native Title Claimant groups)	25.06.09 Sent letter of confirmation that the Widajabul Aboriginal People are now part of the Registered Stakeholder group as per advise from Ngullingah LALC
STAGE 1, ROUND TWO LETTERS				
Bogal LALC	17.06.09	Members: Bogal LALC c/- Mr Lance Manton 156 Bridge Street CORAKI NSW 2471	03.07.09	Stage 1 letter sent informing project details and advising that the CMA had recommended we contact this organisation.
Jali LALC	17.06.09	Members: Jali LALC C/- Chairperson Unit 8/48 Tamar Street BALLINA NSW 2478	03.07.09	Stage 1 letter sent informing project details and advising that the CMA had recommended we contact this organisation.
Muli Muli LALC	17.06.09	Members: Muli Muli LALC C/- Mathew Green Po Box 68 WOODENBONG 2476	03.07.09	Stage 1 letter sent informing project details and advising that the CMA had recommended we contact this organisation.
Gugin Guddaba LALC	17.06.09	Members: Gugin Guddaba LALC C/- Ron Randall 53 Ettrick St KYOGLE 2474	03.07.09	Stage 1 letter sent informing project details and advising that the CMA had recommended we contact this organisation.
Glen Innes LALC	17.06.09	Members: Glen Innes LALC C/- Richard Potter 181 Lang St (PO box 157) Glen Innes 2370	03.07.09	Stage 1 letter sent informing project details and advising that the CMA had recommended we contact this organisation.
Bundjalung Elders Council Ab Corp	17.06.09	Members: Bundjalung Elders Council Ab Corp c/- Chairperson PO Box 528 Lismore 2480	03.07.09	Stage 1 letter sent informing project details and advising that the Lismore Council had recommended we contact this organisation.
Aboriginal Elder	19.06.09	Ms Lilly Bartholomew 7 Railway Street Tenterfield 2372	13.07.09	sent letter acknowledging contact with TransGrid and advising Ms Bartholomew that she is now part of the Registered Stakeholder Group.

Aboriginal Elder	19.06.09	Ms Bertha Daley 71 Riley Street Tenterfield 2372	13.07.09	sent letter acknowledging contact with TransGrid and advising Ms Daley that she is now part of the Registered Stakeholder Group.
Border Rivers-Gwydir CMA	24.06.09	Chairperson Aboriginal Reference Group Border Rivers-Gwydir CMA PO Box 411 Inverell NSW 2360	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Kwiembal Elders Indigenous Group	24.06.09	Chairperson 21A Dudley Street Ashford NSW 2361 Cedric Talbot mobile: 0448 157 567	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation. 06.07.09 Cedric Talbot phoned to advise that this organisation had received the correspondence and wished to be part of the Registered Stakeholder Group.
Ngoorabul Elders	24.06.09	Chairperson PO Box 157 Glen Innes NSW 2370	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Baryulgil Square LALC	24.06.09	Chairperson PO Box 1383 Buryulgil via Grafton NSW 2460	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Jana Ngalee LALC	24.06.09	Chairperson PO box 1398 Malabugilmah via Grafton NSW 2460	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Shared Vision Aboriginal Corp	24.06.09	Chairperson PO Box 14 Lismore NSW 2480	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Bundjalong Tribal Society	24.06.09	Chairperson PO Box 557 Lismore NSW 2480	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Wai Bal Aboriginal Corporation	24.06.09	Chairperson PO Box 6315 Lismore NSW 2180	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Cubawee Aboriginal Corporation	24.06.09	Chairperson 127 Tweed Street North Lismore NSW 2480	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Nunger Aboriginal Corporation	24.06.09	Chairperson 7 Lundurimba Rd Lismore NSW 2480	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Kurrachee Co-operative Society	24.06.09	Chairperson PO Box 3 Coraki NSW 2471	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Jarguan Aboriginal Corporation	24.06.09	c/- Gloria Torrens 7 Creek Street Tabulam NSW 2469	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.

Bonalbo Aboriginal Corporation	24.06.09	c/- Cedrick Walker 1 Peacock St Bonalbo NSW 2469	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Mall-Bunoogah Aboriginal Corp	24.06.09	c/- Kevin Torrens Sandilands St Mallanganee NSW 2469	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Jubal Aboriginal Corp	24.06.09	c/- Cultural Heritage Officer Lot 1 Sandilands St Mallanganee NSW 2469	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Buyinbin Aboriginal Corp	24.06.09	c/- Maree Vidler Po Box 835 Casino NSW 2470	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Tabulam Aboriginal Corp	24.06.09	c/- Frank Walker Po Box 25 Tabulam NSW 2469	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Banjalang Aboriginal Corp	24.06.09	c/- Simone Baker 31 Belmore Street Coraki NSW 2471	13.07.09	Stage 1 letter sent informing project details and advising that the DECC had recommended we contact this organisation.
Edgerton-Kwiembal People	24.06.09	c/ - Liza Duncan 2 David Street Ashford NSW 2361		sent letter acknowledging contact with us and advising that they are now part of the Registered Stakeholder Group.
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	24.06.09	c/- Barry Brown Chairperson 63 Percy Street Warwick Q 4370		sent letter acknowledging contact with us and advising that they are now part of the Registered Stakeholder Group.
Maree Aboriginal Corporation	30.06.09	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370		sent letter acknowledging contact with us and advising that they are now part of the Registered Stakeholder Group.
Anaiwan Land Council	01.07.09	c/- Chairperson PO Box 469 Inverell NSW 2360	17.07.09	Stage 1 letter sent informing project details and advising that the Inverell Shire Council had recommended we contact this organisation.
MurriGejarr Aboriginal Corp	01.07.09	c/- Liza Duncan PO box 742 Inverell NSW 2360	17.07.09	Stage 1 letter sent informing project details and advising that the Inverell Shire Council had recommended we contact this organisation.
NSW Dept Planning	01.07.09	c/- Rick Shapter Aboriginal Heritage Unit Locked Bag 5020 Parramatta NSW2124	17.07.09	Stage 1 letter sent informing project details and advising that the Inverell Shire Council had recommended we contact this organisation.
STAGE 2, Methodology Letter				***Comments***
Ngulingah LALC	21.08.09	Chairperson Ngulingah LALC 53 Conway St (PO Box 981) Lismore NSW 2480		Sent methodology letter, included one map. 27.08.09 .
Jubullum LALC	21.08.09	Chairperson Jubullum LALC Jubullum St/Jubullum Village		Sent methodology letter, included one map. 27.08.09 .

		via Tabulam NSW 2469 Ph 66661337	
Moombahlene LALC	21.08.09	Mr P Harmond Moombahlene LALC Po Box 70 Tenterfield NSW 2372	Sent methodology letter, included one map. 27.08.09 .
Aboriginal Elder	21.08.09	Ms Lilly Bartholomew 7 Railway Street Tenterfield 2372	Sent methodology letter, included one map. 27.08.09 .
Aboriginal Elder	21.08.09	Ms Bertha Daley 71 Riley Street Tenterfield 2372	Sent methodology letter, included two maps. 27.08.09 .
Kwiembal Elders Indigenous Group	21.08.09	Chairperson 21A Dudley Street Ashford NSW 2361 Cedric Talbot mobile: 0448 157 567	Sent methodology letter, included two maps. 27.08.09 Mr Cedric Talbot phoned to speak to Jodie in relation to the FW, it appears that this organisation is only quite small and does not have a ABN, is subsequently exempt from w/comp laws. Cedric expressed his wish to participate in the survey and Jodie advised we will send correspondence instructing the KEIG to obtain an ABN and supply us with letter re: exemption 07.09.09 Sent letter with information as requested and asked that if they wished to send the necessary documentation that they do so by 25.09.09.
Edgerton-Kwiembal People	21.08.09	c/ - Liza Duncan 2 David Street Ashford NSW 2361	Sent methodology letter, included two maps.
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	21.08.09	c/- Barry Brown Chairperson 63 Percy Street Warwick Q 4370 ph: 07 4661 7261	Sent methodology letter, included two maps. 27.08.09 . Selina phoned on behalf of Barry Brown, JB not available at the time. She said that their organisation had worked on the Inverell project with TG and that in that instance community meetings had been held whereby the Indig community were consulted in relation to the project and discussed the fees that they would charge.
Maree Aboriginal Corporation	21.08.09	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370 ph: 4661 7697	Sent methodology letter, included two maps. 28.08.09 . Robert Brown (chairperson) phoned and spoke with Jodie in relation to the letter received, documented below by JB "Today another, this time from Maree LALC which is actually a Qld group (also a problem as law quite diff there for CH). Robert Brown was quite difficult and was wanting meetings with lawyers and for agreements to be drawn up

				before any survey done. He wanted to set his own pay rates, has expectations that TG will get him a hire car etc etc. Was informed that if his group earns under the 7500 threshold then they are covered by workcover but that he will need to provide a letter on letterhead that that is the case. Advised he would be sent the words he needs, but did note that the group has to earn under the threshold amount. He said they do have an ABN which is a start.
Widajabul Aboriginal People	21.08.09	c/- Murray John Roberts Snr 8 Gundurimba Rd, Gundurimba, 2480		Sent methodology letter, included no map, ETL deemed to be not within the boundaries of the Widajabul
Bandjalang People # 2 (NT)	21.08.09	Members – Bandjalang People c/- NTSCORP Ltd Attn: Jemima McCaughan PO Box 2105 Strawberry Hills NSW 2012 fax: 9310 4177		Sent methodology letter, included one map.
Casino LALC	21.08.09	Members: Casino LALC C/- Chairperson 110 Walker Street (PO Box 1047) Casino NSW 2470		Sent methodology letter, included one map.
Ashford LALC	21.08.09	Leanne Kelly ph: 6725 4411 ashfordlalc@bigpond.com PO Box 66 Ashford NSW 2361		Sent methodology letter, included no map, ETL deemed to be not within the boundaries of the ALALC.
STAGE 2 - (METHODOLOGY & Fieldwork Advice)	***DATE***	***Contact details***		***Comments***
Casino LALC	31.08.09	Members: Casino LALC C/- Chairperson 110 Walker Street (PO Box 1047) Casino NSW 2470	09.09.09	sent letter to CLALC advising the field assessment dates as being 14th-16th September, 5 maps included showing area for survey, requested copy of W/Comp certificate of Currency prior to survey.
Bandjalang People # 2 (NT)	31.08.09	Members – Bandjalang People c/- NTSCORP Ltd Attn: Jemima McCaughan PO Box 2105 Strawberry Hills NSW 2012 fax: 9310 4177	09.09.09	sent letter to bandjalang People # 2, c/- NTSCORP, advising the field assessment dates as being 14th September, 2 maps included showing area for survey, requested copy of W/Comp certificate of Currency prior to survey or exemption letter.
Jubullum LALC	31.08.09	Chairperson Jubullum LALC Jubullum St/Jubullum Village via Tabulam NSW 2469 Ph 66661337	09.09.09	sent letter to JLALC advising the field assessment dates as being 17th-18th September, 4 maps included showing area for survey, requested copy of W/Comp certificate of Currency prior to survey.

STAGE 2 - (FW advise - week 2)	***DATE***	***Contact details***		***Comments***
Moombahlene LALC	18.09.09	Members: MLALC C/- Peter Harmond CEO PO Box 70 Tenterfield NSW 2372		sent letter (email & hard copy) to MLALC advising the field assessment dates week 2 as being 28th Sept -2nd October, 4 maps included showing area for survey.
Lilly Bartholomew	18.09.09	L Bartholomew 7 Railway Street Tenterfield NSW 2372		sent letter advising the field assessment dates week 2 as being 29th Sept -2nd October. Requested confirmation that individual was suitably covered and would be able to participate.
Bertha Daley	18.09.09	Ms Bertha Daley 71 Riley Street Tenterfield 2372		sent letter advising the field assessment dates week 2 as being 29th Sept -2nd October. Requested confirmation that individual was suitably covered and would be able to participate.
STAGE 2 - (FW advise - week three)	***DATE***	***Contact details***		***Comments***
Moombahlene LALC	08.10.09	Members: MLALC C/- Peter Harmond CEO PO Box 70 Tenterfield NSW 2372		sent letter advising the field assessment dates week 2 as being 26th -30th October. Indicated that we will advise closer to the date where and what time the team will meet.
Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corp.	08.10.09	c/ - Liza Duncan 2 David Street Ashford NSW 2361 ph: 0429 019 634		sent letter advising the field assessment dates week 2 as being 26th -30th October. Indicated that we will advise closer to the date where and what time the team will meet.
Maree Aboriginal Corporation	08.10.09	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370 ph: 4661 7697		sent letter advising the field assessment dates week 2 as being 26th -30th October. Indicated that we will advise closer to the date where and what time the team will meet.
Kwiembal Elders Indigenous Group	08.10.09	Chairperson / Cedric Talbot 25 Albury Street Ashford NSW 2361 Cedric Talbot mobile: 0448 157 567		sent letter advising the field assessment dates week 2 as being 26th -30th October. Indicated that we will advise closer to the date where and what time the team will meet.
Lilly Bartholomew	08.10.09	L Bartholomew 7 Railway Street Tenterfield NSW 2372		sent letter advising the field assessment dates week 2 as being 26th Oct -30th October. Requested confirmation that individual was suitably covered and would be able to participate.
Bertha Daley	08.10.09	Ms Bertha Daley 71 Riley Street Tenterfield 2372		sent letter advising the field assessment dates week 2 as being 29th Sept -2nd October. Requested confirmation that individual was suitably covered and would be able to participate.

Kambuwal Aboriginal Corporation for Culture, Heritage & Land	08.10.09	c/- Barry Brown Chairperson 63 Percy Street Warwick Q 4370		sent letter advising the field assessment dates week 2 as being 26th -30th October. Indicated that we will advise closer to the date where and what time the team will meet.
INCIDENTAL CORRESPONDENCE / LIAISON				
Moombahlene LALC	29.05.09	Members: MLALC C/- Peter Harmond CEO PO Box 70 Tenterfield NSW 2372		received letter forwarded from URS received by TG in which the Moombahlene LALC requested that they should be consulted in relation to the project. 01.06.09 CB (OzArk) spoke with Peter Harmond summarising where the project was up to and that we will be starting the formal consultation process shortly.
TransGrid	18.06.09	Clair Baxter on behalf of Lilly Bartholomew & Bertha Daley		Clair forwarded a reponse from Lilly Bartholomew who wishes to be included as a Registered Stakeholder, as does her aunt Bertha Daley
Ashford LALC	24.06.09	Leanne Kelly ph: 6725 4411 ashfordlalc@bigpond.com PO Box 66 Ashford NSW 2361		Leanne phoned to request information relating to the project so that she could ascertain if any of the study area is within the ALALC boundaries. I emailed maps (website accessable) and the link to the TG site where she could access more information. Leanne phoned and requested that Ashford LALC be included in the Registered Stakholder group and asked that correspondence be addressed to their chairperson Malcolm Talbot
edgerton-kwiembal People	22.06.09	Liza Duncan 2 David Street Ashford NSW 2361		Ms Duncan contact Phil Cameron & Jodie Benton on mobile numbers and expressed interest in becoming part of the Registered Stakeholder Group. Phoned Liza back for address details and advised we would send out Stage 1 letter regarding the project. Liza also emailed confirmation
Casino LALC	03.09.09	Linda	PJC - phone	Linda? From CLALC phoned re survey...she was a bit quick with her name Linda possibly. She said that they could supply sites officers as requested. I told her it is likely to be put on hold for a bit but once we knew what was going on we would write to them and inform them.
Bertha Daley	04.09.09		JB - mobile	Bertha Daley contacted Jodie Benton on mobile (after hours) to discuss issues relating to the w/compensation cover. Jodie re-iterated what was outlined in the letter and requested that if she had

				further queries that Ms Daley contact the office landline during business hour.s
Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corp.	07.09.09	c/ - Liza Duncan 2 David Street Ashford NSW 2361 ph: 0429 019 634	CB - phone / email	received email from Vicki Duncan requesting that OzArk phone Liza re: project. Contacted Liza who confirmed that the EKEHCAC has sites officers available. Explained we were doing our best to plot where the ETL route vs the boundaries of the stakeholders are. Dates are still applicable and that we will be sending more detailed maps closer to the date. Liza was fine with the methodology and said their organisation was a small business not earning over $7500, advised i would send through sample letter.
Casino LALC	08.09.09	Linda ph: 6662 6286	CB - phone	phoned and spoke to with Linda to confirm dates and request Certificate of Currency. Linda advised that they would probably be fine with the dates, checked that we required two sites officers, however would phone back.
Casino LALC	08.09.09	Veronica ph: 6662 6286	CB - phone	Linda had not phoned back so phoned to get w/comp confirmation and check if they had sites officers, she was out of the office so left a message with Veronica asking if Linda could phone back. Linda phoned back and said that she would request the Certificate from their insurer, GIO, or speak with their book-keeper.
Jubullum LALC	08.09.09	Ross James ph: 6666 1337 'jubullum@nor.com.au'	Cb - phone	no answer, left message on answerphone asking if Ross could phone the office. 12.40 pm. Ross phoned back and advised he had only received the letter yesterday and said that he was in the process of arrangeing two sites officers. Even though he said it would be more appropriate to taken an elder on the survey he said that they would not really be able to 'go the distance' mentioned that Elders in their area were determined by age. A couple of deaths occuring recently may delay his endeavours to get people but he will contact me when he has. He will also look into the Certificate of Currency, speak to bookkeeper. OzArk to email methodology letter which he did not receive.

Maree Aboriginal Corporation	09.09.09	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370 ph: 4661 7697	cb - phone	Mr Brown phoned to check on correspondence that OzArk had sent out advising of w/comp issues. Spoke at GREAT length about the project and he was concerned that we were not going about the project how the community wanted. We needed to consult with them first and hear their concerns. This conversation was extensive and covered such things as the legality of sites officers doing survey, having sitting fees for any meetings held, not listening to their needs and they need to be consulted over who they want to do the survey. etc. It was expressed that we were keen to have meeting however these would be informal and no legal paperwork was necessary and that we did not have the authority to okay sitting fees.
Bandjalang People # 2 (NT)	10.09.09	Members – Bandjalang People c/- NTSCORP Ltd Attn: Jemima McCaughan ph: 9310 3188	Cb - PHONE	left message for Jemima, apparantly she has been away from the office for the last week and is not returning until next week. Asked if someone was handling her matters as it was apparant that the letter re: FW had arrived during her absence. Was advised by Heidi the receptionist she would attempt to contact Jemima to see where this issue was up to.
Bandjalang People # 2 (NT)	11.09.09	Members – Bandjalang People c/- NTSCORP Ltd Attn: Jemima McCaughan ph: 9310 3188	Cb - PHONE	Contacted NTSCORP as had not heard back. Heidi (receptionist) took number and advised she would have another person phone this office in leiu of Jemima. Phillipe phoned @ 3.30pm advising another number to contact in Coffs Harbour, phoned Natalie 6651 4588 and left message.
Casino LALC	11.09.09	Veronica / Linda ph: 6662 6286	CB - phone	tried several times throughout the day, morning and afternoon, no answer, sent email in afternoon requesting they phone the office when it is attended. Contact number does not have messagebank or answer machine. (NB phoned Ashley Moran @ DECCW Lismore attempting to secure other contact number? left message on office phone, mobile switched off Ph: 6627 0205 / 0428 263 230.

Casino LALC	14.09.09	LInda ph: 6662 6286	CB - phone	spoke to Linda who confirmed they had send a sites officer out for the day, advised that she would be sending through Cert of Currency as soon as she received it.
Casino LALC	15.09.09	LInda ph: 6662 6286	CB - phone	Linda phoned to express concern that their sites officer had worked a ten hour day and that so many hours was not a reasonable amount to only be paid $660. Advised that their rate was normally $100 p.h however the fee has never been an issue before and I noted this and said that I would speak to Jodie in relation to the extended hours.
Casino LALC	16.09.09	Linda e: 'cblalc@bigpond.com'	cb - email	Spoke to Linda who confirmed they had send a sites officer out for the day, advised that she would be sending through Cert of Currency as soon as she received it.
Jubullum LALC	15.09.09	Ross James 'jubullum@nor.com.au'	cb - email	emailed Ross to confirm if he had sites officers available Wedn/Thurs for the survey. 16.09.09 follow up phone call to office, spoke to Krystal who advised that Ross was away on business however she advised that there was a sites officer organised. Krystal was not able to assist with the w/comp insurances and said I need to speak to Ross.
Jubullum LALC	16.09.09	Krystal ph: 6666 1337 'jubullum@nor.com.au'	cb - phone	spoke to Krystal twice, initially she said that they had a sites officer organised however when I phoned back with meeting destination and times she advised me to 'not get my hopes up' as she was now not confident that there had been one organised. Krystal unfortunatley was unable to assist with any queries and the fourth time I phoned said that it was not appropriate that the sites officer working on behalf of CLALC worked within their boundary. She advised that there was no-one else available that I could speak to and was sorry that Ross was not there to answer any questions because he had told her nothing in relation to this fieldwork or project.

