International Power

APPENDIX F

Heritage

URS

Peaking Power Plant and Associated Gas Pipeline Parkes, NSW

Cultural Heritage Assessment

March 2007

Report to URS

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EXECUTIVE SUMMARY

International Power (Australia) Pty Ltd proposes to develop a peaking power plant at a location near Parkes in western NSW. This peaking power plant would be connected by an 8 km pipeline to the Central West Pipeline.

URS commissioned a cultural heritage assessment of the augmentation works study area which included a review of relevant heritage literature and databases, Aboriginal consultation and field inspections.

Background research indicated that no Aboriginal sites had been previously recorded as occurring within or in the vicinity of the Parkes study area.

No Aboriginal or European sites were located with the proposed peaking power plant site during the course of the field survey. There are no cultural heritage constraints to the power plant development.

One possible Aboriginal scarred tree **P1** was located near the gas pipeline easement. The current route of the pipeline easement avoids the location of the possible scarred tree and will not impact on any of its heritage values. As a consequence the tree does not pose any heritage constraint to the proposed development.

One historic house site (**P2)** was located within the gas pipeline easement. The site does not fulfil any of the criteria for heritage listing and does not pose any heritage constraint to the proposed development.

It is recommended that:

- In the event that the route of the pipeline easement is changed and impact to the scarred tree cannot be avoided then further assessment of the tree should be undertaken. This would aim to more adequately determine the potential of the scar to be Aboriginal in origin and would involve ascertaining the age of the tree and the age of scar. This work should be conducted by a dendrochronologist. This would allow informed mitigation strategies to be put in place for the tree.

- In the event that the possible scarred tree is to be impacted further consultation with the local Aboriginal community should be undertaken.

- If any further discussions with the local Aboriginal community are undertaken the results should be taken into consideration and incorporated into the development proposal.

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1. INTRODUCTION

International Power (Australia) Pty Ltd proposes to develop a peaking power plant, associated infrastructure and gas pipeline at Parkes, in western NSW. The proposed Parkes Peaking Power Plant project is to be located at a site adjacent to Condobolin Road (Lot 1 DP 602329) approximately 10 km west of Parkes (Figure 1.1). The site is immediately adjacent to an existing TransGrid-owned substation. The natural gas pipeline is approximately 8 km long with a 15m to 25 m wide easement. The pipeline will be located along road reserves and through agricultural paddocks from the peaking power plant site and will link into the Central West Gas pipeline outside of the town of Parkes.

This report documents the results of a cultural heritage assessment undertaken for the proposed Parkes Power Peaking Plant project. Two deviations to the pipeline route are also included in this assessment. The cultural heritage assessment addresses indigenous and non-indigenous heritage issues.

The proposed development of the Parkes Peaking Power Plant falls under the provisions of Part 3A of the *Environment Planning and Assessment Act (1979).* This cultural heritage assessment will form part of the Preliminary Environmental Assessment for the project.

This report was commissioned by URS Australia Pty Ltd.

1.1 Report Outline

This report:

- Documents consultation with local Aboriginal groups carried out in the course of the investigation;
- Describes the environmental setting of the study area;
- Provides a background of local and regional archaeology for the study area;
- Describes the field survey strategy and results;
- Outlines the statutory obligations relevant to cultural heritage in the study area; and
- Provides recommendations based on the results of the investigation and the potential impact of the proposed development on the archaeological resource.

1.2. Aboriginal Consultation

The Parkes Peaking Power Plant study area is situated within the tribal area of the Wiradjuri people (Tindale 1974). The study area falls within the boundaries of the Peak Hill Local Aboriginal Land Council (PHLALC).

Initial contact was made with the Peak Hill Land Council in writing to inform them of the project and to invite the Land Council to provide representatives to participate in the field survey for the project. Subsequent contact was made by telephone to confirm arrangements for the survey and discuss the cultural values of the study area.

Land Council representatives were invited to participate in two site inspections for the Parkes project - the substation site survey in November and the gas pipeline easement in early December. Representatives were unavailable to participate in the November survey, despite rescheduling of the survey dates. Arrangements were made to meet with a representative on site for the pipeline survey, however, the representative did not arrive on site as organised. In phone calls on the morning of the December survey the Land Council representatives indicated that they wanted to conduct the survey over three days with two field representatives.