DECCW Lismore	16.09.09	Ashley Moran ph:0428 263 230.	cb - phone	phoned Ashley Moran for advise on predicament of no reps being available and our desperate attempts to have Aboriginal participation in this area of the survey. Ashley agreed that it was not appropriate that another sites officer from another LALC be on the survey within JLALC boundary, he said that he had been at the same meeting as Ross James and was confident Ross would be back in the office tomorrow. I did discuss that this would mean we have no reps with us tomorrow but hopefully will on Friday and Ashley agreed that this would be the case.
Jubullum LALC	17.09.09	Ross James ph: 6666 1337	cb - phone	phoned Ross and he advised that unfortunately they are not able to provide a sites officer for the final day of the survey (Friday) most of the people are elders and Bill Walker (who Ashley Moran mentioned) has suffered a couple of strokes. I told Ross that if any of the elders had cultural heritage information relevant to the study area that we would be able to get in contact with them to share this information. Advised we would keep in touch and send out a copy of the draft report for any feedback when it became avaialble. Touched on the topic also of sites officers crossing into another LALC boundary and Ross agreed it was inappropriate and was not common practice.
Maree Aboriginal Corporation	22.09.09	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370 ph: 4661 7697	pjc - phone	Mr Brown phoned and spoke at GREAT length about the project. Insists that a meeting takes place prior to survey and lack of co-operation if it does not. PJC identified that as he is Qld based the likely reason for his expectations not being met is un-awareness of the ICCR process where meetings take place with registered stakeholders once objects ID within Study Area require management. PJC provided him with Ph no of DECCW archaeologist to get first hand info and copy of ICCRs so that he could see the requirements we need to follow. PJC and Bob noted that a meeting was still required however in Qld its prior to survey and in NSW its to discuss

				management of objects after survey. Bob was concerned about agreement - fees etc etc. PJC noted that this issue seemed to be the main driver for Bobs reqest to haave a meeting , the agreement he means appears to be for admin matters and 'get to know you' PJC noted that fees / coniditions terms were all in letters sent but if he wanted anything addressed separately he was more than happy to send another letter with these outlined in it. Issue of non-participation was noted, PJC stated that in NSW its opportunity to participate and whilst unfortunate we are required to continue with project should any respective community choose not to participate. PJC noted that he would keep an eye of for a letter Bob was sending and would ensure that he would address any of his conconerns in writing once it came but noted that we follow the ICCRs, not the Qld system which apears to be the source of concern with him.
Lilly Bartholomew	24.09.09	ph: 0432 808 204	PJC - phone	(Lilly left message on JB's mobile however as JB was away on fieldwork she requested that PJC contact Lilly from the office) PJC conversation with Lilly -
Moombahlene LALC	25.09.09	Peter Harmond ph: 0401 397 506		spoke to Peter who advised that it had been Darren who spoke to Phil earlier this week. Darren is a sites officer that MLALC normally contract out however Peter mentioned he has transport difficulty (ie. no car/ no licence) in any case Peter will ask Darren to give the office a call on Monday. Advised that I would email the MLALC with Phil's contact details so that Peter can pass these on.
Lilly Bartholomew	25.09.09	ph: 0432 808 204		Left message on mobile asking if Lilly could contact the office, left office number and Phil's mobile number asking if Lilly could contact either one to speak about the survey.
Moombahlene LALC	28.09.09	Peter Harmond		Peter emailed advising that he had passed the message onto Darren however indicated that he has nothing to do with MLALC and he is undertaking the work of his own accord.

Lilly Bartholomew	28.09.09	ph: 0432 808 204		Left message on mobile asking if Lilly could contact the office, left office number and Phil's mobile number asking if Lilly could contact either one to speak about the survey. 29.09.09 same message left again on mobile number.
Bob Brown - Maree	29.9.09		JB phone	Called to check we received his letter re insurances and whether that would be ok. Can we please write back to let him know that everything's fine. I told him CB had checked with TG and it seemed it was all good.
Bertha Daley	29.09.09	ph: 6736 5410	CB -phone	phoned Bertha to see if she had another contact number for Lilly, apparantly Lilly is up in Oakey and is due back into Tenterfield in the next couple of days. Advised Bertha that we had been trying to contact her and that PJC was interested in meeting up with possibly both Bertha and Lilly to see what cultural knowlege they had about the study area. Said I would try Lilly again tomorrow if Lilly did not return my call.
DECCW Armidale	29.09.09	ph: 6739 0721 Karen Glover	CB - phone	phoned and left message for Karen Glover to return my call, concerns that we have not had any sites officers participating in the survey due to insurances or apathy.
Moombahlene LALC	29.09.09	Peter Harmond 02 6736 3219	CB - phone	spoke to Peter and clarified that because Darren was not representing MLALC he was not a registered stakeholder as such. This conversation was quite lengthy as Peter felt that TG/Ozark were placing too many conditions on participants and by expecting the MLALC to cover them this was unfair on their resources. He expressed the disatisfaction with TG as a whole and suggested that their attitude towards cultural heritage was not particularly serious. One major point being why had they used a consultant who was not from the area, as Sue Hudson is. Sue apparantly would have been prepared to take a sites officer out on survey perhaps under her own w/comp policy. Peter told me that he had seen Lilly around town and I asked that if he saw her could he pass on the message that we were trying to get in contact. In regards to health

				of Lilly and Bertha Peter did mention it was probably not realistic that they were able to participate in the physical componant of the survey due to age and general fitness reasons.
Lilly Bartholomew	29.09.09	ph: 0432 808 204	cb - phone	Lilly phoned from a payphone and phone call was cut off originally however she phoned back to let us know she was back in town. Although Lilly is a member of MLALC she does not have insurances and I explained that we require w/comp or the equivalent cover, she mentioned she has life insurance. She advised that she has been on previous surveys over rugged terrain. I recommended that she speak to Phil as he is keen to speak with her and Bertha regarding any cultural knowledge that they may be able to share about the study area.
DECCW Armidale	30.09.09	ph: 6739 0721 Karen Glover	CB - phone	phoned and left message for Karen Glover to return my call, concerns that we have not had any sites officers participating in the survey due to insurances or apathy.
DECCW Armidale	01.10.09	ph: 6739 0721 Karen Glover	cb - phone	Karen Glover phoned and I expressed our concerns, she was not sure why the MLALC (given as an example due to MLALC having a sites officer amd a member who was a registered stakeholder but not enabling cover) were unable to provide cover for the sites officer, she works with the Glenn Innes LALC and it is custom for them to have their sites officers covered under the w/comp which is mandatory for all businesses. Karen suggested that we perhaps meet with the organisations to address their concerns and I confirmed that we were open with our methods and encouraged feedback regardless of physical participation in the survey.

Kwiembal Elders Indigenous Group	01.10.09	c/- Mr Cedric Talbot 25 Albury Street Ashford NSW 2361 ph: 0448 157 567	jb - phone	Cedric phoned to advise he had new address and say that he would be faxing through his insurances and ABN to the OzArk office. Whilst speaking with him JB confirmed area of interest for this organisation
Maree Aboriginal Corporation	07.10.09	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370 ph: 4661 7697	cb - phone	Bob phoned to check that the FW was not going ahead 12th October, advised that a letter is being mailed today confirming this and nominating FW to start 26th October.
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	07.10.09	c/- Barry Brown Chairperson 63 Percy Street Warwick Q 4370 ph: 07 4661 7261	cb - phone	Barry phoned to express concern that the correspondence he received previously did not include a travel allowance which would enable sites officer to be paid prior to survey. He expressed that participants may not be able to wait to be paid as they were incurring costs prior to work. Requested that conditions be put in writing
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	13.10.09	Selina Griffiths ph: 07 4661 7261	cb - phone	Selina phoned to confirm dates, had not received recent correspondence as yet. She queried the width of the easement and I advised that we would be contacting the organisations next week in relation to the finer details. Selina indicated that she would be participating in the survey and was concerned that the groups would not be big enough to cover the area. I did explain that it was not just one group but a few who would be participating thus the reps would be more than just one from KACCH&L.
Kwiembal Elders Indigenous Group	14.10.09	Chairperson / Cedric Talbot 25 Albury Street Ashford NSW 2361 Cedric Talbot mobile: 0448 157 567	fax	received via fax exemption letter from the KEIG / Malcolm Talbot
Kwiembal Elders Indigenous Group	20.10.09	Chairperson / Cedric Talbot 25 Albury Street Ashford NSW 2361 Cedric Talbot mobile: 0448 157 567		spoke to Cedric and advised FW postponed and due to begin on November 9th. Will contact prior to this date to confirm meeting location and time.
Maree Aboriginal Corporation	20.10.09	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370 ph: 4661 7697		spoke to Bob and advised FW postponed and due to begin on November 9th. Will contact prior to this date to confirm meeting location and time. Barry expressed again his concerns about the project indicating he thought that they should have two reps however I advised that there

				will be four groups participating and each having a rep will be a fair representation and we should cover a fair area.
Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corp.	20.10.09	c/ - Liza Duncan 2 David Street Ashford NSW 2361 ph: 6725 4213		emailed Liza/Vicky adving FW postponed. Followed up 21.10.09 with phone call, left message on answerphone
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	20/21.10.09	Selina Griffiths ph: 07 4661 7261		left message with Selina's mum, Selina is away in Toowoomba & will phone the office when she returns.
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	20/21.10.09	Andrew (Tom) Brown home no: 46 615 949 mobile no: 040 769 3089 address: 123 Wood street Warwick QLD 4370		Jodie Thank you for the the quick response and the one thing I forgot to include in my message is my contact details which are: home no: 46 615 949 mobile no: 040 769 3089 address: 123 Wood street Warwick QLD 4370 Thank you Andrew (Tom) Brown Director Kambuwal Corporation for Culture Heritage and Land
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	23.10.09	Barry Brown ph: 07 4661 7261		Barry phoned to confirm that Andrew (Tom) will be participating in the survey as his daughter (Selina) is now unable to make it. He asked about invoices and costs for accommodation and I advised that OzArk pay promptly on receipt of invoice and if the rep is to work 2 days or 3 days and lodge an invoice then it will be paid, we recognise that they will be paying for away from home costs.
FW week 3 - rescheduled				
Kwiembal Elders Indigenous Group	04.11.09	Chairperson / Cedric Talbot 25 Albury Street Ashford NSW 2361 Cedric Talbot mobile: 0448 157 567		phoned Cedric to advise the FW has been postponed and I will contact him when we have dates.
Maree Aboriginal Corporation	04.11.09	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370 ph: 4661 7697		phoned Bob to advise the FW has been postponed and I will contact him when we have dates.
Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corp.	04.11.09	c/ - Liza Duncan 2 David Street Ashford NSW 2361 ph: 0429 019 634 ph: 6725 4213		numbers given did not answer. Emailed Liza to advise FW have been postponed and I will contact them when we have dates. Also requested current numbers for phone contact.
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	04.11.09	Andrew (Tom) Brown home no: 46 615 949 mobile no: 040 769 3089		Emailed Andrew to advise FW have been postponed and I will contact him when we have dates.

		address: 123 Wood street Warwick QLD 4370		
Ron Connors (Aboriginal Individual)	09.11.09	Mr Ron Connors Unit 1/26 Greaves Street Inverell NSW 2360 ph: 0431 330 060	phone - PJC	Ron phoned OzArk office to register interest in the project. Spoke to Phil who explained he would be accepted as a late registration and that the individuals for fieldwork had been selected. Advised we would send him information on the project and keep him up to date with the progress.
Ivan connors (Aboriginal Individual)	09.11.09	Mr Ivan Connors 158 Sandon Street Gurya NSW 2365 ph: 0432 606 716	phone - PJC	Ivan phoned OzArk office to register interest in the project. Spoke to Phil who explained he would be accepted as a late registration and that the individuals for fieldwork had been selected. Advised we would send him information on the project and keep him up to date with the progress.
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	10.11.09	Barry Brown ph: 07 4661 7261	phone - JB	Barry phoned to confirm dates, also asked if it was possible to have junior participate. JB explained that although OzArk offers this on some jobs it is not possible on this project due to number of registered stakeholders and we cannot offer this to one group without offering it to all the others.
Lilly Bartholomew	10.11.09	ph: 0432 808 204	phone - CB	Lilly phoned reverse charge to apologise for not having been in in touch as she has had a couple of deaths in the family. Was advised the FW had been postponed and was scheduled for end of November, early December.
Olivia Connors	16.11.09	Ph: 0437 816 794 13 Martyn Street Ashford NSW 2361	phone - CB	Olivia phoned OzArk office to register interest in the project. It was explained she would be accepted as a late registration and that the individuals for fieldwork had been selected. Advised we would send her information on the project and keep her up to date with the progress.
Hilda Connors	17.11.09	ph: 0429 805 214 13 Martyn Street Ashford NSW 2361	phone - CB	Hilda phoned OzArk office to register interest in the project. It was explained she would be accepted as a late registration and that the individuals for fieldwork had been selected. Advised we would send her information on the project and keep her up to date with the progress.

Olivia Connors	18.11.09	Ph: 0437 816 794 13 Martyn Street Ashford NSW 2361	Correspondence posted advising that as per ICCR's Olivia will be advised of draft report availability and invited to comment. Included hard copy of TG's July project update and reference to website if more information is required. Also advised that all field positions have been allocated from Registered Stakeholder list.
Hilda Connors	18.11.09	ph: 0429 805 214 13 Martyn Street Ashford NSW 2361	Correspondence posted advising that as per ICCR's Hilda will be advised of draft report availability and invited to comment. Included hard copy of TG's July project update and reference to website if more information is required. Also advised that all field positions have been allocated from Registered Stakeholder list.
Ron Connors (Aboriginal Individual)	18.11.09	Mr Ron Connors Unit 1/26 Greaves Street Inverell NSW 2360 ph: 0431 330 060	Correspondence posted advising that as per ICCR's ron will be advised of draft report availability and invited to comment. Included hard copy of TG's July project update and reference to website if more information is required. Also advised that all field positions have been allocated from Registered Stakeholder list.
Ivan connors (Aboriginal Individual)	18.11.09	Mr Ivan Connors 158 Sandon Street Gurya NSW 2365 ph: 0432 606 716	Correspondence posted advising that as per ICCR's Ivan will be advised of draft report availability and invited to comment. Included hard copy of TG's July project update and reference to website if more information is required. Also advised that all field positions have been allocated from Registered Stakeholder list.
Maree Aboriginal Corporation	19.11.09	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370 ph: 4661 7697	spoke to Bob and verbally advised FW dates start 30th November to 4th December, advised letter will be sent out.
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	19.11.09	Barry Brown ph: 07 4661 7261	Barry phoned and I confirmed the rescheduled dates and advised I had emailed Andrew & will be sending a letter to Barry.
19.11.09 ALL LETTERS SENT OUT TO RESPECTIVE ORGANISATIONS ADVISING SCHEDULED FW DATES BEGINNING 30TH NOVEMBER			
Maree Aboriginal Corporation	25.11.09	Robert Brown Chairperson ph: 4661 7697 no mobile contact	phoned Bob to advise go-ahead with FW. He will ensure the sites officer is at the Tenterfield PO at 8am Monday 30th November
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	25.11.09	Andrew Brown ph: 040 769 3089	Andrew phoned to confirm the work prior to office being able to phone him. Advised it is scheduled to go ahead as planned and the team will meet at 8am at the Tenterfield PO.

Kwiembal Elders Indigenous Group	25.11.09	Cedric Talbot mobile: 0448 157 567		phoned Cedric to advise go-ahead with FW. As their rep will be travelling from Ashford he has elected to meet at the substation. Advised time the team will leave Tenterfield however until the day it will be difficult to give an exact time of arrival. Have Cedric's number so that we can phone and confirm better eta once on the road Monday.
Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corp.	25.11.09	Vicky Duncan ph: 67213434 or Ashford 67254404 no mobile number e: vickyduncan@gotalk.net.au		emailed Vicky (who will be sites officer for the FW) to advise go-ahead with FW. As she is travelling from Ashford has elected to meet at the substation. Advised time the team will leave Tenterfield however until the day it will be difficult to give an exact time of arrival. Vicky does not have a mobile number however advised landline numbers so that team can give her a better indication of their arrival at substation on Monday.
Hilda Connors	27.11.09	ph: 0429 805 214 13 Martyn Street Ashford NSW 2361	phone - PJC	Hilda phoned. In summary of a long conversation, Hilda and her daughter Olivia are very keen to become service providers. PJC noted that previous conversations and letters have indicated that their late registration has seen all FW positions already filled for this round of FW. Future work may be required if TG can not avoid Aboriginal sites and all Registered Stakeholders would be contacted to manage these when it is known. PJC reccommended that Hilda make contact with the LALC and offer her services to them as a LALC would have preference for a position for work as they represent a larger body of people than an individual.
Kwiembal Elders Indigenous Group	01.12.09	Cedric Talbot mobile: 0448 157 567	phone - cb	Cedric phoned to confirm details needed for payment of invoices. Advised that as per earlier correspondence the invoice need to include their ABN, on letterhead and he noted that they are not registered for GST.

Maree Aboriginal Corporation	02.12.09	Robert Brown Chairperson ph: 4661 7697	phone - cb	Bob phoned to confirm details needed for payment of invoices. Advised that as per earlier correspondence the invoice need to include their ABN, on letterhead and he noted that they are not registered for GST. Bob was also concerned that the other sites officers were representing the same organisation however I informed him this was not the case and advised him which groups they represented.
Geoffrey Green	02.12.09	ph: 6725 4411 Ashford LALC	PHONE - CB	Mr Green phoned to express concern that the sites officers that are participating in the survey are not representative of the groups that expressed interest. He also queried how the sites officers were nominated for sites work and I went through the DECCW protocol and also advised that the EOI first went out in June this year and it was also deemed that the ETL was not within the boundaries of the ALALC, as per correspondence we sent in August. His concerns were not allayed and he would like to speak with the Project Manager to express these issues. Advised I would have Phil or Jodie phone him next Monday on their return or he could contact them on the mobile number given to him.
Keith Connors / Individual	18.01.10	Unit 1/368 Chester Street Moree NSW 2400 ph: 6751 1033	phone - CB	Keith phoned to ask if there was anymore work going on for the assessment, had heard there was. He has worked/walked all over Australia and now lives in Moree. Explained the project was complete at this stage however if he chose to have a copy of the report when it is available we will advise him.
FIELDWORK 14 - 18TH SEPTEMBER				
Casino LALC		LInda ph: 6662 6286 e: 'cblalc@bigpond.com'		SITES OFFICER - participated
Bandjalang People		Members – Bandjalang People c/- NTSCORP Ltd Attn: Philippe Savidis PO Box 2105 Strawberry Hills NSW 2012 psavidis@ntscorp.com.au		unsuccessful in contacting this group to organise participation in the field survey.
Jubullum LALC		Ross James ph: 6666 1337 'jubullum@nor.com.au'		unable to provide a sites officer
FIELDWORK 28TH SEPTEMBER - 2ND OCTOBER				
Moombahlene LALC		Mr P Harmond Moombahlene LALC Po Box 70		chose not to participate.

		Tenterfield NSW 2372		
FIELDWORK 30 NOV - 4 DECEMBER				
Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corp.		SITES OFFICER - Vicky Duncan ph: 67213434 or Ashford 67254404 no mobile number e: vickyduncan@gotalk.net.au		
Kwiembal Elders Indigenous Group		SITES OFFICER - Lenny Contact Cedric Talbot mobile: 0448 157 567		
Kambuwal Aboriginal Corporation for Culture, Heritage & Land		SITES OFFICER - Andrew Brown ph: 040 769 3089		
Maree Aboriginal Corporation		SITES OFFICER - Leroy Brown Contact Robert Brown Chairperson ph: 4661 7697 no mobile contact		
FIELDWORK 7 DEC- 11 DECEMBER				
Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corp.		SITES OFFICER - Vicky Duncan / Steven Duncan ph: 67213434 or Ashford **67254404** no mobile number e: vickyduncan@gotalk.net.au		
Kwiembal Elders Indigenous Group		SITES OFFICER - Lenny Contact Cedric Talbot mobile: 0448 157 567		
Kambuwal Aboriginal Corporation for Culture, Heritage & Land		SITES OFFICER - Andrew Brown ph: 040 769 3089		
Maree Aboriginal Corporation		SITES OFFICER - Wally McIntosh Contact: Robert Brown Chairperson ph: 4661 7697 no mobile contact		
CONSULTATION 2010				
Alex Hippi (individual)	08.02.10	Mr A Hippi PO Box 36 Boggabille NSW 2409 m: 0401 277 335		Mr Hippi phoned to ask if there was anymore work going on for the assessment. Explained the project was complete at this stage however if he chose to have a copy of the report when it is available we will advise him.
Barry Brown		ph: 0401 243 664		called in, as he lives in Dubbo, to speak with Jodie about the project. Barry is Bob Brown's son
Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corp.	07.10.10	c/ - Liza Duncan 2 David Street Ashford NSW 2361		sent notice advising FW w/c 18th October, inviting one representative from this organisation
Kwiembal Elders Indigenous Group	07.10.10	Chairperson / Cedric Talbot 25 Albury Street Ashford NSW 2361		sent notice advising FW w/c 18th October, inviting one representative from this organisation
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	07.10.10	c/- Barry Brown Chairperson 63 Percy Street Warwick Q 4370	CONFIRMED 12/10/10 - same rep - Andrew (Tom) Brown.	sent notice advising FW w/c 18th October, inviting one representative from this organisation

Maree Aboriginal Corporation	07.10.10	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370 PH: 07 4661 7697	confirmed 12/10/10 - same rep - Leroy	sent notice advising FW w/c 18th October, inviting one representative from this organisation
Kwiembal Elders Indigenous Group	12.10.10	Chairperson / Cedric Talbot NEW ADDRESS 6 Bala Street Ashford 2361 NEW MOBILE: 0457 971 541 same landline	confirmed - 12/10/10 - REP will be Sharmayne Talbot (Cedric's daughter)	
Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corp.	13.10.10.	c/ - Liza Duncan 2 David Street Ashford NSW 2361 ph: 67213434 disconnected Ashford **67254404** - left message e: vickyduncan@gotalk.net.au (undeliverable)		
Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corp.	14.10.10	Liza Duncan Ashford 67254404 - left message for Liza/Vicki or Steven Duncan		
Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corp.	15.10.10	Liza Duncan Ashford 67254404 - left message for Liza/Vicki or Steven Duncan 0429091634 - Liza	confirmed with Liza that it would be Vicki participating in FW and she is fine to meet @ PO in Tenterfield	
FIELDWORK - 18TH - 22ND OCTOBER				
Jubullum LALC	25.10.10	Ross James 'jubullum@nor.com.au' ph: 6666 1337 Jubullum LALC Jubullum St/Jubullum Village via Tabulam NSW 2469	cb - email / mail / phone (left message)	
Casino LALC	25.10.10	Members: Casino LALC C/- Chairperson 110 Walker Street (PO Box 1047) Casino NSW 2470 fax: 6662 6290 phone: 6662 6286	cb - email / phone (left message)	
Moombahlene LALC	25.10.10	Members: MLALC C/- Peter Harmond CEO PO Box 70 Tenterfield NSW 2372	cb - email	
Casino LALC	26.10.10	Members: Casino LALC fax: 6662 6290 phone: 6662 6286	PJC - phone left message	left message on answerphone
Moombahlene LALC	29.10.10	Barry Duroux - CEO ph: 6736 3219	CB - phone	Spoke to Bradley Duroux who advised he was the site officer for next week, Barry (CEO of MLALC) emailed exemption letter through. Advised fw on Monday, phoned and spoke with Bradley - 0421 871 412 also left message on the answerphone at MLALC to advise Barry I had spoken to Bradley and emailed confirmation of arrangements to the MLALC office

Jubullum LALC	29.10.10	Ross James ph: 6666 1337 'jubullum@nor.com.au'	cb - phone	contacted Ross who advised he did not have a site officer as yet and was waiting to hear back. He suggested I contact him on Tuesday to see if he had heard anything. Emailed reminder & advise of dates and requirment for Certificate of currency.
Casino LALC	29.10.10	phone: 6662 6286	CB - phone	phoned office, no answer, left message on answerphone advising FW would be Thursday 4th November, requesting someone contact the office and also provide a certificate of Currency.
Casino LALC	01.11.10	phone: 6662 6286	CB - phone	phoned office, no answer, left message on answerphone advising FW would be Thursday 4th November, requesting someone contact the office and also provide a certificate of Currency.
Casino LALC	01.11.10	phone: 6662 6286	CB - phone	Veronica phoned from CLALC to advise she had received the fax only today as she has been away from the office. Advised she would try and arrange someone for the survey on Thursday and I will contact her tomorrow. Reminded her we would need the Certificate of Currency as well.
Jubullum LALC	2.11.10	Ross James ph: 6666 1337	CB - PHONE	spoke with Krystal, Ross will be in the office hopefully after 2pm. Advised I will phone him back.
Jubullum LALC	2.11.10	Ross James ph: 6666 1337	CB - PHONE	2.20 PM spoke with Krystal, Ross still not in office, advised I will call back after 3pm
Casino LALC	02.11.10	Veronica phone: 6662 6286	CB - PHONE	2.22pm left message on answerphone for Veronica to contact the OzArk office re: survey etc..
Jubullum LALC	2.11.10	Ross James ph: 6666 1337	CB - PHONE	3.39pm left message on answerphone, no-one in office to take the call. Left the OzArk office number and requested Ross call either myself, Kim or Heidi back re: FW tomorrow.
Jubullum LALC	2.11.10	Ross James ph: 6666 1337	CB - PHONE	4.09 pm left message on answerphone, no-one in office to take the call. Left Jodie's mobile number and requested Ross call her direct re: FW tomorrow or alternativley contact the office on number left before.
Jubullum LALC	3.11.10	Ross James ph: 6666 1337	CB - PHONE	left message with Tammy for Ross to contact OzArk office (9.24am).

Casino LALC	03.11.10	phone: 6662 6286 Veronica	CB - PHONE	9.19am - phoned, Veronica advised she would send through Certificate of Currency and site officer is Dwayn. I will contact her with times and meeting place after we receive info and I speak with Jodie re these issues. 9.26am - received insurances and advised via return email I would contact her with confirmation of arrangements after I speak with Jodie.
Casino LALC	03.11.10	phone: 6662 6286 Veronica	CB - PHONE / EMAIL	12.21pm left message on answerphone asking Veronica to confirm the message either verbally or by return email. Finalised meeting time and place and need confirmation. Emailed information as well.
Casino LALC	03.11.10	phone: 6662 6286 Linda	cb - phone	received 'read receipts' from emails, no reply either verbally or via return email. Phoned and spoke to Linda who confirmed that site officer will be at meeting point at 8am tomorrow morning.
Casino LALC	03.11.10	phone: 6662 6286 Veronica	CB - PHONE	2.50 pm Veronica phoned and advised she would drop Dwayne there and back in the instance that the survey finished closer to Casino and he would not have to be driven back to get his vehicle at the meeting place.
FIELDWORK - 2ND - 5TH NOVEMBER				
Maree Aboriginal Corporation	09.11.10	Bob Brown PH: 07 4661 7697	CB - PHONE	Bob contacted the office in relation to additional FW and concerned about the open site which was recorded during the 1st week of survey with Ben Churcher. I advised Bob that no work would be going ahead without consultation with the community. Bob felt that their concerns regarding the survey being done too quickly and not enough areas being covered was falling on 'deaf ears'. Also would like to see more surveys and re-visit to site it done by Xmas this year as he is also concerned that because sites have been recorded the property owners may destroy them as they fear Native Title.

Edgerton-Kwiembal Environmental, Heritage & Cultural Aboriginal Corp.	11.11.10	Liza Duncan 'lizaduncan2361@hotmail.com'	JB - EMAIL	hi jodie, wanting to know when will work start for the places that missed along the access road liza Advised by Jodie that access track locations that were not able to be accessed were replaced with others. May be potential in future to access these locations however is likely to be post project approval.
Kwiembal Elders Indigenous Group	15.11.10	Cedric Talbot NEW MOBILE: 0457 971 541	CB - PHONE	Cedric phoned to see if there was any additional fieldwork going to be done prior to Xmas, advised no there was not.
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	17.11.10	Tom Brown E: 'browns70@bigpond.com'		Hello Cheryl While doing the access track survey on the 18th Oct with Ben Churcher it was discussed about the possibility of further work before christmas. Ben was not 100% sure of this. Would it be possible to get a forcast if OzArk has any future work on the Tenterfield transmission line until the end of the year. Thank you Advised we will not likely be taking any fieldwork for the project prior to Christmas. Also noted the draft report will be available soon and it will be sent to all registered stakeholders should they so wish.
Provision of Draft report				
Jubullum LALC	01.03.11	Mr R James / CEO Jubullum LALC Jubullum St/Jubullum Village via Tabulam NSW 2469 Ph 66661337		letter sent advising report was available for review, please contact OzArk office ASAP for a copy, 23/3/2011 final date for comment
Jubullum LALC	07.03.11	Ross James		Ross emailed requesting copy of draft report, upload and received via 'send this file'.

Aboriginal Elder	01.03.11	Ms Bertha Daley 71 Riley Street Tenterfield 2372		letter sent advising report was available for review, please contact OzArk office ASAP for a copy, 23/3/2011 final date for comment
Olivia Connors	01.03.11	Ph: 0437 816 794 13 Martyn Street Ashford NSW 2361		letter sent advising report was available for review, please contact OzArk office ASAP for a copy, 23/3/2011 final date for comment
Ivan connors (Aboriginal Individual)	01.03.11	Mr Ivan Connors 158 Sandon Street Gurya NSW 2365		letter sent advising report was available for review, please contact OzArk office ASAP for a copy, 23/3/2011 final date for comment
Ron Connors (Aboriginal Individual)	01.03.11	Mr Ron Connors Unit 1/26 Greaves Street Inverell NSW 2360 ph: 0431 330 060		letter sent advising report was available for review, please contact OzArk office ASAP for a copy, 23/3/2011 final date for comment
Ms Lilly Bartholomew Aboriginal Elder	01.03.11	Ms Lilly Bartholomew 7 Railway Street Tenterfield 2372		letter sent advising report was available for review, please contact OzArk office ASAP for a copy, 23/3/2011 final date for comment
Hilda Connors	01.03.11	Hilda Connors 13 Martyn Street Ashford NSW 2361		letter sent advising report was available for review, please contact OzArk office ASAP for a copy, 23/3/2011 final date for comment
Keith Connors	01.03.11	Unit 1/368 Chester Street Moree NSW 2400		letter sent advising report was available for review, please contact OzArk office ASAP for a copy, 23/3/2011 final date for comment
Ngulingah LALC / Widajabul Aboriginal People	01.03.11	Mr M Roberts Snr NEW ADDRESS: 3/175 Dawson Street, Lismore 2480 e: 'Gloria.Hennessey@ngulingah.org.au'		letter sent advising report was available for review, please contact OzArk office ASAP for a copy, 23/3/2011 final date for comment
Bandjalang People # 2 (NT)	01.03.11	Members – Bandjalang People c/- NTSCORP Ltd Attn: Jemima McCaughan PO Box 2105 Strawberry Hills NSW 2012 fax: 9310 4177		letter sent advising report was available for review, please contact OzArk office ASAP for a copy, 23/3/2011 final date for comment
Ashford LALC	01.03.11	Ms L Riggs PO Box 66 Ashford NSW 2361		letter sent advising report was available for review, please contact OzArk office ASAP for a copy, 23/3/2011 final date for comment
Ashford LALC	21.03.11			Hi Cheryl, Ashford LALC would like to request a copy of the draft report on the Aboriginal Heritage Assessment for the Far North NSW Transmission Line Upgrade

				between Bonshaw and Lismore. Our postal address is PO Box 66 Ashford NSW 2361. Many thanks Lorrayne Riggs CEO Ashford Local Aboriginal Land Council Phone: 02 6725 4411 Fax: 02 6725 4422 Email: landcouncil@ashfordlalc.com
STAKEHOLDERS WHO RECEIVED A HARD COPY OF THE DRAFT REPORT (FIRST INSTANCE)				
Casino LALC	01.03.11	Members: Casino LALC C/- Chairperson 110 Walker Street (PO Box 1047) Casino NSW 2470		COPY OF DRAFT report sent, response/comment due by 23 March2011
Moombahlene LALC	01.03.11	Members: Moombahlene LALC c/- Mr B Durroux / CEO PO Box 70 Tenterfield NSW 2372		COPY OF DRAFT report sent, response/comment due by 23 March2011
Kwiembal Elders Indigenous Group	01.03.11	Chairperson 6 Bala Street Ashford NSW 2361 Cedric Talbot NEW MOBILE: 0457 971 541		COPY OF DRAFT report sent, response/comment due by 23 March2011
Edgerton-Kwiembal People	01.03.11	c/ - Liza Duncan 2 David Street Ashford NSW 2361		COPY OF DRAFT report sent, response/comment due by 23 March2011
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	01.03.11	c/- Barry Brown Chairperson 63 Percy Street Warwick Q 4370		COPY OF DRAFT report sent, response/comment due by 23 March2011
Maree Aboriginal Corporation	01.03.11	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370		COPY OF DRAFT report sent, response/comment due by 23 March2011
RESPONSES TO REPORT				
Jubullum LALC	29.04.11	Mr Ross James e: 'jubullum@gmail.com'		emailed request for feedback.
Maree Aboriginal Corporation	29.04.11	Bob Brown PH: 07 4661 7697		Spoke to Bob who was concerned about the sites that he feels need to be revisited. He would like himself and Barry Brown, as Elders, to visit these sites and discuss the management of them. He advised that Leroy (Site officer for Maree) confirmed there were a couple of big sites recorded and Bob says they are of cultural significance and therefore needed to be managed appropriately.

Ashford LALC	02.05.11	Lorrayne Riggs e: 'landcouncil@ashfordlalc.com '		Hi Cheryl, We have Board Meeting on 10th May and will come back to you with any feedback soon after this date. Many thanks for following it up. Lorrayne Riggs CEO Ashford Local Aboriginal Land Council Phone: 02 6725 4411 Fax: 02 6725 4422
Kwiembal Elders Indigenous Group	03.05.11	Cedric Talbot PH: 0457 971 541		contacted Cedric who advised he was happy with the report and the way the project has been managed. Cedric said that had he have had any problems with it he would have let us know. He felt that although he did not read the entire report he looked over the most important bits and was fine with it all. Queried if there was more work coming up on the project, if so he would like to be involved.
Casino LALC	03.05.11	Veronica phone: 6662 6286		phoned Casino LALC office, no answer, phone rang out, unable to leave message.
Jubullum LALC	03.05.11	Ross James ph: 6666 1337		number was busy, diverted to message bank. Asked if Ross could contact either the office number or flick me an email to confirm if he was satisfied with the draft report and was he intending to submit any comments.
Moombahlene LALC	03.05.11	Barry Duroux - CEO ph: 6736 3219		spoke to Barry who advised there was a delegate put together to address any issues with the report and give feedback. The delegate is yet to report back to Barry and he will chase it up. I confirmed that they did receive the report and that comments were due over a month ago.
Edgerton-Kwiembal People	03.05.11	Liza Duncan ph: 67254404 @ ALALC office: 02 6725 4411 mob: 0429 091 634		Liza noted that she had spoken to Vicki (in addition to Cedric) and that they felt that the artefacts recorded on the access tracks should be collected and moved to their keeping place prior to any works commencing, noted that a representative of the Edgerton-Kwiembal People should be involved in the collections. In relation to the Stone Quarry site where the pole would potentially be built Liza said this should preferably be avoided however should it need to be moved an Indigenous Site Officer should be

				consulted about any location which was being considered as it's resting place. Vicki had also noted that the stone axes that were recorded should be documented and collected and moved to their keeping place. Queried if there was more work coming up on the project, if so either herself our Vicki should be involved.
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	03.05.11	Barry Brown ph: 07 4661 7261		Spoke to Barry who feels the same as Bob (Brown) about the need to revisit the sites are they are of cultural significance and it is necessary they are able to see the sites prior to discussing future management of them.
Widajabul Aboriginal People	03.05.11	c/- Murray John Roberts Snr NEW ADDRESS: 3/175 Dawson Street, Lismore 2480 e: 'Gloria.Hennessey@ngulingah.org.au' ph : 0418 736 294		emailed request for feedback. Do not have contact number. Also emailed the Ngulingah LALC asking if they could forward it on or find a contact number for Murray 'John' Roberts. Mobile number received, contacted 'John' Roberts, advised he was just on his way to the post office now and will pick up the report. He will contact the OzArk office should he have any issues to address.
Widajabul Aboriginal People	06.05.11	Murray (John) Roberts		Murray Roberts phoned and expressed his concern relating to the areas he feels should have been surveyed. Although he understands that the areas assessed during the project related to the current impact areas, he said that perhaps additional areas should have been assessed as potentially the project may expand in the future and they will have to go back and be re-assessed. Murray noted this happened with the Branxton project.

Appendix 3: Aboriginal Community Correspondence

Copy of Expression of Interest Advert appearing in 'Southern Free Times' and 'Northern Star' newspapers.

Heritage Study

Far North NSW Transmission Line Project

TransGrid, owner and operator of the NSW high voltage electricity network, is planning to construct an electrical link between the existing electricity switching station near Bonshaw and their Lismore Substation, Far North NSW.

Local Aboriginals with a traditional interest in this area, who wish to be consulted with regard to an archaeological study, are invited to apply to be kept informed and involved.

Interested parties can contact OzArk between 9.00am - 5.00pm weekdays, on (02) 6882 0118.

Written expressions of interest to be sent to:

OzArk EHM
PO Box 2069
Dubbo, NSW, 2830

Submissions should be received by C.O.B. 29 June 2009.

TransGrid

Tear Sheet from 'Southern Free Times' ,11 June 2009.

Valley people don't come camping when there are shots fired over their head.

"This is the second time this has happened, it happened earlier this year. I've got nothing against people shooting, I'm a registered shooter myself, but you don't endanger other people."

It is unclear whether the shooter had permission from or had been hired by property owners to undertake the shoot.

The Free Times attempted to contact

Moombahlene Local Aboriginal Land Council (MLALC)

A Local Aboriginal Land Council constituted under s.50 of the Aboriginal Land Rights Act 1983

ABN 87 798 635 420

Your Reference:
Our Reference: jb090512transgridlineupgradeletter

Postal Address:
PO Box 70
Tenterfield NSW 2372

12 May 2009

Letter received on 18th May 09
Denis

Mr. Denis Novakovic
Project Manager
TransGrid
PO Box A1000
SYDNEY SOUTH NSW 2315

Dear Denis

It has been bought to the attention of the Moombahlene Local Aboriginal Land Council that TransGrid have identified the need to upgrade the power supply in Far North NSW and is proposing to construct an electrical link between the existing electricity switching station near Bonshaw and its Lismore substation. The Moombahlene Local Aboriginal Land Council of Tenterfield has been advised that there may be Aboriginal Sites in the area in which you will be upgrading, therefore we would appreciate if you could tell us what you're cultural & heritage plan is and when you will be consulting with the Moombahlene LALC in relation to this matter.

Any correspondence should be sent to the CEO of the MLALC office, Mr. Peter Harmond at PO Box 70 TENTERFIELD NSW 2372.

Yours sincerely
Janine Binge
For.

Peter B Harmond
Chief Executive Officer
Moombahlene Local Aboriginal Land Council

Tel: (02) 6736 3719(h) Facs. (02) 6736 1486 Email: moombahlenelalc1@bigpond.com
Office: 299 Rouse Street TENTERFIELD NSW 2372

Environmental & Heritage Management P/L

ABN: 59 104 582 354

1st June 2009

Members – Moombahlene LALC
c/- Mr P Harmond
CEO
PO Box 70
Tenterfield NSW 2372
E: 'moombahlenelalc1@bigpond.com'

Dear Peter

Re: Aboriginal & European heritage assessment for the proposed Dumaresq-Lismore 330kV ETL easement, NSW.

Thank you for the Moombahlene LALC correspondence regarding the proposed TransGrid upgrade to the Lismore / Tenterfield ETL easement. OzArk EHM has been commissioned to conduct the heritage assessment for this project. We will soon be commencing formal consultation in accordance with the DECC *Interim Community Consultation Requirements* (ICCR's). As you are aware this process involves inviting the Local Aboriginal Land Councils to become part of the Registered Stakeholder Group.

Although your correspondence has preceded our formal contact with the MLALC, we will now consider your letter as a formal expression of interest in the project and include the MLALC as a Registered Stakeholder Group. The Stage 1 letter, which will briefly outline the project, will be forwarded to your organisation as a formality in the near future.
We look forward to your input on this project. Please do not hesitate to contact this office if you have any further queries.

Kind regards

Jodie Benton
Director

OzArk Environmental & Heritage Management P/L –PO Box 2069 Dubbo NSW 2830
Tel: 6882 0118; Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898;
E-mail: jodie@ozarkehm.com.au / phil@ozarkehm.com.au / cheryl@ozarkehm.com.au
Web: www.ozarkehm.com.au

Moombahlene Local Aboriginal Land Council (MLALC)

A Local Aboriginal Land Council constituted under s 50 of the Aboriginal Land Rights Act 1983

ABN 87 798 635 420

Your Reference:
Our Reference: ph090615ozarkletter

Postal Address:
PO Box 70
Tenterfield NSW 2372

15th June 2009

Ms. Cheryl Burke
Project Officer
OzArk Environment & Heritage Management P/L
PO Box 2069
DUBBO NSW 2830

Dear Cheryl

Thank you for your letter of 4th June 2009 concerning an Aboriginal Heritage Assessment for the proposed Far North transmission line upgrade between Bunshaw and Lismore. In your letter you formally invited the Moombahlene LALC to be part of the registered Stakeholder Group. On behalf of the board of the MLALC I would like to formally accept your offer to be part of this group.

You also requested information from the MLALC about any other Aboriginal groups that may have a cultural heritage interest in the area affected by the transmission line. The MLALC would recommend that you contact the Jubullum LALC PO Box 25 Tabulum NSW 2469 Tel. 02 6666 1337 if you have not already done so.

Thank you for your interest in the culture and heritage of the MLALC.

Yours sincerely

Peter B Harmond
Chief Executive Officer
Moombahlene Local Aboriginal Land Council

Tel: (02) 6736 3290(h) Facs. (02) 6736 1486 Email: moombahlenelalc1@bigpond.com
Office: 299 Rouse Street TENTERFIELD NSW 2372

Stage 1 Letters: Copies of Maps sent to each organization, however not included in each sample letter due to size of images.

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Attn: Mr B Nudd
DECC – North East Branch
Federation House
24 Moonee Street
Coffs Harbour NSW 2450

Dear Brett

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

OzArk Environmental & Heritage Management P/L is seeking knowledge of any Aboriginal groups, stakeholders or traditional knowledge holders in the Bonshaw/Tenterfield/Lismore area, with an interest in the management of Indigenous heritage matters.

We are currently undertaking Indigenous heritage consultation as per the DECC "*Interim Community Consultation Requirements*", for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**).

If DECC can recommend and provide contact details for any known Aboriginal groups with a cultural interest in this area we can then include them in the consultation process with regard to potential Indigenous heritage issues.

We would appreciate it if you could provide any feedback regarding these Indigenous stakeholder groups by **25th June 2009.**

Please feel free to contact our office if you require further information from our company regarding this request.

Yours truly

Cheryl Burke
Project Officer

OzArk Environmental & Heritage Management P/L –PO Box 2069 Dubbo NSW 2830
Tel: 6882 0118; Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898;
E-mail: jodie@ozarkehm.com.au / phil@ozarkehm.com.au / cheryl@ozarkehm.com.au
Web: www.ozarkehm.com.au

Figure 1. Study Area between Dumaresq Substation (near Bonshaw) and the existing easement

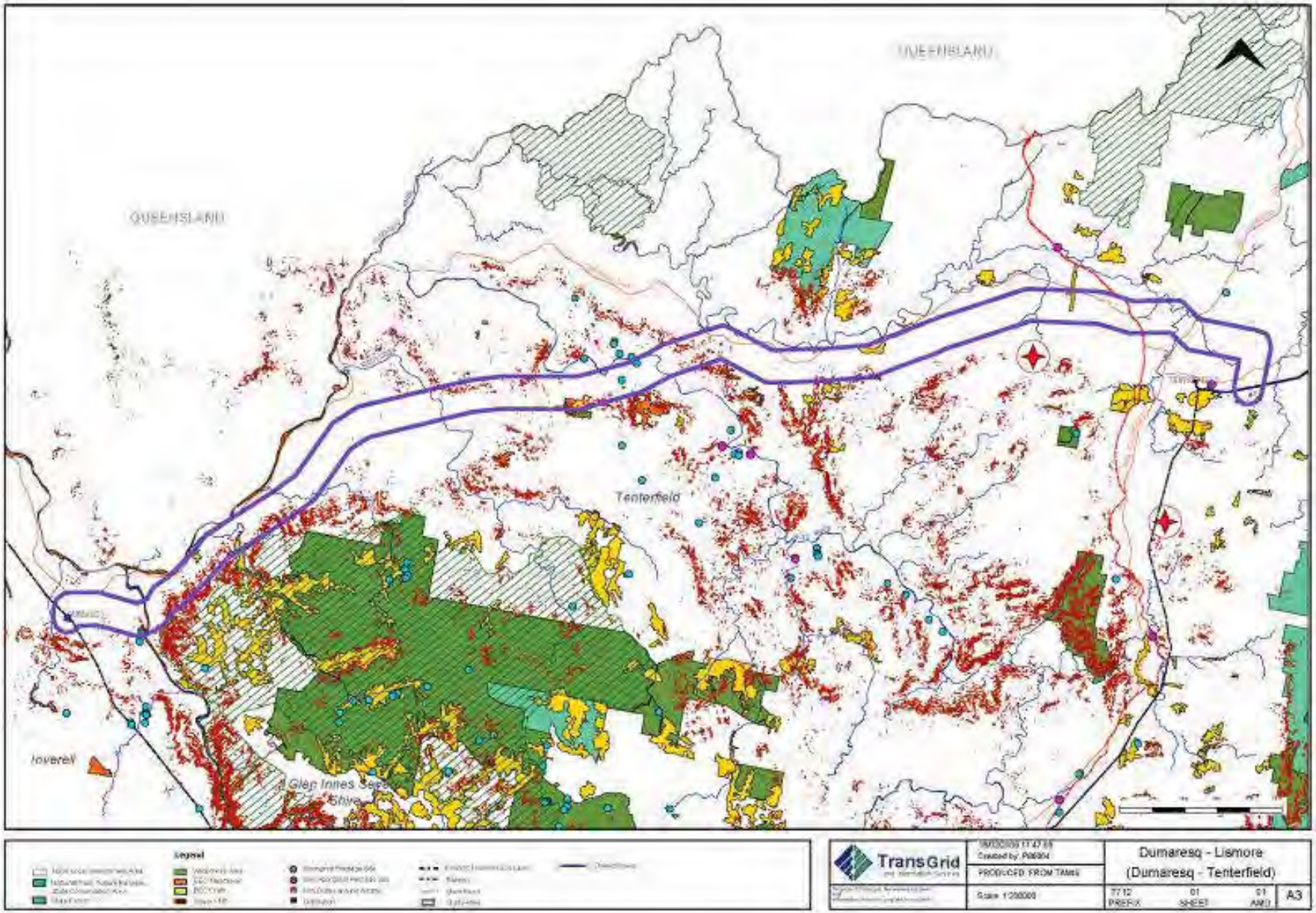


Figure 2. Existing 132kV transmission line easement between Tenterfield and Lismore.