The lack of field participation resulted in an inability to discuss more fully the cultural significance of the area. As a result cultural significance values for the area have been determined through phone discussions with the Land Council and a written confirmation of these values has been requested though at this time this has not been received.

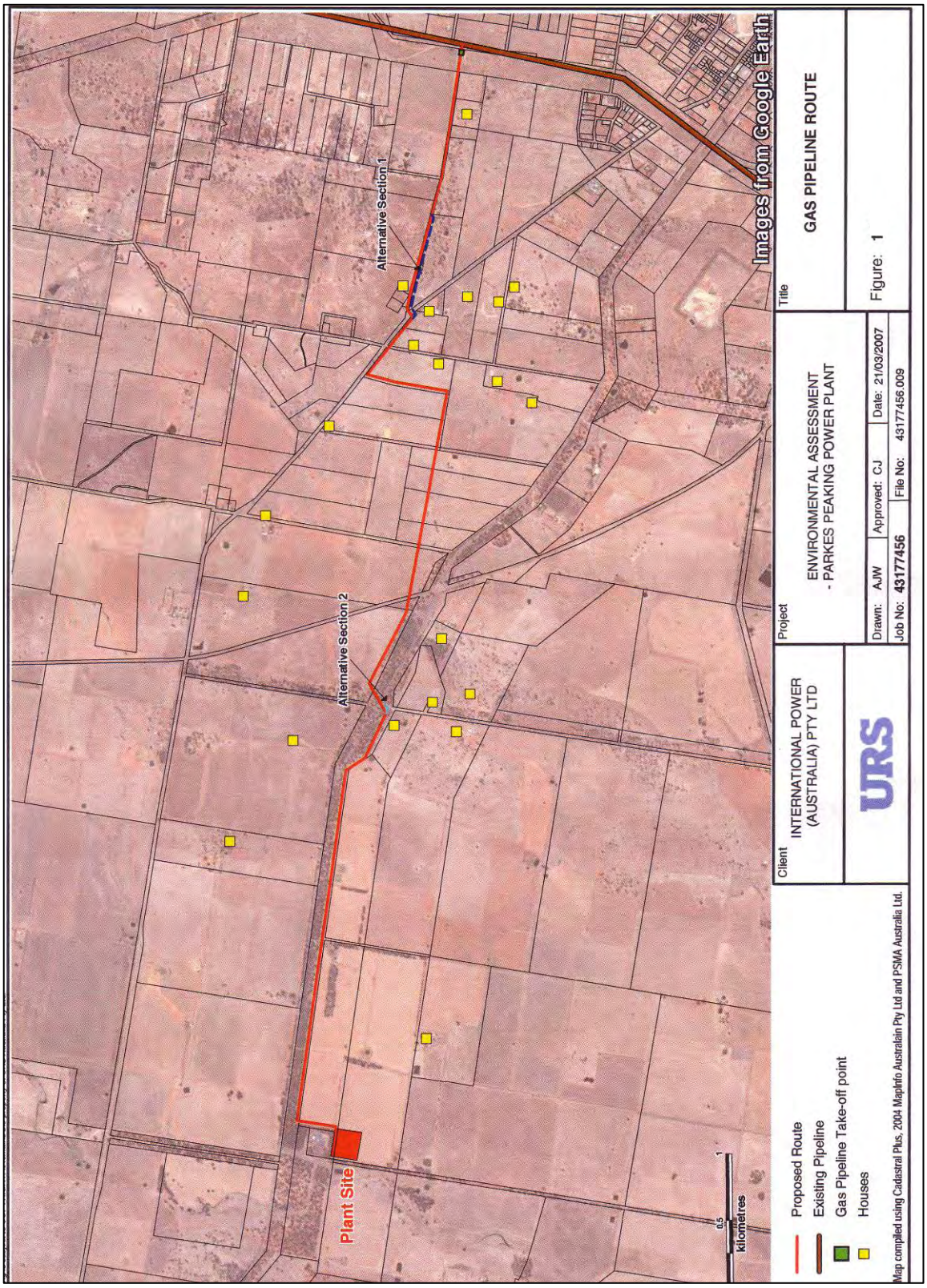


Figure 1.1. Parkes Peaking Power Plant Study Area (Base map supplied by Client)

2. STUDY METHODOLOGY

2.1 Literature and Database Review

A range of documentation was used in assessing archaeological knowledge for the Parkes study area and its surrounds. This background research was used to determine if known heritage sites were located within the area under investigation, to facilitate site prediction on the basis of known regional and local site patterns, and to place the area within an archaeological and heritage management context.