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Administration / Notification Team
NTSCORP
PO Box 2105
Strawberry Hills NSW 2012

Dear Sir / Madam

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

OzArk Environmental & Heritage Management P/L is seeking knowledge of any Aboriginal groups, stakeholders or traditional knowledge holders in the Bonshaw/Tenterfield/Lismore area, with an interest in the management of Indigenous heritage matters.

We are currently undertaking Indigenous heritage consultation as per the DECC "*Interim Community Consultation Requirements*", for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**).

If NTSCORP can recommend and provide contact details for any known Aboriginal groups with a cultural interest in this area we can then include them in the consultation process with regard to potential Indigenous heritage issues.

The closing date for expressions of interest for this project will be **25th June 2009,** so any feedback prior to this date will assist in an equal opportunity for all stakeholders to register.

Please feel free to contact our office if you require further information from our company regarding this request.

Yours truly

Cheryl Burke
Administration Officer

OzArk Environmental & Heritage Management P/L–PO Box 2069/145 Wingewarra St, Dubbo NSW 2830 Tel: 6882 0118;
Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898
E-mail: phil@ozarkehm.com.au / jodie@ozarkehm.com.au / Web: www.ozarkehm.com.au

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Megan Mebberson
Office of the Registrar, ALRA
Tranby Aboriginal College
11 - 13 Mansfield Street
Glebe NSW 2037
E: megan.mebberson@daa.nsw.gov.au

Dear Megan

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you are aware, consulting archaeologists (on behalf of developers) are required to provide written requests to the Office of the Registrar, ALRA and other Government and non-Government organisations, with the aim of identifying Indigenous stakeholder groups or individuals who may wish to be consulted about development projects such that they may be invited to register their interest.
If the Registrar can recommend any known groups with a cultural interest in the Bonshaw/Tenterfield/Lismore area (see attached **Figures 1 and 2**), we would appreciate a copy of their contact details so that we may liaise with them. Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.

The closing date for expressions of interest for this project will be the **25th June 2009,** so any feedback prior to this period will assist in an equal opportunity for all stakeholders to register.

Please feel free to contact our office if you require further information from our company regarding this request.

Yours truly

Cheryl Burke
Project Officer

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Aboriginal Reference Group
Northern Rivers CMA
PO Box 1417
Coffs Harbour NSW 2450

Dear Sir / Madam

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

OzArk Environmental & Heritage Management P/L is seeking knowledge of any Aboriginal groups, stakeholders or traditional knowledge holders in the Bonshaw/Tenterfield/Lismore area, with an interest in the management of Indigenous heritage matters.

We are currently undertaking Indigenous heritage consultation as per the DECC "*Interim Community Consultation Requirements*", for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**).

If Northern Rivers CMA can recommend and provide contact details for any known Aboriginal groups with a cultural interest in this area we can then include them in the consultation process with regard to potential Indigenous heritage issues.

We would appreciate it if you could provide any feedback regarding these Indigenous stakeholder groups by **25th June 2009.**

Please feel free to contact our office if you require further information from our company regarding this request.

Yours truly

Cheryl Burke
Project Officer

Environmental & Heritage Management P/L

ABN: 59 104 582 354

5th June 2009

Members – Bandjalang People
c/- NTSCORP Ltd
Attn: Philippe Savidis
PO Box 2105
Strawberry Hills NSW 2012
psavidis@ntscorp.com.au

Dear Philippe

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you may be aware, the Proponents of development projects, or consulting archaeologists acting on their behalf, are required to provide written notification to Native Title Claimants and other Government and non-Government organisations that may have an interest within a given project study area for the purpose of establishing a Registered Stakeholder group for consultation over potential Aboriginal heritage issues.

Hence, OzArk Environmental & Heritage Management P/L is currently seeking Expressions of Interest from relevant Aboriginal Groups and individuals in the Bonshaw/Lismore/Tenterfield area, to form a consultation group to assist in the cultural heritage evaluation for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**). We would like to formally invite the Bandjalang People to be part of the Registered Stakeholder Group.

The closing date for expressions of interest for this project will be the **25th June 2009.** The Bandjalang People are asked contact our office to acknowledge receipt of this correspondence and formally register interest.

Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.

Yours truly

Cheryl Burke
Project Officer

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Members – Casino LALC
c/- Chairperson
110 Walker Street
(PO Box 1047)
Casino NSW 2470

Dear Sir/Madam

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you may be aware, the Proponents of development projects, or consulting archaeologists acting on their behalf, are required to provide written notification to the Local Aboriginal Land Council and other Government and non-Government organisations that may have an interest within a given project study area for the purpose of establishing a Registered Stakeholder group for consultation over potential Aboriginal heritage issues.

Hence, OzArk Environmental & Heritage Management P/L is currently seeking Expressions of Interest from relevant Aboriginal Groups and individuals in the Bonshaw/Lismore/Tenterfield area, to form a consultation group to assist in the cultural heritage evaluation for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**). We would like to formally invite the Casino LALC to be part of the Registered Stakeholder Group.

The closing date for expressions of interest for this project will be the **25th June 2009.** CLALC is asked contact our office to acknowledge receipt of this correspondence and formally register interest.

Further, if Casino LALC can recommend any other Indigenous groups with a cultural heritage interest in this area we would appreciate their details so that we may liaise with them. Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.

Yours truly

Cheryl Burke
Project Officer

OzArk Environmental & Heritage Management P/L–PO Box 2069/145 Wingewarra St, Dubbo NSW 2830 Tel: 6882 0118;
Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898
E-mail: phil@ozarkehm.com.au / jodie@ozarkehm.com.au / Web: www.ozarkehm.com.au

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Members – Jubullum LALC
c/- Chairperson
(PO Box 25)
Jubullum Street/Jubullum Village
via Tabulam NSW 2469

Dear Sir/Madam

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you may be aware, the Proponents of development projects, or consulting archaeologists acting on their behalf, are required to provide written notification to the Local Aboriginal Land Council and other Government and non-Government organisations that may have an interest within a given project study area for the purpose of establishing a Registered Stakeholder group for consultation over potential Aboriginal heritage issues.

Hence, OzArk Environmental & Heritage Management P/L is currently seeking Expressions of Interest from relevant Aboriginal Groups and individuals in the Bonshaw/Lismore/Tenterfield area, to form a consultation group to assist in the cultural heritage evaluation for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**). We would like to formally invite the Jubullum LALC to be part of the Registered Stakeholder Group.

The closing date for expressions of interest for this project will be the **25th June 2009.** JLALC is asked contact our office to acknowledge receipt of this correspondence and formally register interest.

Further, if Jubullum LALC can recommend any other Indigenous groups with a cultural heritage interest in this area we would appreciate their details so that we may liaise with them. Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.

Yours truly

Cheryl Burke
Project Officer

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Members – Moombahlene LALC
c/- Mr P Harmond / CEO
PO Box 70
Tenterfield NSW 2372
E: 'moombahlenelalc1@bigpond.com'

Dear Peter

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you may be aware, the Proponents of development projects, or consulting archaeologists acting on their behalf, are now required to provide written notification to the Local Aboriginal Land Council and other Government and non-Government organisations that may have an interest within a given project study area for the purpose of establishing a Registered Stakeholder group for consultation over potential Indigenous heritage issues.

Hence, OzArk Environmental & Heritage Management P/L is currently seeking Expressions of Interest from relevant Aboriginal Groups and individuals in the Bonshaw/Lismore/Tenterfield area, to form a consultation group to assist in the cultural heritage evaluation for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**). We would like to formally invite the Moombahlene LALC to be part of the Registered Stakeholder Group.

The closing date for expressions of interest for this project will be **25th June 2009.** As per our correspondence dated 1st June, we have confirmed Moombahlene LALC is now part of the Registered Stakeholder group.

Further, if Moombahlene LALC can recommend any other Indigenous groups with a cultural heritage interest in this area we would appreciate their details so that we may liaise with them. Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.
Yours truly

Cheryl Burke
Project Officer

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Members – Ngulingah LALC
c/- Chairperson
53 Conway Street
(PO Box 981)
Lismore NSW 2480

Dear Sir/Madam

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you may be aware, the Proponents of development projects, or consulting archaeologists acting on their behalf, are required to provide written notification to the Local Aboriginal Land Council and other Government and non-Government organisations that may have an interest within a given project study area for the purpose of establishing a Registered Stakeholder group for consultation over potential Aboriginal heritage issues.

Hence, OzArk Environmental & Heritage Management P/L is currently seeking Expressions of Interest from relevant Aboriginal Groups and individuals in the Bonshaw/Lismore/Tenterfield area, to form a consultation group to assist in the cultural heritage evaluation for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**). We would like to formally invite the Ngulingah LALC to be part of the Registered Stakeholder Group.

The closing date for expressions of interest for this project will be the **25th June 2009.** NLALC is asked contact our office to acknowledge receipt of this correspondence and formally register interest.

Further, if Ngulingah LALC can recommend any other Indigenous groups with a cultural heritage interest in this area we would appreciate their details so that we may liaise with them. Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.

Yours truly

Cheryl Burke
Project Officer

OzArk Environmental & Heritage Management P/L–PO Box 2069/145 Wingewarra St, Dubbo NSW 2830 Tel: 6882 0118;
Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898
E-mail: phil@ozarkehm.com.au / jodie@ozarkehm.com.au / Web: www.ozarkehm.com.au

Environmental & Heritage Management P/L

ABN: 59 104 582 354

5th June 2009

Members – Widajabul Aboriginal People
c/- Blackshield & Co
Attn: Simon Blackshield
Level 57, MLC Centre
19-29 Martin Place
Sydney NSW 2000
'simon@blackshield.net'

Dear Simon

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you may be aware, the Proponents of development projects, or consulting archaeologists acting on their behalf, are required to provide written notification to Native Title Claimants and other Government and non-Government organisations that may have an interest within a given project study area for the purpose of establishing a Registered Stakeholder group for consultation over potential Aboriginal heritage issues.

Hence, OzArk Environmental & Heritage Management P/L is currently seeking Expressions of Interest from relevant Aboriginal Groups and individuals in the Bonshaw/Lismore/Tenterfield area, to form a consultation group to assist in the cultural heritage evaluation for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**). We would like to formally invite the Widajabul Aboriginal People to be part of the Registered Stakeholder Group.

The closing date for expressions of interest for this project will be the **25th June 2009.** The Widajabul Aboriginal People are asked contact our office to acknowledge receipt of this correspondence and formally register interest.

Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.
Yours truly

Cheryl Burke
Project Officer

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Attn: General Manager
Inverell Shire Council
PO Box 138
Inverell NSW 2360

Dear Sir / Madam

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you are aware, consulting archaeologists (on behalf of developers) are required to provide written requests to relevant Local Councils, as well as other Government and non-Government organisations, with the aim of identifying Indigenous stakeholder groups or individuals who may wish to be consulted about development projects such that they may be invited to register their interest.

We are currently undertaking Indigenous heritage consultation as per the DECC "*Interim Community Consultation Requirements*", for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**).

If your Council can recommend any known Aboriginal groups with a cultural interest in your LGA we would appreciate a copy of their contact details so that we may liaise with them. Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.
The closing date for expressions of interest for this project will be the **25th June 2009,** so any feedback prior to this period will assist in an equal opportunity for all stakeholders to register. Please feel free to contact our office if you require further information from our company regarding this request.

Yours truly

Cheryl Burke
Project Officer

OzArk Environmental & Heritage Management P/L–PO Box 2069/145 Wingewarra St, Dubbo NSW 2830 Tel: 6882 0118;
Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898
E-mail: phil@ozarkehm.com.au / jodie@ozarkehm.com.au / Web: www.ozarkehm.com.au

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Attn: General Manager
Kyogle Council
PO Box 11
Kyogle NSW 2474

Dear Sir / Madam

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you are aware, consulting archaeologists (on behalf of developers) are required to provide written requests to relevant Local Councils, as well as other Government and non-Government organisations, with the aim of identifying Indigenous stakeholder groups or individuals who may wish to be consulted about development projects such that they may be invited to register their interest.

We are currently undertaking Indigenous heritage consultation as per the DECC "*Interim Community Consultation Requirements*", for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**).

If your Council can recommend any known Aboriginal groups with a cultural interest in your LGA we would appreciate a copy of their contact details so that we may liaise with them. Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.
The closing date for expressions of interest for this project will be the **25th June 2009,** so any feedback prior to this period will assist in an equal opportunity for all stakeholders to register. Please feel free to contact our office if you require further information from our company regarding this request.

Yours truly

Cheryl Burke
Project Officer

OzArk Environmental & Heritage Management P/L–PO Box 2069/145 Wingewarra St, Dubbo NSW 2830 Tel: 6882 0118;
Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898
E-mail: phil@ozarkehm.com.au / jodie@ozarkehm.com.au / Web: www.ozarkehm.com.au

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Attn: General Manager
Lismore City Council
PO Box 23A
Lismore NSW 2480

Dear Sir / Madam

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you are aware, consulting archaeologists (on behalf of developers) are required to provide written requests to relevant Local Councils, as well as other Government and non-Government organisations, with the aim of identifying Indigenous stakeholder groups or individuals who may wish to be consulted about development projects such that they may be invited to register their interest.

We are currently undertaking Indigenous heritage consultation as per the DECC "*Interim Community Consultation Requirements*", for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**).

If your Council can recommend any known Aboriginal groups with a cultural interest in your LGA we would appreciate a copy of their contact details so that we may liaise with them. Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.
The closing date for expressions of interest for this project will be the **25th June 2009,** so any feedback prior to this period will assist in an equal opportunity for all stakeholders to register. Please feel free to contact our office if you require further information from our company regarding this request.

Yours truly

Cheryl Burke
Project Officer

OzArk Environmental & Heritage Management P/L–PO Box 2069/145 Wingewarra St, Dubbo NSW 2830 Tel: 6882 0118;
Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898
E-mail: phil@ozarkehm.com.au / jodie@ozarkehm.com.au / Web: www.ozarkehm.com.au

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Attn: General Manager
Richmond Valley Council
Locked Bag 10
Casino NSW 2470

Dear Sir / Madam

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you are aware, consulting archaeologists (on behalf of developers) are required to provide written requests to relevant Local Councils, as well as other Government and non-Government organisations, with the aim of identifying Indigenous stakeholder groups or individuals who may wish to be consulted about development projects such that they may be invited to register their interest.

We are currently undertaking Indigenous heritage consultation as per the DECC "*Interim Community Consultation Requirements*", for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**).

If your Council can recommend any known Aboriginal groups with a cultural interest in your LGA we would appreciate a copy of their contact details so that we may liaise with them. Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.
The closing date for expressions of interest for this project will be the **25th June 2009,** so any feedback prior to this period will assist in an equal opportunity for all stakeholders to register. Please feel free to contact our office if you require further information from our company regarding this request.

Yours truly

Cheryl Burke
Project Officer

OzArk Environmental & Heritage Management P/L–PO Box 2069/145 Wingewarra St, Dubbo NSW 2830 Tel: 6882 0118; Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898
E-mail: phil@ozarkehm.com.au / jodie@ozarkehm.com.au / Web: www.ozarkehm.com.au

Environmental & Heritage Management P/L

ABN: 59 104 582 354

4th June 2009

Attn: General Manager
Tenterfield Shire Council
PO Box 214
Tenterfield NSW 2372

Dear Sir / Madam

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you are aware, consulting archaeologists (on behalf of developers) are required to provide written requests to relevant Local Councils, as well as other Government and non-Government organisations, with the aim of identifying Indigenous stakeholder groups or individuals who may wish to be consulted about development projects such that they may be invited to register their interest.

We are currently undertaking Indigenous heritage consultation as per the DECC "*Interim Community Consultation Requirements*", for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**).

If your Council can recommend any known Aboriginal groups with a cultural interest in your LGA we would appreciate a copy of their contact details so that we may liaise with them. Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.
The closing date for expressions of interest for this project will be the **25th June 2009,** so any feedback prior to this period will assist in an equal opportunity for all stakeholders to register. Please feel free to contact our office if you require further information from our company regarding this request.

Yours truly

Cheryl Burke
Project Officer

OzArk Environmental & Heritage Management P/L–PO Box 2069/145 Wingewarra St, Dubbo NSW 2830 Tel: 6882 0118;
Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898
E-mail: phil@ozarkehm.com.au / jodie@ozarkehm.com.au / Web: www.ozarkehm.com.au

Stage 1 Letters: Responses.

Your reference:
Our Reference: DOC09/27821, F807/0339
Contact: Ciaron Dunn, 6659 8221
Date: 17 June 2009

Cheryl Burke
Project Officer
OzArk Environmental & Heritage Management P/L
PO Box 2069
Dubbo NSW 2830

Dear Ms Burke

RE: ABORIGINAL HERITAGE ASSESSMENT FOR THE PROPOSED FAR NORTH NSW TRANSMISSION LINE UPGRADE, BETWEEN BONSHAW AND LISMORE, NSW.

I refer to your correspondence dated 4 June 2009 to the Department of Environment and Climate Change (DECC) regarding the above matter.

Attached is the list of known Aboriginal parties that DECC feels is likely to have an interest in your development. Please note this list is not necessarily an exhaustive list of all interested Aboriginal parties and receipt of this list does not remove the requirement of a proponent/consultant to advertise in local print media and contact other bodies seeking interested Aboriginal parties, in accordance with the DECC Interim Community Consultation Requirements.

If you wish to discuss any of the above matters further please contact Ciaron Dunn, Aboriginal Heritage & Planning Officer on (02) 6659 8221.

Yours sincerely

BRETT NUDD
Acting Manager, Planning and Aboriginal Heritage - North East
Environment Protection and Regulation Group

ATTACHMENT 1

ABORIGINAL STAKEHOLDER GROUPS ON THE NORTH COAST / FAR NORTH COAST THAT THE DECC HAS WRITTEN TO IN REGARD TO THE 'INTERIM COMMUNITY CONSULTATION REQUIREMENTS FOR APPLICANTS'.

Baryulgil Square LALC PO Box 1383 Baryulgil via Grafton NSW 2460		Casino-Boolangle LALC PO Box 1047 Casino NSW 2470
Gugin Gudubba LALC PO Box 2474 Kyogle NSW 2474		Jana Ngalee LALC PO Box 1398 Malabugilmah via Grafton NSW 2460
Jubullum LALC PO Box 25 Tabulam NSW 2469		Moombahlene LALC PO Box 70 Tenterfield NSW 2372
Muli Muli LALC PO Box 68 Woodenbong NSW 2476		Ngulingah LALC PO Box 981 Lismore NSW 2480
Shared Vision Aboriginal Corporation PO BOX 14 LISMORE NSW 2480		Bundjalong Tribal Society PO Box 557 LISMORE NSW 2480
Bundjalung Elders Council Aboriginal Corporation PO Box 1015 LISMORE NSW 2480		Wal:Bal Aboriginal Corporation PO Box 6315 LISMORE NSW 2480
Cubawee Aboriginal Corporation 127 Tweed Street NORTH LISMORE NSW 2480		Nunger Aboriginal Corporation 7 Lundurimba Road LISMORE NSW 2480
Kurrachee Co-operative Society Ltd PO Box 3 CORAKI NSW 2471		Jarguan Aboriginal Corporation Gloria Torrens 7 Creek St Tabulam NSW 2469

Bonalbo Aboriginal Corporation Cedrick Walker 1 Peacock St Bonalbo NSW 2469		Mall-Bunoogah Aboriginal Corporation Kevin Torrens Sandilands St Mallanganee NSW 2469
Jubal Aboriginal Corporation Cultural Heritage Officer Lot1 Sandiland St Mallanganee NSW 2469		Buyinbin Aboriginal Corporation Maree Vidler PO Box 835 Casino NSW 2470
Tabulam Aboriginal Corporation Frank Walker PO Box 25 Tabulam NSW 2469		Kurrachee Co-Operative Society Russell Kapeen PO Box 3 Coraki NSW 2471
Banjalang Aboriginal Corporation Simone Baker 31 Belmore St Coraki NSW 2471		

INVERELL SHIRE COUNCIL

4.4.3
Tiffany Grant, Planning & Development Administrative Support Officer

24 June 2009

Cheryl Burke
Project Officer
OZARK Environment & Heritage Management Pty Ltd
PO Box 2069
DUBBO 2830

Dear Ms Burke

Aboriginal Heritage Assessment For The Proposed Far North NSW Transmission Line Upgrade, Between Bonshaw And Lismore

Reference is made to you letter of 4 June, 2009 and the subject matter.

Below is a list of Aboriginal groups/organisations within the Inverell Shire, with which you may like to liaise while undertaking the Indigenous Heritage Consultation in relation to the abovementioned proposed project:-

Anaiwan Land Council
PO Box 469
INVERELL NSW 2360

Ashford Aboriginal Land Council
25 Albury Street
ASHFORD NSW 2361

Liza Duncan
Aboriginal Cultural & Heritage Consultant
MumGejarr Aboriginal Corporation
PO Box 742
INVERELL NSW 2360

Rick Shapter
Aboriginal Heritage Unit
NSW Department of Planning
Locked Bag 5020
PARRAMATTA NSW 2124

Should further assistance be required, please contact Council's Planning and Development Department on 02) 6728 8202.

Yours faithfully

BRETT McINNES
DIRECTOR PLANNING & DEVELOPMENT

All communications to be addressed to
The General Manager
PO Box 11 KYOGLE
NSW 2474
AUSTRALIA

ADMINISTRATION OFFICE
Stratheden Street
Kyogle NSW 2474 AUSTRALIA
Phone 02 6632 1611
Fax 02 6632 2228
International Code (+61 2)
Email council@kyogle.nsw.gov.au
Website www.kyogle.nsw.gov.au

CONTACT Matthew Hutchings
FOR FURTHER INFORMATION

PLEASE QUOTE THIS REFERENCE

17 June 2009

OzArk Environmental & Heritage Management P/L
PO Box 2069
DUBBO NSW 2830

Attn: Cheryl Burke

Dear Ms Burke

ABORIGINAL HERITAGE ASSESSMENT FOR THE PROPOSED FAR NORTH NSW TRANSMISSION LINE UPGRADE, BETWEEN BONSHAW AND LISMORE

Council is in receipt of your enquiry dated 4 June 2009 regarding the abovementioned proposal. Thank you.

There are two (2) known Indigenous groups that have an interest in the area proposed for transmission line works within the Kyogle Local Government Area. These are recorded on Council's mapping database as the Jubullum Local Aboriginal Land Council and the Casino Local Aboriginal Land Council.

Contact details for theses councils have been procured from the internet as follows:

Jubullum Local Aboriginal Land Council Tabulam Village TABULAM NSW 2470 Tel.: (02) 6665 1337	Casino Boolangle Local Aboriginal Land Council 110 Walker Street CASINO NSW 2470 Tel. (02) 6662 6286

Additional contact details may be obtained from the following URL:
http://www.alc.org.au/resources/LALCS/contacts/LALC_Contact_Details.pdf

Council would also urge consideration of European heritage within the development area as recognised in the Kyogle Shire Heritage Study (as reviewed). These items are the subject of Draft Local Environmental Plan 18 for the Kyogle Local Government Area.

Should you have any queries regarding this matter please do not hesitate to contact Council's Planning and Environmental Services Department on 6632 0216.

Yours faithfully

Matthew Hutchings
for
John Hession
Director Planning and Environmental Services

Cheryl Burke
Project Officer, OZARK
Environmental & Heritage Management
PO Box 2069
Dubbo NSW 2830

Dear Cheryl

Re: Request - Search for Registered Aboriginal Owners

I refer to your letter dated 4 June 2009 regarding an Aboriginal heritage assessment in the Banshaw / Lismore area.

I have searched the Register of Aboriginal Owners and the subject land does not appear to have Registered Aboriginal Owners pursuant to Division 3 of the *Aboriginal Land Rights Act 1983*.

I trust that you are in contact with the Moombahlene, Casino, Jubullum and Ngulingah Local Aboriginal Land Councils. The land councils may able be to assist you with information and contact details for other interested groups.

Casino LALC
PO Box 1047
Casino NSW 2470
Tel: 02 6662 6288 Fax: 02 6662 6290

Moombahlene LALC
PO Box 70
Tenterfield NSW 2372
Tel: 02 6736 3219 Fax: 02 6736 1486

Jubullum LALC
PO Box 25
Tabulam NSW 2469
Tel: 02 6666 1337 Fax: 02 6666 1386

Ngulingah LALC
PO Box 981
Lismore NSW 2480
Tel: 02 6621 5541 Fax: 02 6621 5168

Regards,

Courtney Field
Administration Officer
Office of the Registrar, *Aboriginal Land Rights Act 1983*
15 June 09

Kambuwal Aboriginal Corporation for Culture, Heritage and Land

Barry Brown
(Chairperson)
63 Percy St
Warwick Q. 4370

Telephone (07) 46 617 261

June 16, 2009

OzArk EHM
PO Box 2069
Dubbo, NSW, 2830

Dear OzArk EHM:

We the Kambuwal People are the Traditional owners of the proposed area that you intend putting a power line on. And we have a traditional interest in that area, Bonshaw NSW to the New England Highway. We wish to be consulted and be involved in the Archaeological study. The Kambuwal have worked with Trans Grid in the past on the Interconnector and are very familiar with the process. Please notify our Chairperson and Elder Barry Brown on any up and coming meetings.

Sincerely,

B Brown

Barry Brown
Chairperson
Kambuwal Aboriginal Corporation for Culture Heritage and Land

TransGrid's Far North NSW Project Update

May 2009

Have your say! Your comments on the proposed transmission line study area (see overleaf) are appreciated and we invite you to complete this feedback form and return it by 10/05/09 to:

REPLY PAID 75000
North Sydney NSW 2060

Details (optional)

Name: Mr B[illegible]

Postal Address: 7 Railway St
Tenterfield 2372

Telephone:

Mobile: 0432 [illegible]

Email:

If you would like to receive information concerning the project, please indicate how:
- email
- post
- other

1. Are you aware of any constraints that the project team should consider when determining the preferred easement, such as the issues listed below or any other issues?

ATT: Mrs Bertha Daley
71 Riley St
Tenterfield

D TC

Provide details to others.

Please tick the areas of most interest or concern to you in relation to the choice of the preferred easement:

SOCIO ECONOMIC ISSUES
- Land use impacts
- Fire management
- Power for growth
- Security of supply
- Safety during construction
- Safety during operation
- Proximity to villages
- Proximity to residences
- Other (please specify below)

ENVIRONMENTAL ISSUES
- Flora/fauna protection
- Soil erosion control
- Water quality
- Dust management
- Noise and vibration
- Weed management
- Visual amenity
- Other (please specify below)

If there is insufficient room on this form, you are welcome to make a separate submission. Should you wish to register your interest or speak with a member of the project team, please call the toll free project hotline: 1800 [illegible]

TransGrid

TransGrid's Far North NSW Project Update

May 2008

7. Have you any other comments or suggestions about the proposed transmission line study area?

I Lilly Bartholomew, an Indigenous elder of the Aboriginal Community of Tenterfield do wish to receive data from the operators of Transgrid concerning the line. I would like to be notified whenever this takes place so that I myself as well as my Aunt Bertha Bailey be permitted to look for Artefacts (Aboriginal).

If there is insufficient room on this form, you are welcome to make a separate submission. Should you wish to register your interest or speak with a member of the project team, please call the toll free project number: 1800 [illegible]

TransGrid

MAREE Aboriginal Corporation
Land Council

Ozark Ehm
Trans Grid
Po Box 2069
Dubbo NSW 2830

Robert Brown
386 Conrad Street
Warwick QLD 4370
Phone 07 46617697

ATTENTION
TRANS GRID

My name is Robert Brown I am the Chairperson of the MAREE Aboriginal Corporation. I've received information on the Power line That will go Through our Country. The MAREE Corporation occupys the area with in the Study area enclosed is a Map outlining our boundary areas That We occupy and the Registration Certificate of the Corporation
As you know a Cultural heritage assessment need To be Carried out during The Cause of the Power line To insure That our negotiation and agreements can be met Because of the Impact it may have on the Enviroment and Cultural and archaeolgicial Sites of Significance
Meetings need To be SAT up between Transgrid and The Traditional owners To discusse The Cultural assessment. Also an archaeologist Should be required To work in Conjunction with The Traditional owners To help To record Sites of Significance. If you have any queries in regard To this letter Please dont hesitate To Contact me on The above number.

Yours Sincerely
Robert Brown

Signed. R Brown
Chairperson


BRISBANE
IPSWICH
GOLD COAST
GOLD COAST
QUEENSLAND
Proposed cable location

From: Drake, Dianne [Dianne.Drake@nntt.gov.au]
Sent: Tuesday, 9 June 2009 3:14 PM
To: Cheryl Burke
Subject: native title contact details

Follow Up Flag: Follow up
Flag Status: Completed
Cheryl
As requested I have listed the contact details below for Bandjalang and Widjabul native title claims.

Bandjalang People:
NTSCORP Ltd – PH: 02 9310 3188
FAX: 02 9310 4177

Contact Person: Philippe Savidis - (02) 8306-2708

PO Box 2105
Strawberry Hills, NSW 2012

psavidis@ntscorp.com.au

Widjabul People:
Simon Blackshield:
PH: 0414 257 435

Blackshield & Co
Level 57, MLC Centre
19-29 Martin Place
SYDNEY NSW 2000

simon@blackshield.net

regards

Dianne Drake | SENIOR CASE MANAGER
National Native Title Tribunal | New South Wales and Australian Capital Territory Registry
Level 25, 25 Bligh Street, Sydney, New South Wales 2000
Telephone (02) 9235 6326 | Facsimile (02) 9233 5613 | Email dianne.drake@nntt.gov.au
Freecall 1800 640 501 | www.nntt.gov.au
Facilitating timely and effective outcomes.

hi cheryl,

On behalf edgerton-kwiembal we would like to be considered a stake hold group

with TransGrid power line from bonshaw sub station to tenterfield & there on.

We have four people a senior site officer @ $100 per hour & $65 for other site officers per hour.

I am to be informed of any other consultants.

contacts.

thank you

liza duncan C/P

0429091634

0267254213

Received via email 19/06/2009 7:03 pm

Dear Cheryl,

RE: Aboriginal Heritage Assessment for the proposed Far North Coast NSW Transmission Line Upgrade between Bonshaw and Lismore.

Ngulingah Local Aboriginal Land Council reccomend that Native Title Determination application NSD6019/01 Widjabul Aboriginal People (NC01/7) also be advised of the above works, contact person address Murray John Roberts Snr 8 Gundurimba Rd, Gundurimba, 2480. Thank you for the notice.

Yours Truly

Murray John Roberts Snr.
Sites Officer
Ngulingah LALC.

53 Conway Street,
PO Box 981 Lismore NSW 2480

Tel: (02) 6621 5541
Fax: (02) 6621 5068

Received via email 23/06/2009 12:39 pm

From: Northern Rivers CMA [mailto:northern@cma.nsw.gov.au]

Sent: Monday, 15 June 2009 3:18 PM

To: Phil Cameron

Subject: Transmission Line-Aboriginal Contacts

Ozark E&H Management

attention Cheryl Burke

Cheryl

With reference to your letter of 4th June recieved at our Coffs Harbour Office regarding contacts between Bonshaw and Lismore for the new Transgrid Line.

Please find attached a list of contacts. These people should be able to guide your staff as to the level of consultation, and where they consider, which Elders or local groups and aboriginal landholders need to be included in the process.

Please note these contacts are provided only for this specific project consultation, and we do not give permission for the use of this information for any other purpose. You may not forward it to other parties.

Hope this assists, apologies for e-response.

Michael Pitt

General Manager

Northern Rivers CMA

Aboriginal Contacts Northern Area						
Name	**Area**	**Organisation**	**Address**	**Phone**	**Fax**	**email**
Graham Randall		Casino Boolangle LALC	PO Box 1047 Casino 2470	6662 6286 0432 184489	6662 6290	gjrandall@myway.com
Linda Stewart		Casino Boolangle LALC	PO Box 1047 Casino NSW 2470 110 Walker St, Casino NSW 2470	6662 6286	6662 6290	cblalc@bigpond.com
Tracey King	Lismore LGA and the eastern half of the Richmond Valley LGA.	Ngulingah LALC	53 Conway Street Lismore 2480	6621 5541	6621 5068	tracey.king@ngulingah.org.au
Lance Manton		Bogal LALC	156 Bridge St, Coraki NSW 2471	02 6683 2510	02 66832698	bogallalc@bigpond.com
		Jali Local Aboriginal Land Council	Cabbage Tree Island, NSW 2477 Unit 8/ 48 Tamar St Ballina NSW 2478	02 6683 4413	02 66868255	jalilalc@bigpond.com
Mathew Green	Woodenbong and Tenterfield (?)	Muli Muli Local Aboriginal Land Council	Muli Muli Crs, Woodenbong, NSW 2476 PO Box 68 Woodenbong NSW 2476	02 6635 1487	02 66351498	Matthew.green@y7mail.com
Ron Randall		Gugin Guddaba Local Aboriginal Land Council	53 Ettrick St Kyogle NSW 2474	02 66321056	02 66322324	gglalc@bigpond.net.au
Richard Potter (May have left not known who replaces him)		Glen Innes Local Aboriginal Land Council	181 Lang St, Glen Innes, NSW 2370 PO Box 157 Glen Inness NSW 2370	02 6732 1150	026732641 3	gilalc@northnet.com.au

Dear Cheryl

Your letter of 4/6/2009 refers. On behalf of Jubullum LALC, I acknowledge receipt of the correspondence and formally register interest in being part of the Registered Stakeholder Group.

Regards

Ross James

CEO

Ph 66661337

Received via email 19/09/2009 11:10 am

Stage 1 Letters, Round 2: As advised by Government Agencies / TransGrid Stage 1 letters sent to thirty-two (32) organisations / individuals listed below. A sample letter and map included is shown addressed to Anaiwan Land Council

Bogal LALC	17.06.09	Members: Bogal LALC c/- Mr Lance Manton 156 Bridge Street CORAKI NSW 2471
Jali LALC	17.06.09	Members: Jali LALC C/- Chairperson Unit 8/48 Tamar Street BALLINA NSW 2478
Muli Muli LALC	17.06.09	Members: Muli Muli LALC C/- Mathew Green Po Box 68 WOODENBONG 2476
Gugin Guddaba LALC	17.06.09	Members: Gugin Guddaba LALC C/- Ron Randall 53 Ettrick St KYOGLE 2474
Glen Innes LALC	17.06.09	Members: Glen Innes LALC C/- Richard Potter 181 Lang St (PO box 157) Glen Innes 2370
Bundjalung Elders Council Ab Corp	17.06.09	Members: Bundjalung Elders Council Ab Corp c/- Chairperson PO Box 528 Lismore 2480
Aboriginal Elder	19.06.09	Ms Lilly Bartholomew 7 Railway Street Tenterfield 2372
Aboriginal Elder	19.06.09	Ms Bertha Daley 71 Riley Street Tenterfield 2372
Border Rivers-Gwydir CMA	24.06.09	Chairperson Aboriginal Reference Group Border Rivers-Gwydir CMA PO Box 411 Inverell NSW 2360
Kwiembal Elders Indigenous Group	24.06.09	Chairperson 21A Dudley Street Ashford NSW 2361 Cedric Talbot mobile: 0448 157 567
Ngoorabul Elders	24.06.09	Chairperson PO Box 157 Glen Innes NSW 2370
Baryulgil Square LALC	24.06.09	Chairperson PO Box 1383 Buryulgil via Grafton NSW 2460
Jana Ngalee LALC	24.06.09	Chairperson PO box 1398 Malabugilmah via Grafton NSW 2460
Shared Vision Aboriginal Corp	24.06.09	Chairperson PO Box 14 Lismore NSW 2480
Bundjalong Tribal Society	24.06.09	Chairperson PO Box 557 Lismore NSW 2480

Wai Bal Aboriginal Corporation	24.06.09	Chairperson PO Box 6315 Lismore NSW 2180
Cubawee Aboriginal Corporation	24.06.09	Chairperson 127 Tweed Street North Lismore NSW 2480
Nunger Aboriginal Corporation	24.06.09	Chairperson 7 Lundurimba Rd Lismore NSW 2480
Kurrachee Co-operative Society	24.06.09	Chairperson PO Box 3 Coraki NSW 2471
Jarguan Aboriginal Corporation	24.06.09	c/- Gloria Torrens 7 Creek Street Tabulam NSW 2469
Bonalbo Aboriginal Corporation	24.06.09	c/- Cedrick Walker 1 Peacock St Bonalbo NSW 2469
Mall-Bunoogah Aboriginal Corp	24.06.09	c/- Kevin Torrens Sandilands St Mallanganee NSW 2469
Jubal Aboriginal Corp	24.06.09	c/- Cultural Heritage Officer Lot 1 Sandilands St Mallanganee NSW 2469
Buyinbin Aboriginal Corp	24.06.09	c/- Maree Vidler Po Box 835 Casino NSW 2470
Tabulam Aboriginal Corp	24.06.09	c/- Frank Walker Po Box 25 Tabulam NSW 2469
Banjalang Aboriginal Corp	24.06.09	c/- Simone Baker 31 Belmore Street Coraki NSW 2471
Edgerton-Kwiembal People	24.06.09	c/ - Liza Duncan 2 David Street Ashford NSW 2361
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	24.06.09	c/- Barry Brown Chairperson 63 Percy Street Warwick Q 4370
Maree Aboriginal Corporation	30.06.09	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370
Anaiwan Land Council	01.07.09	c/- Chairperson PO Box 469 Inverell NSW 2360
MurriGejarr Aboriginal Corp	01.07.09	c/- Liza Duncan PO box 742 Inverell NSW 2360
NSW Dept Planning	01.07.09	c/- Rick Shapter Aboriginal Heritage Unit Locked Bag 5020 Parramatta NSW2124

Environmental & Heritage Management P/L

ABN: 59 104 582 354

1st July 2009

Members – Anaiwan Land Council
c/- Chairperson
PO Box 469
Inverell NSW 2360

Dear Sir / Madam

Re: Aboriginal Heritage Assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

As you may be aware, the Proponents of development projects, or consulting archaeologists acting on their behalf, are required to provide written notification to the Local Aboriginal Land Council and other Aboriginal organisations that may have an interest within a given project study area for the purpose of establishing a Registered Stakeholder group for consultation over potential Aboriginal heritage issues.

Hence, OzArk Environmental & Heritage Management P/L is currently seeking Expressions of Interest from relevant Aboriginal Groups and individuals in the Bonshaw/Lismore/Tenterfield area, to form a consultation group to assist in the cultural heritage evaluation for the proposed construction of a 215 km 330kV electrical link between TransGrid's existing substations near Bonshaw and Lismore. This project will include the upgrade and replacement of the existing transmission line between Tenterfield and Lismore, and the construction of a new transmission line between the substation near Bonshaw and Tenterfield (see attached **Figures 1 and 2**). The Inverell Shire Council has recommended to our office that you be informed of this project.

The closing date for expressions of interest for this project will be the **17th July 2009.**

Once relevant groups and individuals have been identified, they will form part of the formal consultation and evaluation process for the project.

Yours truly

Cheryl Burke
Project Officer

OzArk Environmental & Heritage Management P/L–PO Box 2069/145 Wingewarra St, Dubbo NSW 2830
Tel: 6882 0118; Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898
E-mail: phil@ozarkehm.com.au / jodie@ozarkehm.com.au / cheryl@ozarkehm.com.au
Web: www.ozarkehm.com.au

Figure 1. Study Area between Dumaresq Substation (near Bonshaw) and the existing easement

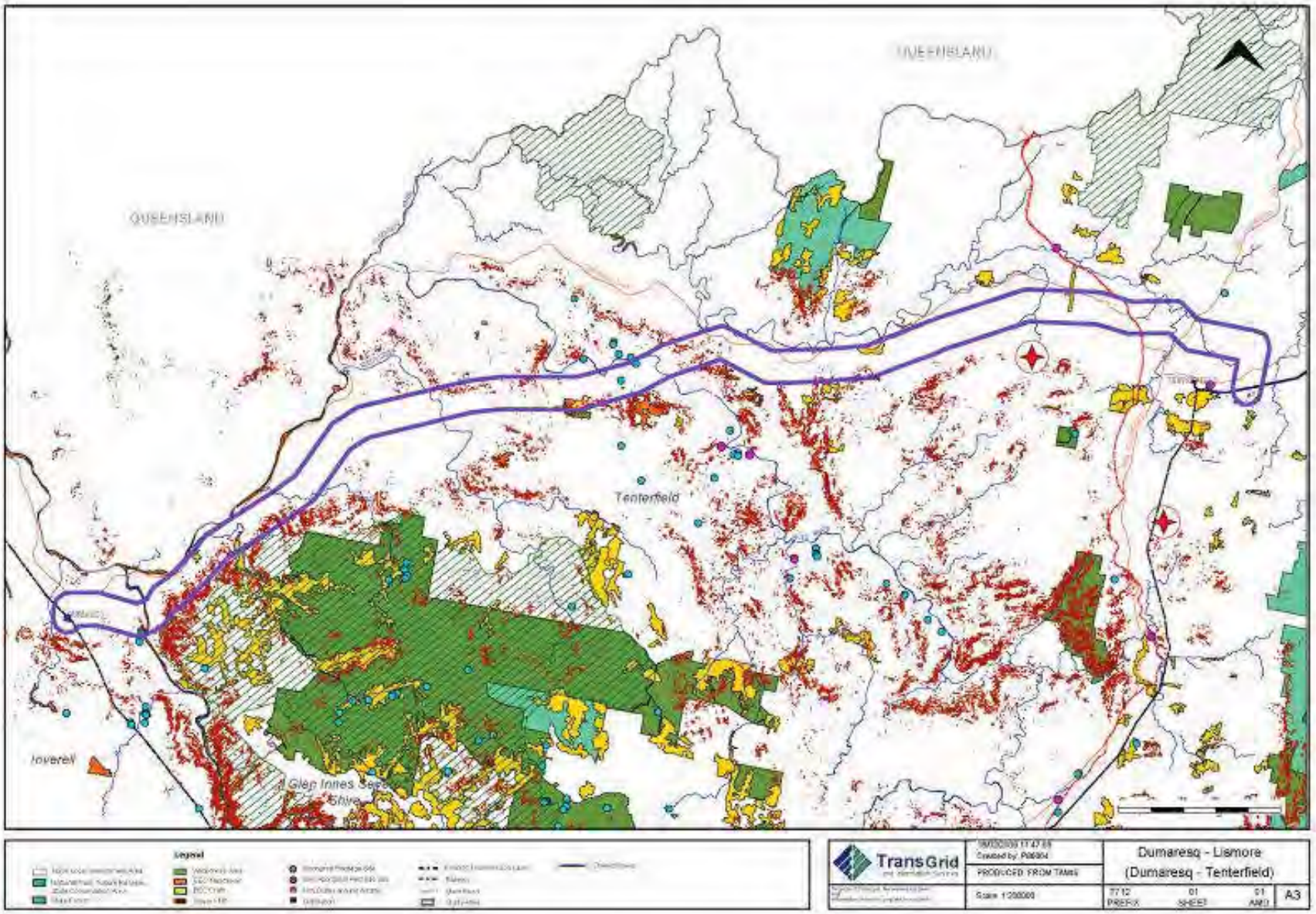


Figure 2. Existing 132kV transmission line easement between Tenterfield and Lismore.

Stage 2 Methodology Letter to Ashford LALC advising that the proposed route of the ETL did not extend to within the boundaries of the ALALC.

Environmental & Heritage Management P/L

ABN: 59 104 582 354

20th August 2009

Members: Ashford LALC
c/- Mr M Talbot / CEO
PO Box 66
Ashford NSW 2361

Dear Malcolm,

Re: Methodology for Aboriginal heritage assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

Recently the Ashford LALC (ALALC) expressed interest to become a registered stakeholder to be consulted over the proposed Far North NSW transmission line upgrade, we are now writing to inform you of the proposed methodology for the cultural and archaeological assessment that we anticipate will be conducted in September and October. ALALC review and feedback on this proposed methodology is requested. As we hope to be in the field the 3rd week of September, we would appreciate any feedback ASAP. We can then consider these comments in finalising the methodology.

Having maps of the route of the Electricity Transmission Line (*ETL*) we have tried to determine where it crosses in relation to the LALC boundaries of each Registered Stakeholder group. The proposed route of the ETL does not extend to within the boundaries of the Ashford LALC. As Registered Stakeholders your organisation will nonetheless remain involved with the project and be invited to review the draft report when it is available.

Project Location: The Far North NSW Project area is located in northern NSW between the substations located near Bonshaw and Lismore, as shown in attached **Figure 1.**

Proposal: TransGrid is proposing to construct an approximately 215 km 330 kV electrical link between their existing substations near Bonshaw and Lismore. This plan includes the upgrade and replacement of the existing transmission line between Tenterfield and Lismore and the construction of a new transmission line between the substation near Bonshaw and Tenterfield.

Methodology for assessment: The methodology proposed is as follows:

1. Provide the stakeholders with the opportunity to identify if there is a need to meet and consult elders to receive additional information about a particular area. If you have specific cultural heritage information relevant to this project, please let OzArk know so that we may manage any additional meetings on a case by case basis.

2. It is proposed that an archaeologist, an archaeological assistant and representatives from the group of registered stakeholders will undertake physical assessment to determine whether Indigenous sites are present within the areas that may be impacted by the proposal.

3. At this stage of the project we aim to target locations that, through proximity to water resources, have the highest likelihood of the presence of Aboriginal sites. Whilst at each location, we will also survey the remainder of the 60 m easement on that property. Targeted survey of areas along the remainder of the ETL is planned to occur at a later stage, after project approval.

4. Discuss in the field, at the end of the field survey, any findings, identified cultural values, management of cultural heritage and culturally acceptable mitigation measures to be considered within the Study Area.

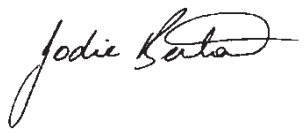
5. Once this assessment is complete, OzArk will prepare a report that documents the results of the assessment. This will include the archaeological component as well as any cultural information that the registered stakeholders would like to put forward. Once this document is a final draft report, notice of its availability will be provided to all registered stakeholder groups. If they wish to review the document for comment it will be supplied. Comments will then be incorporated into the finalised document.

6. If the assessment indicates that sites may be impacted, which at this stage is unknown, a Statement of Commitments will be compiled and comment on them sought from the registered stakeholders.

We require feedback on this methodology, either verbal or in writing, which should be received no later than **Friday 11th September 2009.**

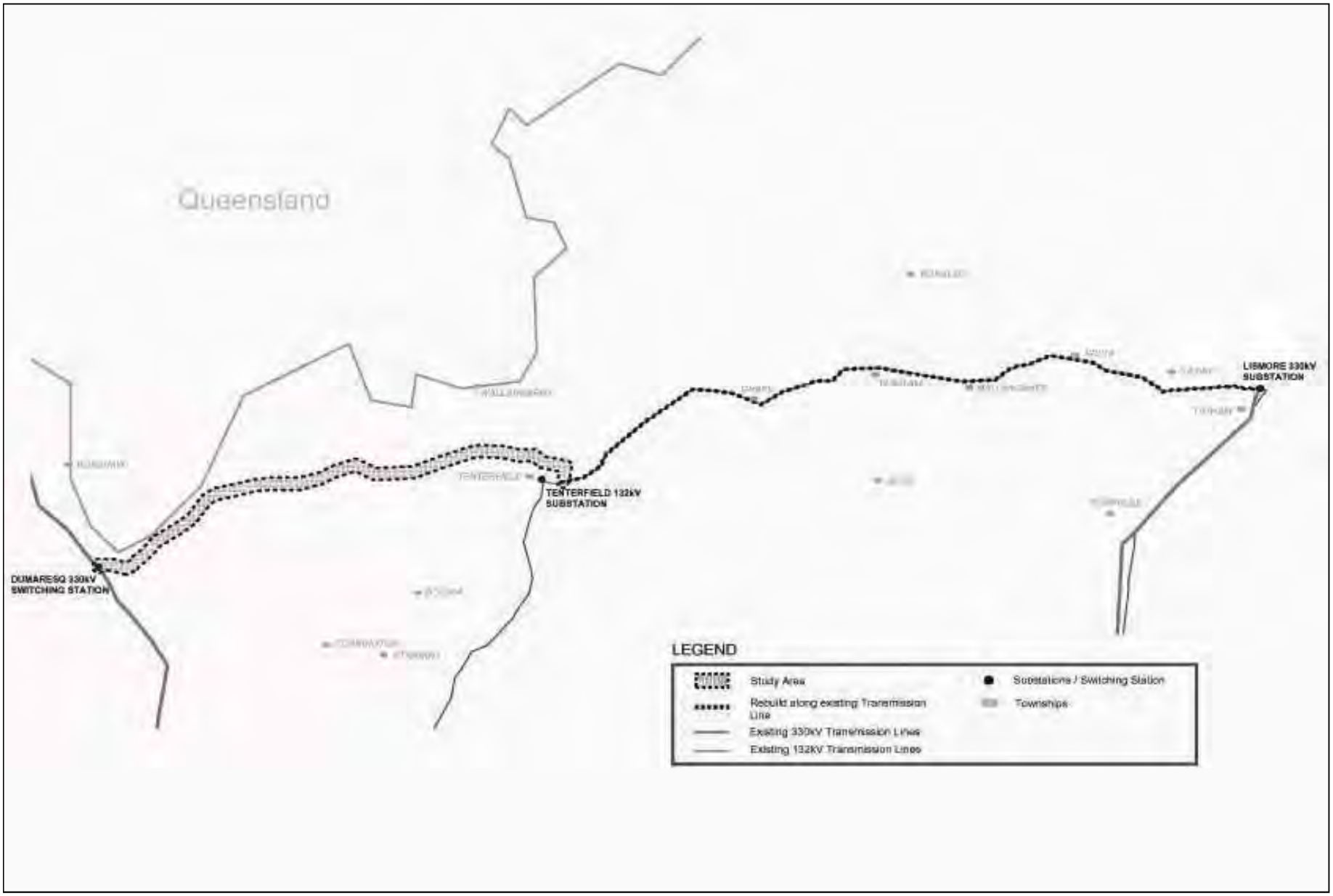
If you have any queries, please feel free to contact our office.

Kind regards



Jodie Benton, Director

Figure 1: Lismore – Bonshaw study area.



Stage 2 – Sample methodology letter sent to Registered Stakeholders (listed below) at the Lismore to Tenterfield end of the ETL. Copies of maps sent to each organisation / individual however not included in sample letters due to size of images.

Ngulingah LALC	Chairperson Ngulingah LALC 53 Conway St (PO Box 981) Lismore NSW 2480
Jubullum LALC	Chairperson Jubullum LALC Jubullum St/Jubullum Village via Tabulam NSW 2469 Ph 66661337
Moombahlene LALC	Mr P Harmond Moombahlene LALC Po Box 70 Tenterfield NSW 2372
Bandjalang People # 2 (NT)	Members – Bandjalang People c/- NTSCORP Ltd Attn: Jemima McCaughan PO Box 2105 Strawberry Hills NSW 2012 fax: 9310 4177

Environmental & Heritage Management P/L

ABN: 59 104 582 354

20th August 2009

Members: Bandjalang People #2
c/- NTSCORP
Atttn: Jemima McCaughan
PO Box 2105
Strawberry Hills NSW 2012

Dear Jemima,

Re: Methodology for Aboriginal heritage assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

We recently sent correspondence to Native Title claimants Bandjalang People #2 (NC98/19) c/ - Mr Phillipe Savidis, relating to the proposed Far North NSW transmission line upgrade. We are now writing to inform them of the proposed methodology for the cultural and archaeological assessment that we anticipate will be conducted in September/October 2009. Bandjalang People review and feedback on this proposed methodology is requested. As we hope to be in the field in the 3rd week of September, we would appreciate any feedback ASAP. We can then consider these comments in finalising the methodology.

Project Location: The Far North NSW Project area is located in northern NSW between the substations located near Bonshaw and Lismore, as shown in attached **Figure 1.**

Proposal: TransGrid is proposing to construct an approximately 215 km 330 kV electrical link between their existing substations near Bonshaw and Lismore. This plan includes the upgrade and replacement of the existing transmission line between Tenterfield and Lismore and the construction of a new transmission line between the substation near Bonshaw and Tenterfield.

As the Transmission Line Upgrade covers an extensive area it is planned that the Lismore to Tenterfield area will be surveyed first. The Tenterfield to Bonshaw assessment is planned for early October.

Field assessment:

Having maps of the route of the Electricity Transmission Line (ETL) we have tried to determine where it crosses in relation to the four LALC's boundaries of each Registered Stakeholder group. OzArk will be inviting representatives from these organisations to participate in the field survey.

In selecting the groups / individuals to participate in the field assessments it is a requirement that your organisation / you are covered by valid workers compensation insurance, and that you forward this documentation i.e. your **Certificate of Currency,** to our office. Please be aware that without this documentation we will not be able to allow your sites officer to be involved in the field assessment (due to NSW OH&S legislation), and consequently an alternative group which has valid workers compensation insurance may be

invited to participate. Regardless of participation in the survey all Registered Stakeholders will remain involved in the project through this consultation process and be invited to review a draft report when it is available.

We will be seeking **one** representative from Registered Stakeholder Groups who have provided us with current documentation that confirms they are covered by workers compensation insurance. The tentative dates for the Lismore to Tenterfield ETL survey are planned during the following weeks: **Monday 14th – Friday 18th September, Monday 28th Sept – Friday 2nd October.** These dates are subject to property access and we aim to maintain them, however please be aware that if issues arise they may be changed. We will stay in touch regarding these dates.

If we do not receive any confirmation from your organisation by **Monday 7th September**, we will presume that you do not wish to participate in the field assessment. However we will continue to consult with you during the duration of the project.

Fee Offer:

The rate of pay is $600 per day for a senior representative and $400 per day for a junior, inclusive of all expenses, not including GST.

Methodology for assessment: The methodology proposed is as follows:

7. Provide the stakeholders with the opportunity to identify if there is a need to meet and consult elders to receive additional information about a particular area. If you have specific cultural heritage information relevant to this project, please let OzArk know so that we may manage any additional meetings on a case by case basis.

8. It is proposed that an archaeologist, an archaeological assistant and representatives from the group of registered stakeholders will undertake physical assessment to determine whether Indigenous sites are present within the areas that may be impacted by the proposal.

9. At this stage of the project we aim to target locations that, through proximity to water resources, have the highest likelihood of the presence of Aboriginal sites. Whilst at each location, we will also survey the remainder of the 60 m easement on that property. Targeted survey of areas along the remainder of the ETL is planned to occur at a later stage, after project approval.

10. Discuss in the field, at the end of the field survey, any findings, identified cultural values, management of cultural heritage and culturally acceptable mitigation measures to be considered within the Study Area.

11. Once this assessment is complete, OzArk will prepare a report that documents the results of the assessment. This will include the archaeological component as well as any cultural information that the registered stakeholders would like to put forward. Once this document is a final draft report, notice of its availability will be provided to all registered stakeholder groups. If they wish to review the document for comment it will be supplied. Comments will then be incorporated into the finalised document.

12. If the assessment indicates that sites may be impacted, which at this stage is unknown, a Statement of Commitments will be compiled and comment on them sought from the registered stakeholders.

The field assessment and Indigenous community involvement:

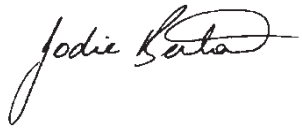
The participant's group is responsible for their Occupational Health and Safety (OH&S). Any participant must be fully assessed by their respective organisation and deemed as 'fit for field work'. OzArk reserves the right to send any participants home who pose a threat to their own health and safety. The respective organisation will also ensure adequate Personal Protective clothing, boots, wide brimmed hat, long sleeve pants and shirt (high visibility) is provided. Participants must also ensure they have water and lunch for the duration of the field work.

In relation to the fee offer and scheduled dates we would appreciate confirmation of your representative's participation in the field assessment. Please also forward your documentation that confirms your organisation is covered by workers compensation insurance

We require feedback on this methodology, either verbal or in writing, which should be received no later than **Friday 11th September 2009.**

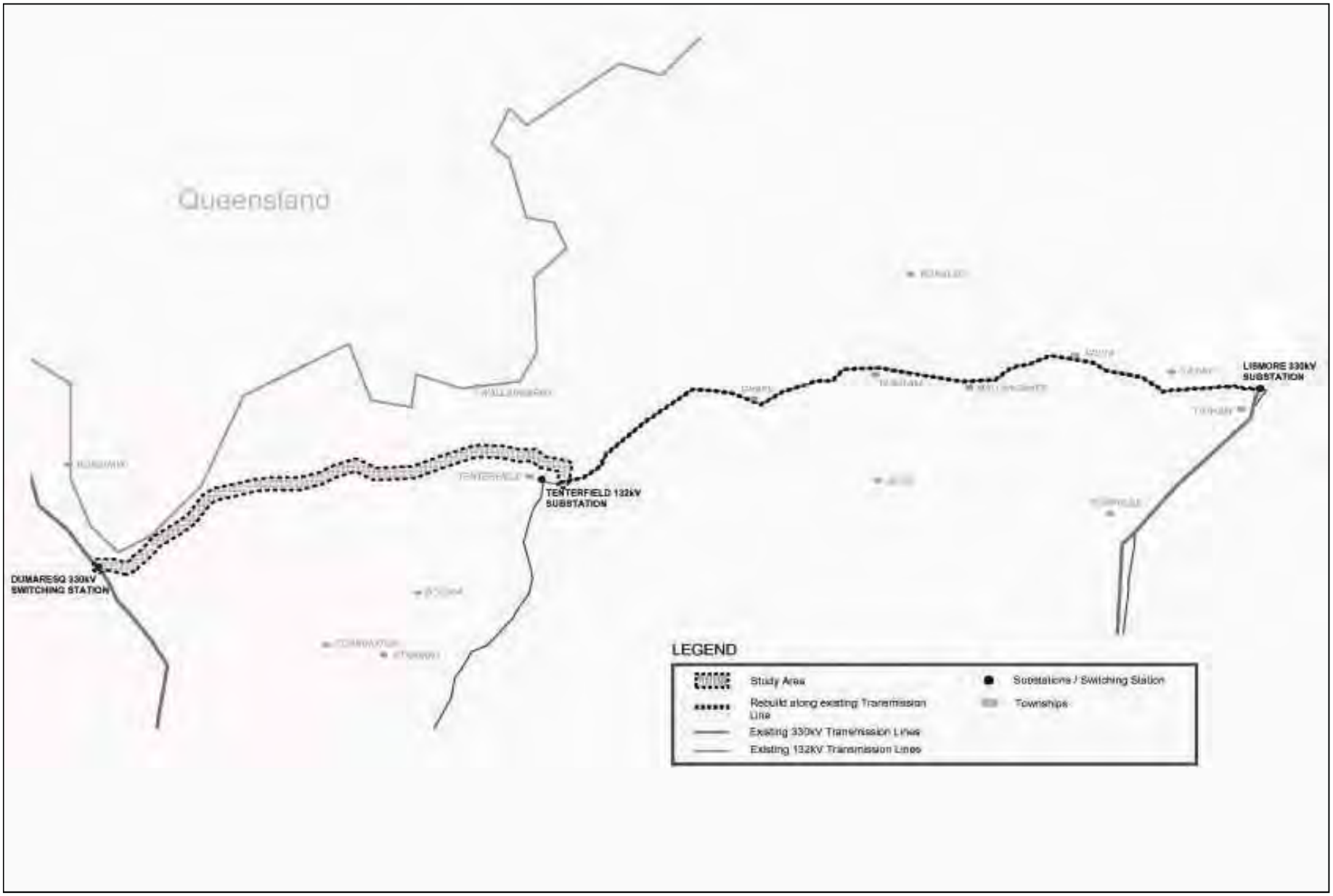
If you have any queries, please feel free to contact our office.

Kind regards



Jodie Benton, Director

Figure 1: Lismore – Bonshaw study area.



Environmental & Heritage Management P/L

ABN: 59 104 582 354

20th August 2009

Members: Casino LALC
c/- Chairperson
110 Walker Street
(PO Box 1047)
Casino NSW 2470

Dear Sir / Madam,

Re: Methodology for Aboriginal heritage assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

We recently sent you correspondence relating to the proposed Far North NSW transmission line upgrade. We are now writing to inform you of the proposed methodology for the cultural and archaeological assessment that we anticipate will be conducted in September/October 2009. Casino LALC review and feedback on this proposed methodology is requested. As we hope to be in the field in the 3rd week of September, we would appreciate any feedback ASAP. We can then consider these comments in finalising the methodology.

Project Location: The Far North NSW Project area is located in northern NSW between the substations located near Bonshaw and Lismore, as shown in attached **Figure 1.**

Proposal: TransGrid is proposing to construct an approximately 215 km 330 kV electrical link between their existing substations near Bonshaw and Lismore. This plan includes the upgrade and replacement of the existing transmission line between Tenterfield and Lismore and the construction of a new transmission line between the substation near Bonshaw and Tenterfield.

As the Transmission Line Upgrade covers an extensive area it is planned that the Lismore to Tenterfield area will be surveyed first. The Tenterfield to Bonshaw assessment is planned for early October.

Field assessment:

Having maps of the route of the Electricity Transmission Line (ETL) we have tried to determine where it crosses in relation to the four LALC's boundaries of each Registered Stakeholder group. OzArk will be inviting representatives from these organisations to participate in the field survey.

In selecting the groups / individuals to participate in the field assessments it is a requirement that your organisation / you are covered by valid workers compensation insurance, and that you forward this documentation i.e. your **Certificate of Currency,** to our office. Please be aware that without this documentation we will not be able to allow your sites officer to be involved in the field assessment (due to NSW OH&S legislation), and consequently an alternative group which has valid workers compensation insurance may be invited to participate. Regardless of participation in the survey all Registered Stakeholders will remain involved in the project through this consultation process and be invited to review a draft report when it is available.

We will be seeking **one** representative from Registered Stakeholder Groups who have provided us with current documentation that confirms they are covered by workers compensation insurance. The tentative dates for the Lismore to Tenterfield ETL survey are planned during the following weeks: **Monday 14th – Friday 18th September, Monday 28th Sept – Friday 2nd October.** These dates are subject to property access and we aim to maintain them, however please be aware that if issues arise they may be changed. We will stay in touch regarding these dates.

If we do not receive any confirmation from your organisation by **Monday 7th September**, we will presume that you do not wish to participate in the field assessment. However we will continue to consult with you during the duration of the project.

Fee Offer:

The rate of pay is $600 per day for a senior representative and $400 per day for a junior, inclusive of all expenses, not including GST.

Methodology for assessment: The methodology proposed is as follows:

13. Provide the stakeholders with the opportunity to identify if there is a need to meet and consult elders to receive additional information about a particular area. If you have specific cultural heritage information relevant to this project, please let OzArk know so that we may manage any additional meetings on a case by case basis.

14. It is proposed that an archaeologist, an archaeological assistant and representatives from the group of registered stakeholders will undertake physical assessment to determine whether Indigenous sites are present within the areas that may be impacted by the proposal.

15. At this stage of the project we aim to target locations that, through proximity to water resources, have the highest likelihood of the presence of Aboriginal sites. Whilst at each location, we will also survey the remainder of the 60 m easement on that property. Targeted survey of areas along the remainder of the ETL is planned to occur at a later stage, after project approval.

16. Discuss in the field, at the end of the field survey, any findings, identified cultural values, management of cultural heritage and culturally acceptable mitigation measures to be considered within the Study Area.

17. Once this assessment is complete, OzArk will prepare a report that documents the results of the assessment. This will include the archaeological component as well as any cultural information that the registered stakeholders would like to put forward. Once this document is a final draft report, notice of its availability will be provided to all registered stakeholder groups. If they wish to review the document for comment it will be supplied. Comments will then be incorporated into the finalised document.

18. If the assessment indicates that sites may be impacted, which at this stage is unknown, a Statement of Commitments will be compiled and comment on them sought from the registered stakeholders.

The field assessment and Indigenous community involvement:

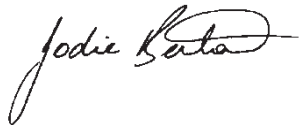
The participant's group is responsible for their Occupational Health and Safety (OH&S). Any participant must be fully assessed by their respective organisation and deemed as 'fit for field work'. OzArk reserves the right to send any participants home who pose a threat to their own health and safety. The respective organisation will also ensure adequate Personal Protective clothing, boots, wide brimmed hat, long sleeve pants and shirt (high visibility) is provided. Participants must also ensure they have water and lunch for the duration of the field work.

In relation to the fee offer and scheduled dates we would appreciate confirmation of your representative's participation in the field assessment. Please also forward your documentation that confirms your organisation is covered by workers compensation insurance

We require feedback on this methodology, either verbal or in writing, which should be received no later than **Friday 11th September 2009.**

If you have any queries, please feel free to contact our office.

Kind regards



Jodie Benton, Director

Stage 2 – Methodology letter sent to Moombahlene LALC. Entire ETL within the boundaries of MLALC.

Environmental & Heritage Management P/L

ABN: 59 104 582 354

20th August 2009

Members: Moombahlene LALC
c/- Mr P Harmond / CEO
PO Box 70
Tenterfield NSW 2372

Dear Peter,

Re: Methodology for Aboriginal heritage assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

Recently the Moombahlene LALC (MLALC) expressed interest to become a registered stakeholder to be consulted over the proposed Far North NSW transmission line upgrade. We are now writing to inform you of the proposed methodology for the cultural and archaeological assessment that we anticipate will be conducted in September/October 2009. MLALC review and feedback on this proposed methodology is requested. As we hope to be in the field the 3rd week of September, we would appreciate any feedback ASAP. We can then consider these comments in finalising the methodology.

Project Location: The Far North NSW Project area is located in northern NSW between the substations located near Bonshaw and Lismore, as shown in attached **Figure 1.** At the moment the ETL corridor from Tenterfield to Bonshaw is still in the process of being selected **Figure 2 (**but please note the southernmost option has been discounted**)**. Prior to field work being undertaken a preferred corridor will have been nominated.

Proposal: TransGrid is proposing to construct an approximately 215 km 330 kV electrical link between their existing substations near Bonshaw and Lismore. This plan includes the upgrade and replacement of the existing transmission line between Tenterfield and Lismore and the construction of a new transmission line between the substation near Bonshaw and Tenterfield.

As the Transmission Line Upgrade covers an extensive area it is planned that the Lismore to Tenterfield area will be surveyed first, followed directly by the Tenterfield to Bonshaw field work.

Field assessment:

Having maps of the route of the Electricity Transmission Line (ETL) we have tried to determine where it crosses in relation to the four LALC's boundaries of each Registered Stakeholder group. OzArk will be inviting representatives from these organisations to participate in the field survey.

In selecting the groups / individuals to participate in the field assessments it is a requirement that your organisation / you are covered by valid workers compensation insurance, and that you forward this documentation i.e. your **Certificate of Currency,** to our office. Please be aware that without this documentation we <u>will not</u> be able to allow your sites officer to be involved in the field assessment (due to NSW OH&S legislation), and consequently an alternative group which has valid workers compensation insurance may be

invited to participate. Regardless of participation in the survey all Registered Stakeholders will remain involved in the project through this consultation process and be invited to review a draft report when it is available.

We will be seeking **one** representative from Registered Stakeholder Groups who have provided us with current documentation that confirms they are covered by workers compensation insurance. The tentative dates for the Lismore to Tenterfield ETL survey are planned during the following weeks: **Monday 14th – Friday 18th September, Monday 28th Sept – Friday 2nd October** with tentative dates for the Tenterfield to Bonshaw ETL survey planned during the following weeks: **Monday 12th – Friday 16th October and Monday 26th – Friday 30th October.** These dates are subject to property access and we aim to maintain them, however please be aware that if issues arise they may be changed. We will stay in touch regarding these dates.

If we do not receive any confirmation from your organisation by **Monday 7th September**, we will presume that you do not wish to participate in the field assessment. However we will continue to consult with you during the duration of the project.

Fee Offer:

The rate of pay is $600 per day for a senior representative and $400 per day for a junior, inclusive of all expenses, not including GST.

Methodology for assessment: The methodology proposed is as follows:

19. Provide the stakeholders with the opportunity to identify if there is a need to meet and consult elders to receive additional information about a particular area. If you have specific cultural heritage information relevant to this project, please let OzArk know so that we may manage any additional meetings on a case by case basis.

20. It is proposed that an archaeologist, an archaeological assistant and representatives from the group of registered stakeholders will undertake physical assessment to determine whether Indigenous sites are present within the areas that may be impacted by the proposal.

21. At this stage of the project we aim to target locations that, through proximity to water resources, have the highest likelihood of the presence of Aboriginal sites. Whilst at each location, we will also survey the remainder of the 60 m easement on that property. Targeted survey of areas along the remainder of the ETL is planned to occur at a later stage, after project approval.

22. Discuss in the field, at the end of the field survey, any findings, identified cultural values, management of cultural heritage and culturally acceptable mitigation measures to be considered within the Study Area.

23. Once this assessment is complete, OzArk will prepare a report that documents the results of the assessment. This will include the archaeological component as well as any cultural information that the registered stakeholders would like to put forward. Once this document is a final draft report, notice of its availability will be provided to all registered stakeholder groups. If they wish to review the document for comment it will be supplied. Comments will then be incorporated into the finalised document.

24. If the assessment indicates that sites may be impacted, which at this stage is unknown, a Statement of Commitments will be compiled and comment on them sought from the registered stakeholders.

The field assessment and Indigenous community involvement:

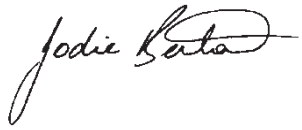
The participant's group is responsible for their Occupational Health and Safety (OH&S). Any participant must be fully assessed by their respective organisation and deemed as 'fit for field work'. OzArk reserves the right to send any participants home who pose a threat to their own health and safety. The respective organisation will also ensure adequate Personal Protective clothing, boots, wide brimmed hat, long sleeve pants and shirt (high visibility) is provided. Participants must also ensure they have water and lunch for the duration of the field work.

In relation to the fee offer and scheduled dates we would appreciate confirmation of your representative's participation in the field assessment. Please also forward your documentation that confirms your organisation is covered by workers compensation insurance

We require feedback on this methodology, either verbal or in writing, which should be received no later than **Friday 11th September 2009.**

If you have any queries, please feel free to contact our office.

Kind regards



Jodie Benton, Director

Stage 2 – Sample methodology letter sent to Registered Stakeholders at the Tenterfield to Bonshaw end of the ETL. Copies of Maps sent to each organisation / individual however not included in each sample letter due to size of images.

Aboriginal Elder	Ms Lilly Bartholomew 7 Railway Street Tenterfield 2372
Aboriginal Elder	Ms Bertha Daley 71 Riley Street Tenterfield 2372
Kwiembal Elders Indigenous Group	Chairperson 21A Dudley Street Ashford NSW 2361 Cedric Talbot mobile: 0448 157 567
Edgerton-Kwiembal People	c/ - Liza Duncan 2 David Street Ashford NSW 2361
Kambuwal Aboriginal Corporation for Culture, Heritage & Land	c/- Barry Brown Chairperson 63 Percy Street Warwick Q 4370 ph: 07 4661 7261
Maree Aboriginal Corporation	c/- Robert Brown Chairperson 38b Conrad Street Warwick QLD 4370 ph: 4661 7697

Environmental & Heritage Management P/L

ABN: 59 104 582 354

18th August 2009

Ms B Daley
71 Riley Street
Tenterfield NSW 2372

Dear Bertha,

Re: Methodology for Aboriginal heritage assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

Recently you expressed interest to become a registered stakeholder to be consulted over the proposed Far North NSW transmission line upgrade. We are now writing to inform you of the proposed methodology for the cultural and archaeological assessment that we anticipate will be conducted in September/October 2009. Your review and feedback on this proposed methodology is requested. As we hope to be in the field the 3rd week of September, we would appreciate any feedback ASAP. We can then consider these comments in finalising the methodology.

Project Location: The Far North NSW Project area is located in northern NSW between the substations located near Bonshaw and Lismore, as shown in attached **Figure 1.** At the moment the ETL corridor from Tenterfield to Bonshaw is still in the process of being selected **Figure 2 (**but please note the southernmost option has been discounted**)**. Prior to field work being undertaken a preferred corridor will have been nominated.

Proposal: TransGrid is proposing to construct an approximately 215 km 330 kV electrical link between their existing substations near Bonshaw and Lismore. This plan includes the upgrade and replacement of the existing transmission line between Tenterfield and Lismore and the construction of a new transmission line between the substation near Bonshaw and Tenterfield.

As the Transmission Line Upgrade covers an extensive area it is planned that the Lismore to Tenterfield area will be surveyed first, followed directly by the Tenterfield to Bonshaw field work.

Field assessment:

Having maps of the route of the Electricity Transmission Line (ETL) we have tried to determine where it crosses in relation to the interest area boundaries of each Registered Stakeholder group or individual. OzArk will be inviting individuals and representatives from these organisations to participate in the field survey.

As an individual Registered Stakeholder who wishes to be considered for participation in the field assessment, it is necessary that you are covered by valid workers compensation insurance. You will need to have the necessary documentation that demonstrates you are covered as an individual, or are included on the policy of an organisation you are associated with. If you organise this insurance your documentation i.e. a **Certificate of Currency,** should be forwarded to our office so that we are aware you are able to participate in the survey. Please know that without this documentation we will not be able to allow you to be involved in the field

assessment (due to NSW OH&S legislation). Regardless of participation in the survey you will remain involved in the project through this consultation process and be invited to review a draft report when it is available.

If you are unable to participate in the field assessment and can share any Aboriginal cultural heritage knowledge relevant to the proposed study area, we welcome this input so as to improve our assessment outcomes.

We will be seeking **one** representative from Registered Stakeholder Groups or individuals who have provided us with current documentation that confirms they are covered by workers compensation insurance. The tentative dates for the Tenterfield to Bonshaw ETL survey are planned during the following weeks: **Monday 12th – Friday 16th October and Monday 26th – Friday 30th October.** These dates are subject to property access and we aim to maintain them, however please be aware that if issues arise they may be changed. We will stay in touch regarding these dates.

If we do not receive any confirmation from you by **Monday 7th September**, we will presume that you do not wish to participate in the field assessment. However we will continue to consult with you during the duration of the project.

Fee Offer:

The rate of pay is $600 per day for a senior representative and $400 per day for a junior, inclusive of all expenses, not including GST.

Methodology for assessment: The methodology proposed is as follows:

25. Provide the stakeholders with the opportunity to identify if there is a need to meet and consult elders to receive additional information about a particular area. If you have specific cultural heritage information relevant to this project, please let OzArk know so that we may manage any additional meetings on a case by case basis.

26. It is proposed that an archaeologist, an archaeological assistant and representatives from the group of registered stakeholders will undertake physical assessment to determine whether Indigenous sites are present within the areas that may be impacted by the proposal.

27. At this stage of the project we aim to target locations that, through proximity to water resources, have the highest likelihood of the presence of Aboriginal sites. Whilst at each location, we will also survey the remainder of the 60 m easement on that property. Targeted survey of areas along the remainder of the ETL is planned to occur at a later stage, after project approval.

28. Discuss in the field, at the end of the field survey, any findings, identified cultural values, management of cultural heritage and culturally acceptable mitigation measures to be considered within the Study Area.

29. Once this assessment is complete, OzArk will prepare a report that documents the results of the assessment. This will include the archaeological component as well as any cultural information that the registered stakeholders would like to put forward. Once this document is a final draft report, notice of its availability will be provided to all registered stakeholder groups. If they wish to review the document for comment it will be supplied. Comments will then be incorporated into the finalised document.

30. If the assessment indicates that sites may be impacted, which at this stage is unknown, a Statement of Commitments will be compiled and comment on them sought from the registered stakeholders.

The field assessment and Indigenous community involvement:

The participant's group is responsible for their Occupational Health and Safety (OH&S). Any participant must be fully assessed by their respective organisation and deemed as 'fit for field work'. OzArk reserves the right to send any participants home who pose a threat to their own health and safety. The respective organisation will

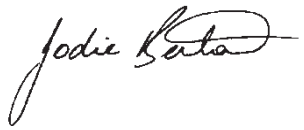
also ensure adequate Personal Protective clothing, boots, wide brimmed hat, long sleeve pants and shirt (high visibility) is provided. Participants must also ensure they have water and lunch for the duration of the field work.

In relation to scheduled dates we would appreciate confirmation of your participation in the field assessment. Please also forward your documentation that confirms you are covered by workers compensation insurance

We require feedback on this methodology, either verbal or in writing, which should be received no later than **Friday 11th September 2009.**

If you have any queries, please feel free to contact our office.

Kind regards



Jodie Benton, Director

Figure 1: Lismore – Bonshaw study area.

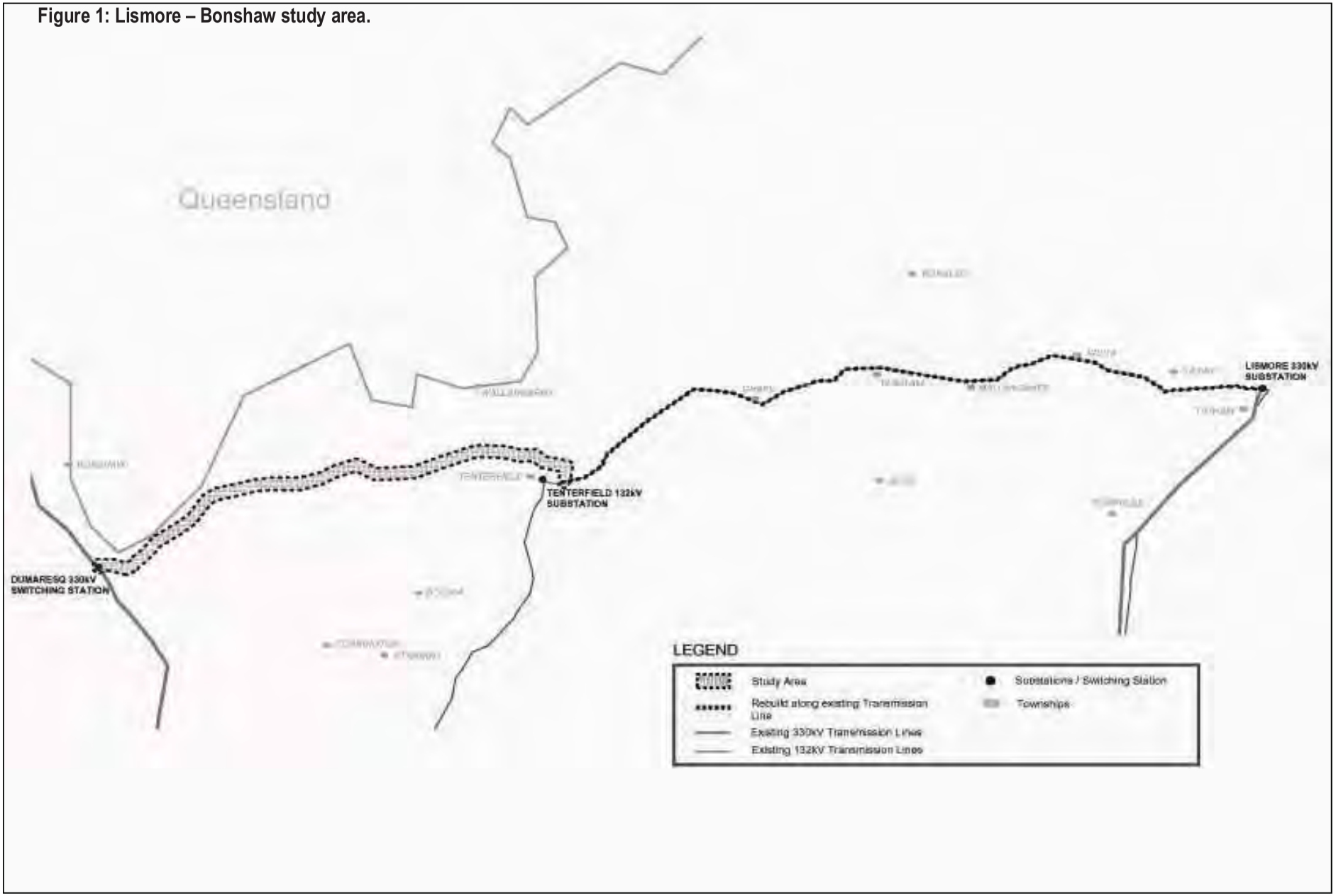
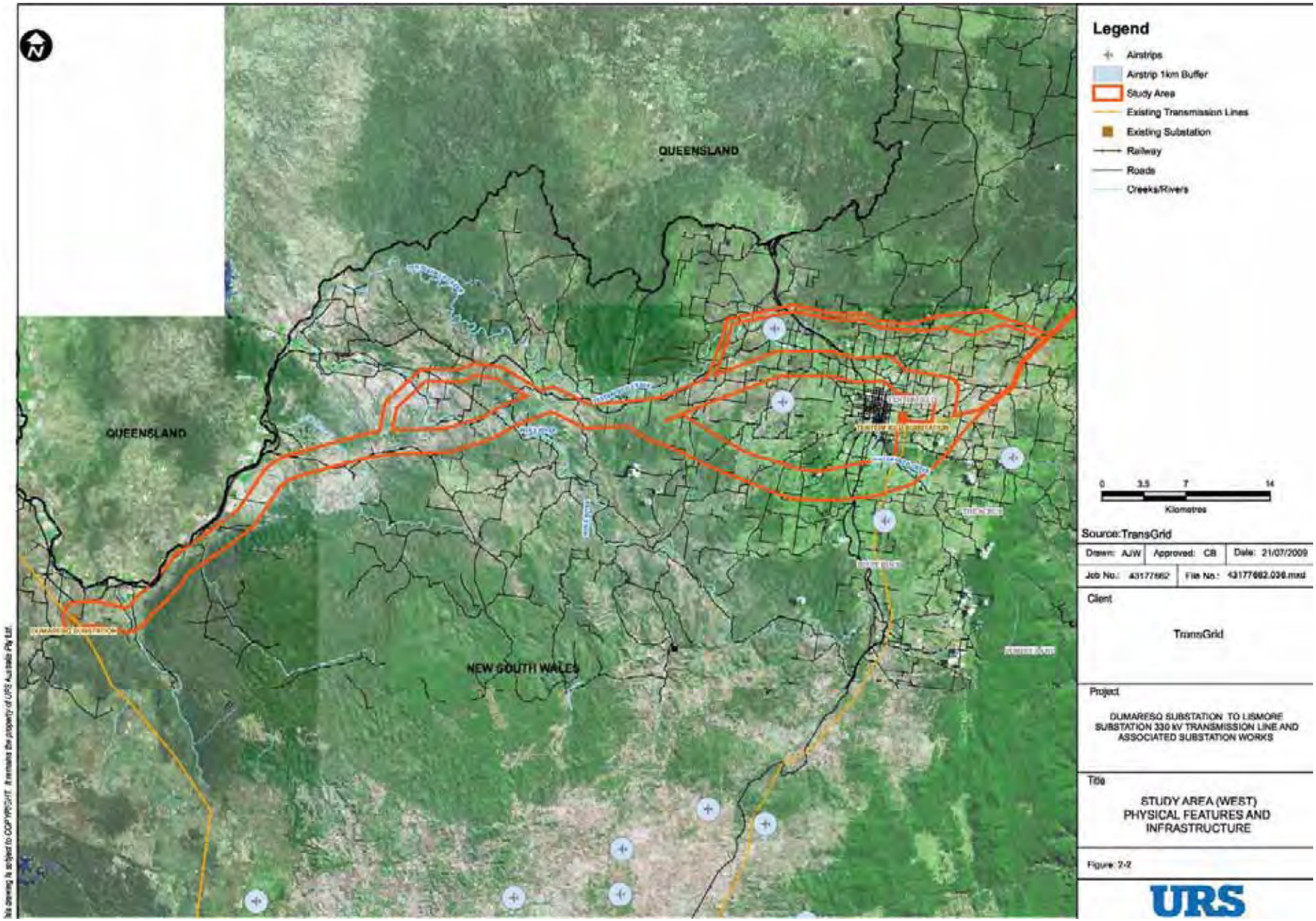


Figure 2: Tenterfield to Bonshaw study area.



Environmental & Heritage Management P/L

ABN: 59 104 582 354

20th August 2009

Members: Maree Aboriginal Corp Land Council
c/- Mr R Brown / Chairperson
38b Conrad Street
Warwick NSW 4370

Dear Robert,

Re: Methodology for Aboriginal heritage assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

Recently the Maree Aboriginal Corporation Land Council (MACLC) expressed interest to become a registered stakeholder to be consulted over the proposed Far North NSW transmission line upgrade. We are now writing to inform you of the proposed methodology for the cultural and archaeological assessment that we anticipate will be conducted in September/October 2009. MACLC review and feedback on this proposed methodology is requested. As we hope to be in the field the 3rd week of September, we would appreciate any feedback ASAP. We can then consider these comments in finalising the methodology.

Project Location: The Far North NSW Project area is located in northern NSW between the substations located near Bonshaw and Lismore, as shown in attached **Figure 1.** At the moment the ETL corridor from Tenterfield to Bonshaw is still in the process of being selected **Figure 2 (**but please note the southernmost option has been discounted**)**. Prior to field work being undertaken a preferred corridor will have been nominated.

Proposal: TransGrid is proposing to construct an approximately 215 km 330 kV electrical link between their existing substations near Bonshaw and Lismore. This plan includes the upgrade and replacement of the existing transmission line between Tenterfield and Lismore and the construction of a new transmission line between the substation near Bonshaw and Tenterfield.

As the Transmission Line Upgrade covers an extensive area it is planned that the Lismore to Tenterfield area will be surveyed first, followed directly by the Tenterfield to Bonshaw field work.

Field assessment:

Having maps of the route of the Electricity Transmission Line (ETL) we have tried to determine where it crosses in relation to the interest area boundaries of each Registered Stakeholder group. OzArk will be inviting representatives from these organisations to participate in the field survey.

In selecting the groups / individuals to participate in the field assessments it is a requirement that your organisation / you are covered by valid workers compensation insurance, and that you forward this

documentation i.e. your **Certificate of Currency,** to our office. Please be aware that without this documentation we will not be able to allow your sites officer to be involved in the field assessment (due to NSW OH&S legislation), and consequently an alternative group which has valid workers compensation insurance may be invited to participate. Regardless of participation in the survey all Registered Stakeholders will remain involved in the project through this consultation process and be invited to review a draft report when it is available.

We will be seeking **one** representative from Registered Stakeholder Groups who have provided us with current documentation that confirms they are covered by workers compensation insurance. The tentative dates for the Tenterfield to Bonshaw ETL survey are planned during the following weeks: **Monday 12th – Friday 16th October and Monday 26th – Friday 30th October.** These dates are subject to property access and we aim to maintain them, however please be aware that if issues arise they may be changed. We will stay in touch regarding these dates.

If we do not receive any confirmation from your organisation by **Monday 7th September**, we will presume that you do not wish to participate in the field assessment. However we will continue to consult with you during the duration of the project.

Fee Offer:

The rate of pay is $600 per day for a senior representative and $400 per day for a junior, inclusive of all expenses, not including GST.

Methodology for assessment: The methodology proposed is as follows:

31. Provide the stakeholders with the opportunity to identify if there is a need to meet and consult elders to receive additional information about a particular area. If you have specific cultural heritage information relevant to this project, please let OzArk know so that we may manage any additional meetings on a case by case basis.

32. It is proposed that an archaeologist, an archaeological assistant and representatives from the group of registered stakeholders will undertake physical assessment to determine whether Indigenous sites are present within the areas that may be impacted by the proposal.

33. At this stage of the project we aim to target locations that, through proximity to water resources, have the highest likelihood of the presence of Aboriginal sites. Whilst at each location, we will also survey the remainder of the 60 m easement on that property. Targeted survey of areas along the remainder of the ETL is planned to occur at a later stage, after project approval.

34. Discuss in the field, at the end of the field survey, any findings, identified cultural values, management of cultural heritage and culturally acceptable mitigation measures to be considered within the Study Area.

35. Once this assessment is complete, OzArk will prepare a report that documents the results of the assessment. This will include the archaeological component as well as any cultural information that the registered stakeholders would like to put forward. Once this document is a final draft report, notice of its availability will be provided to all registered stakeholder groups. If they wish to review the document for comment it will be supplied. Comments will then be incorporated into the finalised document.

36. If the assessment indicates that sites may be impacted, which at this stage is unknown, a Statement of Commitments will be compiled and comment on them sought from the registered stakeholders.

The field assessment and Indigenous community involvement:

The participant's group is responsible for their Occupational Health and Safety (OH&S). Any participant must be fully assessed by their respective organisation and deemed as 'fit for field work'. OzArk reserves the right to

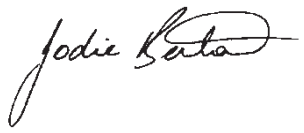
send any participants home who pose a threat to their own health and safety. The respective organisation will also ensure adequate Personal Protective clothing, boots, wide brimmed hat, long sleeve pants and shirt (high visibility) is provided. Participants must also ensure they have water and lunch for the duration of the field work.

In relation to the fee offer and scheduled dates we would appreciate confirmation of your representative's participation in the field assessment. Please also forward your documentation that confirms your organisation is covered by workers compensation insurance

We require feedback on this methodology, either verbal or in writing, which should be received no later than **Friday 11th September 2009.**

If you have any queries, please feel free to contact our office.

Kind regards



Jodie Benton, Director

OzArk Environmental & Heritage Management P/L –PO Box 2069 Dubbo NSW 2830
Tel: 6882 0118; Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898; E-mail: jodie@ozarkehm.com.au / phil@ozarkehm.com.au Web: www.ozarkehm.com.au
*

Responses to Stage 2 Methodology Letter.

OzArk Environmental & Heritage Management P/L –PO Box 2069 Dubbo NSW 2830
Tel: 6882 0118; Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898; E-mail: jodie@ozarkehm.com.au / phil@ozarkehm.com.au Web: www.ozarkehm.com.au
*

Moombahlene Local Aboriginal Land Council (MLALC)

A Local Aboriginal Land Council constituted under s.50 of the Aboriginal Land Rights Act 1983

3 ABN 87 798 635 420

Your Reference:

Our Reference: ph090907ozarksurveyletter

Postal Address:

PO Box 70

Tenterfield NSW 2372

7th September 2009

Ms. Jodie Benton
Director
OzArk Environment & Heritage Management P/L
PO Box 2069
DUBBO NSW 2830

Dear Jodie

I refer to your letter of 20th August 2009 concerning the methodology for Aboriginal Heritage Assessment for the proposed Far North transmission line upgrade between Bonshaw and Lismore. The methodology was discussed by the Board of the MLALC at its meeting held on 3rd September 2009. It was resolved that I should write to you expressing the disappointment of the Board in the extremely restrictive and burdensome requirements that have been put in place to conduct the assessment.

In the case of the MLALC, site inspection services have been outsourced and are now provided by sub-contractors. While most would carry personal and public liability insurance I doubt many would need workers' compensation insurance as they do not normally employ any workers.

The requirements shown under the heading "The field assessment and indigenous community involvement" would appear to expose the MLALC to significant risk if was to engage site workers or even sub-contractors under those requirements. To require participant groups to guarantee the health and fitness of field workers to the standard required in your letter is to force such groups to decline to participate in the process because of the risks of litigation should a field worker be injured or suffer illness during the survey. It is my guess that the purchase of suitable insurance against litigation would also be cost prohibitive. As well as this the possibility of finding a

medical practitioner willing to certify any worker to the level of fitness required by you would be impossible.

The Board was firmly of the view that the methodology you have proposed seems designed more to achieve the minimum involvement of Aboriginal participants rather than provide a genuine process to determine if there is any Aboriginal culture and heritage sites of significance that need protection.

While the MLALC is not in a position to directly participate in the site assessment process it nevertheless would appreciate being kept informed of any culture and heritage discoveries that may come to light.

Thank you for your interest in the culture and heritage of the MLALC.

Yours sincerely

Peter B Harmond
Chief Executive Officer
Moombahlene Local Aboriginal Land Council

Environmental & Heritage Management Ltd
ABN 59 104 582 354

8th September 2009

Mr P Harmond
CEO
Moombahlene LALC
PO Box 70
Tenterfield NSW 2372

Dear Peter

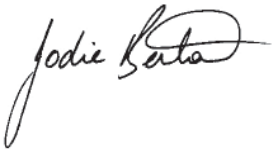
Thank you for your response, dated 7th September 2009, relating to the methodology proposed for the Aboriginal Heritage Assessment for the transmission line upgrade between Bonshaw and Lismore. We appreciate that this matter has been taken before the Board of the MLALC, and are keen to receive feedback as your input will invariably improve our assessment outcomes. In this respect we feel that our aims have been somewhat misinterpreted. It is not our intention to alienate or exclude Aboriginal participants; we are genuine in our endeavours to work with the Indigenous community to gain an understanding of the cultural heritage knowledge relevant to this project area.

It is standard that in each field assessment we conduct that participants are covered by some form of insurance, normally workers compensation, which protects them in the event of injury. We are required to have this insurance for our staff and Proponents that contract us request a copy of our Certificate of Currency as confirmation of cover. As we now understand MLALC sub-contracts sites officers, we would ask that the MLALC check the insurance documents of your sub-contractors to ensure they have valid cover. If MLALC is happy that your sub-contractors are adequately covered, either by workers compensation or an alternative personal accident policy, you could perhaps provide us a letter to that affect and then the issue will be signed off. As a safeguard for every worker it is important that they as individuals, or the corporation who employs them, are responsible for their safety and welfare in the workplace. We do not adopt this view to eliminate participants; it is to ensure their protection against risks to health and safety during the assessment, and to comply with NSW OH&S regulations. It would be remiss of OzArk, and MLALC, to not guarantee the safety of any participant.

In outsourcing your sites officer-work, MLALC would be likely to ensure that sub-contractors are experienced and able to impart their knowledge, and also able to physically participate. On past projects we have had incidents whereby organisations have provided sites officers that were not physically capable of completing the day's survey due to health issues, i.e. chronic heart condition, unable to walk without assistance of walking stick. By 'fit for work' we simply request that the sites
officer is physically able to participate and will be comfortable walking long distances as part of the survey. No doctor's certificates or the like are required.

We hope that this correspondence clarifies our field work requirements and hopefully enables the MLALC to consider outsourcing a sub-contractor(s) to participate in the field assessment. We look forward to your continued involvement in this project and to meeting with the Board after field assessment to discuss management of any identified sites.

Yours sincerely



Jodie Benton
Director

Correspondence advising dates for fieldwork: Lismore to Tenterfield ETL. Copies of maps sent with methodology letters Lismore to Tenterfield ETL can be found in Appendices 5 and 6.

Environmental & Heritage Management P/L

ABN: 59 104 582 354

18th September 2009

Members: Moombahlene LALC
c/- Mr P Harmond
PO Box 70
Tenterfield NSW 2372
E: 'moombahlenelalc1@bigpond.com'

Dear Peter

Re: Aboriginal heritage assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

Further to our correspondence dated 8th September clarifying our field work requirements, we would like to confirm if Moombahlene LALC have conferred on this issue and wish to provide a sites officer for the upcoming field work.

This letter is advising, if MLALC are able to provide sites officers, the field work dates for the proposed Lismore to Tenterfield Electricity Transmission Line (ETL) Study Area.

The field assessment – Lismore to Tenterfield ETL: OzArk would like to invite *two* members from Moombahlene LALC participate in the five (5) day field assessment relating to this portion of the survey, tentatively planned for **Monday 28th September to Friday 2nd October**. Representatives are to meet at **8.30 am at a destination to be advised prior to the survey date**. We aim to survey a partial length of the existing ETL by foot (see attached **Maps # 8 - 11**) approx. 20 km in length, plus as yet undefined access tracks new and/or existing. These dates are subject to property access and we aim to maintain them, however please be aware that if issues arise they may be changed. We will stay in touch regarding these dates.

Fee Offer - The rate of pay is $600 per day for a senior representative and $400 per day for a junior, inclusive of all expenses, not including GST.

In relation to the fee offer and scheduled dates we would appreciate confirmation of your representative's participation in the field assessment. Please also forward documentation that confirms your sub-contractors are adequately covered, either by workers compensation or an alternative personal accident policy.

If you have any queries, please feel free to contact our office.

Kind regards

Phillip Cameron
Project Manager

OzArk Environmental & Heritage Management P/L –PO Box 2069 Dubbo NSW 2830
Tel: 6882 0118; Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898;
E-mail: jodie@ozarkehm.com.au / phil@ozarkehm.com.au
Web: www.ozarkehm.com.au

Environmental & Heritage Management P/L

ABN: 59 104 582 354

31st August 2009

Members: Casino LALC
C/- Chairperson
110 Walker Street
(PO Box 1047)
Casino NSW 2470

Dear Sir / Madam

Re: Aboriginal heritage assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

Your organisation was sent a letter on 20th August outlining the proposed methodology for the cultural and archaeological assessment for the proposed Far North NSW Transmission Line Upgrade. The methodology etc. described in this correspondence is still applicable, however we would now like to advise the proposed field work dates for the Lismore to Tenterfield Electricity Transmission Line (ETL) Study Area.

In selecting the groups to participate in the field assessment it is a requirement that your organisation has valid workers compensation insurance and that you forward your **Certificate of Currency** to our office. Please be aware that without this certificate we will not be able to allow your sites officer to be involved in the field assessment (due to NSW OH&S legislation). If you are unable to get this insurance, we will still be able to involve your group in the consultation process through phone and letter, and possibly meetings once the locations of sites and proposed project impacts are known.

If we do not receive any confirmation from your organisation by **Wednesday 9th September**, we will presume that you do not wish to participate in the field assessment. We will, however, continue to keep you informed and provide opportunity for you to participate in the management of any sites recorded in the Study Area during the duration of the project.

The field assessment – Lismore to Tenterfield ETL: OzArk would like to invite *two* members from Casino LALC participate in the three day field assessment relating to this portion of the survey, tentatively planned for **Monday 14th September**, **Tuesday 15th and Wednesday 16th September**. One representative from the native title claimant group the Bandjalang People # 2 (NC98/19) has also been invited to participate on the first day of this survey. Representatives are to meet at the **entrance to the Lismore Substation** at **8 am**. On Monday we aim to survey a partial length of the existing ETL by foot (see attached **Maps # 15 - 19**) approx. 8 km in length e, plus as yet undefined access tracks new and/or existing. On Tuesday and Wednesday we aim to survey an approx. further 17 km in length of the existing ETL.

Personal Protective Equipment (PPE): Each group is responsible for their own OH&S issues. Please ensure your Site's Officer has adequate Personal Protective Equipment; long sleeve shirt and pants, broad brimmed hat, high visibility safety vests, boots / appropriate walking shoes, sunscreen etc. All staff provided should be physically fit and able to walk long distances, up to 10 km per day. It is the responsibility of each group to identify if any of your personnel have medical conditions / allergies that should be known to other people participating in the field assessment in the event of an emergency. The OzArk field director will send home anyone who they determine to be 'unfit for work' or who may pose an OH&S risk to themselves or others.

There is little opportunity to get to shops where we will be working. It is important each person should ensure they have enough food, water and any other necessity for the day.

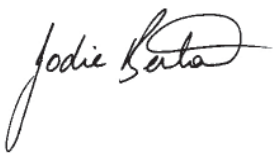
Fee offer: The Proponent is offering $600.00 (excl. GST) per day for participation in the field survey for an experienced, senior Sites Officer or Elder; or $400 (excl. GST) per day for a junior Sites Officer. This fee is all inclusive of travel, accommodation and meal expenses. Invoices are to be addressed to OzArk EHM P/L, P O Box 2069, Dubbo, NSW, 2830 and Attention: Jodie Benton.

Important: Due to the size of this project, and the area we need to survey, we are doing our best to estimate the length of time it will take to complete each portion of the assessment. We also need to be aware of where the ETL crosses the boundaries of each LALC and plan the survey days accordingly. It is noteworthy that many factors may delay our progress, i.e weather conditions, excessive sites recorded, property access, however we hope to complete the field work on the schedules dates. If the arrangements need to be updated we ask that you provide a contact number for your nominated sites officer so we are able to liaise directly with them, and they are not inconvenienced by any changes. Please provide this information when you respond to this correspondence.

In relation to the fee offer and scheduled dates we would appreciate confirmation that your organisation has valid workers compensation insurance and that your representative is available to participate in the field assessment.

If you have any queries, please feel free to contact our office.

Kind regards



Jodie Benton
Director

Encl. **Maps # 15 – 19** showing Study Area and what we have determined from the ALRA Aboriginal Land Councils Map to be the boundaries of each LALC area. If you have any queries and concerns about these marked areas please do not hesitate to contact our office.

Environmental & Heritage Management P/L

ABN: 59 104 582 354

31st August 2009

Members: Bandjalang People #2
c/- NTSCORP
Atttn: Jemima McCaughan
PO Box 2105
Strawberry Hills NSW 2012

Dear Jemima,

Re: Aboriginal heritage assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

The Bandjalang People # 2 (NC98/19), on behalf of NTSCORP Ltd, was recently sent a letter outlining the proposed methodology for the cultural and archaeological assessment for the proposed Far North NSW Transmission Line Upgrade. The methodology etc. described in this correspondence is still applicable, however we would now like to advise the proposed field work dates for the Lismore to Tenterfield Electricity Transmission Line (ETL) Study Area.

In selecting the groups to participate in the field assessments it is a requirement that Native Title Claimants the Bandjalang People # 2 have valid workers compensation insurance, and that they forward their **Certificate of Currency** to our office. Alternatively due to new legislation introduced on 30th June, if this organisation expects to pay $7,500 or less in Wages for this financial year, they no longer require a Workers Compensation insurance Policy. We do however require **a letter stating this information**[1] on company letterhead and signed by a representative of the Bandjalang People # 2, see example enclosed. If you are unable to get this insurance, we will still be able to involve your group in the consultation process through phone and letter, and possibly meetings once the locations of sites and proposed project impacts are known.

If we do not receive any confirmation from your organisation by **Wednesday 9th September**, we will presume that you do not wish to participate in the field assessment. We will, however, continue to keep you informed and provide opportunity for you to participate in the management of any sites recorded in the Study Area during the duration of the project.

[1] Please note that penalties apply if you provide incorrect Wage Declarations or fail to take out a Policy when your Wages exceed $7,500.

The field assessment – Lismore to Tenterfield ETL: OzArk would like to invite *one* member from Bandjalang People # 2 (NC98/10) to participate in the field assessment relating to this portion of the survey, tentatively planned for **Monday 14th September**. Representatives are to meet at the **entrance to the Lismore Substation** at **8 am**. Two representatives from the Casino LALC have also been invited to participate in this portion of the survey. On Monday we aim to survey a partial length of the existing ETL by foot (see attached **Maps # 18 - 19**) approx. 8 km in length e, plus as yet undefined access tracks new and/or existing.

Personal Protective Equipment (PPE): Each group is responsible for their own OH&S issues. Please ensure your Site's Officer has adequate Personal Protective Equipment; long sleeve shirt and pants, broad brimmed hat, high visibility safety vests, boots / appropriate walking shoes, sunscreen etc. All staff provided should be physically fit and able to walk long distances. It is the responsibility of each group to identify if any of your personnel have medical conditions / allergies that should be known to other people participating in the field assessment in the event of an emergency. The OzArk field director will send home anyone who they determine to be 'unfit for work' or who may pose an OH&S risk to themselves or others.

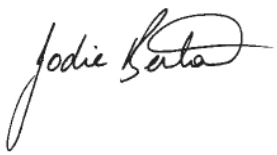
There is little opportunity to get to shops where we will be working. It is important each person should ensure they have enough food, water and any other necessity for the day.

Important: Due to the size of this project, and the area we need to survey, we are doing our best to estimate the length of time it will take to complete each portion of the assessment. We also need to be aware of where the ETL crosses the boundaries of each LALC and plan the survey days accordingly. It is noteworthy that many factors may delay our progress, i.e weather conditions, excessive sites recorded, property access, however we hope to complete the field work on the schedules dates. If the arrangements need to be updated we ask that you provide a contact number for your nominated sites officer so we are able to liaise directly with them, and they are not inconvenienced by any changes. Please provide this information when you respond to this correspondence.

In relation to the fee offer and scheduled dates we would appreciate confirmation that your organisation has valid workers compensation insurance and that your representative is available to participate in the field assessment.

If you have any queries, please feel free to contact our office.

Kind regards



Jodie Benton
Director

Encl. **Maps # 18 – 19** showing Study Area and what we have determined from the ALRA Aboriginal Land Councils Map to be the boundaries of each LALC area. If you have any queries and concerns about these marked areas please do not hesitate to contact our office.

OzArk Environmental & Heritage Management P/L –PO Box 2069 Dubbo NSW 2830
Tel: 6882 0118; Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898; E-mail: jodie@ozarkehm.com.au / phil@ozarkehm.com.au Web: www.ozarkehm.com.au

Environmental & Heritage Management P/L

ABN: 59 104 582 354

31st August 2009

Members: Jubullum LALC
c/- Mr R James
Jubullum St/Jubullum Village
via Tabulam NSW 2469
Ph 66661337

Dear Ross

Re: Aboriginal heritage assessment for the proposed Far North NSW Transmission Line Upgrade, between Bonshaw and Lismore.

Your organisation was sent a letter on 20th August outlining the proposed methodology for the cultural and archaeological assessment for the proposed Far North NSW Transmission Line Upgrade. The methodology etc. described in this correspondence is still applicable, however we would now like to advise the proposed field work dates for the Lismore to Tenterfield Electricity Transmission Line (ETL) Study Area.

In selecting the groups to participate in the field assessment it is a requirement that your organisation has valid workers compensation insurance and that you forward your **Certificate of Currency** to our office. Please be aware that without this certificate we will not be able to allow your sites officer to be involved in the field assessment (due to NSW OH&S legislation). If you are unable to get this insurance, we will still be able to involve your group in the consultation process through phone and letter, and possibly meetings once the locations of sites and proposed project impacts are known.

If we do not receive any confirmation from your organisation by **Wednesday 9th September**, we will presume that you do not wish to participate in the field assessment. We will, however, continue to keep you informed and provide opportunity for you to participate in the management of any sites recorded in the Study Area during the duration of the project.

The field assessment – Lismore to Tenterfield ETL: OzArk would like to invite *two* members from Jubullum LALC participate in the two day field assessment relating to this portion of the survey, tentatively planned for **Thursday 17th September and Friday 18th September**. Representatives are to meet at **8 am at a destination to be advised prior to the survey date**. We aim to survey a partial length of the existing ETL by foot (see attached **Maps # 12 - 15**) approx. 20 km in length, plus as yet undefined access tracks new and/or existing.

Personal Protective Equipment (PPE): Each group is responsible for their own OH&S issues. Please ensure your Site's Officer has adequate Personal Protective Equipment; long sleeve shirt and pants, broad brimmed hat, high visibility safety vests, boots / appropriate walking shoes, sunscreen etc. All staff provided should be physically fit and able to walk long distances, up to 10 km per day. It is the responsibility of each group to identify if any of your personnel have medical conditions / allergies that should be known to other people participating in the field assessment in the event of an emergency. The OzArk field director will send home anyone who they determine to be 'unfit for work' or who may pose an OH&S risk to themselves or others.

There is little opportunity to get to shops where we will be working. It is important each person should ensure they have enough food, water and any other necessity for the day.

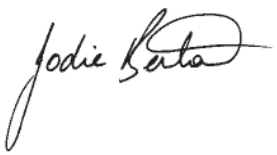
Fee offer: The Proponent is offering $600.00 (excl. GST) per day for participation in the field survey for an experienced, senior Sites Officer or Elder; or $400 (excl. GST) per day for a junior Sites Officer. This fee is all inclusive of travel, accommodation and meal expenses. Invoices are to be addressed to OzArk EHM P/L, P O Box 2069, Dubbo, NSW, 2830 and Attention: Jodie Benton.

Important: Due to the size of this project, and the area we need to survey, we are doing our best to estimate the length of time it will take to complete each portion of the assessment. We also need to be aware of where the ETL crosses the boundaries of each LALC and plan the survey days accordingly. It is noteworthy that many factors may delay our progress, i.e weather conditions, excessive sites recorded, property access, however we hope to complete the field work on the schedules dates. If the arrangements need to be updated we ask that you provide a contact number for your nominated sites officer so we are able to liaise directly with them, and they are not inconvenienced by any changes. Please provide this information when you respond to this correspondence.

In relation to the fee offer and scheduled dates we would appreciate confirmation that your organisation has valid workers compensation insurance and that your representative is available to participate in the field assessment.

If you have any queries, please feel free to contact our office.

Kind regards



Jodie Benton
Director

Encl. **Maps # 12 – 15** showing Study Area and what we have determined from the ALRA Aboriginal Land Councils Map to be the boundaries of each LALC area. If you have any queries and concerns about these marked areas please do not hesitate to contact our office.

OzArk Environmental & Heritage Management P/L –PO Box 2069 Dubbo NSW 2830
Tel: 6882 0118; Fax: 6882 0630; Mob: 0403 763 504 / 0423 198 898;
E-mail: jodie@ozarkehm.com.au / phil@ozarkehm.com.au
Web: www.ozarkehm.com.au