Aboriginal literature sources included the NSW Department of Environment and Conservation (DECC) Aboriginal Heritage Information Management System (AHIMS), associated files and catalogue of archaeological reports.

Non-Aboriginal literature sources included a search of the following:

- State Heritage inventory (NSW Heritage Office)
- Register of the National Estate (DEH)
- Register of the National Trust of NSW
- Parkes Local Environment Plan 1990 Heritage Schedule
- Various secondary historical sources relating to nineteenth century occupation of the local and regional area
- Parish maps for Currajong

2.2 Fieldwork

Field survey of the peaking power plant site was carried out by archaeologists, Lyn O'Brien and Lindsay Smith, on the 10th November, 2006, and survey of the gas easement was undertaken on 7th December 2006 by Lyn O'Brien and Nicola Hayes and the 21st March 2007 by Lyn O'Brien and Daniel Powell. All survey was conducted on foot and involved walking both formal and opportunistic traverses within the study area. All areas of significant ground surface visibility were surveyed. Remnant stands of native vegetation were inspected for trees with potential Aboriginal scars. An assessment of landscape disturbance and archaeological sensitivity/potential was made for all areas.

2.3 Project Personnel

Fieldwork was conducted by Lyn O'Brien, Lindsay Smith, Nicola Hayes and Daniel Powell. This report was prepared by Lyn O'Brien and edited by Kerry Navin.

2.4 Recording Parameters

The archaeological survey aimed at identifying material evidence of Aboriginal occupation as revealed by surface artefacts and areas of archaeological potential unassociated with surface artefacts. Potential recordings fall into three categories: isolated finds, sites and potential archaeological deposits.

2.4.1 Background scatter

Background scatter is a term used generally by archaeologists to refer to artefacts which cannot be usefully related to a place or focus of past activity (except for the net accumulation of single artefact losses).

There is however no single concept for background discard or 'scatter', and therefore no agreed definition. The definitions in current use are based on the postulated nature of prehistoric activity, and often they are phrased in general terms and do not include quantitative criteria. Commonly agreed is that background discard occurs in the absence of 'focused' activity involving the production or discard of stone artefacts in a particular location. An example of unfocused activity is occasional isolated discard of artefacts during travel along a route or pathway. Examples of 'focussed activity' are camping, knapping and heat -treating stone, cooking in a hearth, and processing food with stone tools. In practical terms, over a period of thousands of years an accumulation of 'unfocused' discard may result in an archaeological concentration that may be identified as a 'site'. Definitions of background discard comprising only qualitative criteria do not specify the numbers (numerical flux) or 'density' of artefacts required to discriminate site areas from background discard.

2.4.2 Scarred Trees

Trees with scars of Aboriginal origin form the other major type of artefactual evidence. Each tree is normally considered to be a separate site. The identification of a scar as Aboriginal in origin is dependent on a set of inter-related interpretive criteria. The credibility of alternative causal explanations such as natural traumas and other types of human scarring must be tested for each scar.

A range of diagnostic criteria has been developed to assist in the identification of Aboriginal scarred trees. The following numbered criteria are based on archaeological work conducted by Simmons (1977) and Beesley (1989). It should be noted that these criteria have never been quantitatively tested or quantified using non-relative criteria such as absolute dating or an analysis of pre-occluded scar morphologies..

1. *The scar does not normally run to ground level:* (scars resulting from fire, fungal attack or lightning nearly always reach ground level). However, ground termination does not necessarily discount an Aboriginal origin (some ethno-historic examples of canoe scars reach the ground);

1(a). *If a scar extends to the ground, the sides of the original scar must be relatively parallel:* (natural scars tend to be triangular in shape;

2. *The scar is either approximately parallel sided or concave, and symmetrical:* (few natural scars are likely to have these properties except fire scars which may be symmetrical but are wider at the base than their apex. Surveyors marks are typically triangular, and often adzed);

3. *The scar should be reasonably regular in outline and regrowth:* scars of natural origin tend to have irregular outlines and may have uneven regrowth;

4. *The ends of the scar should be 'shaped', either squared off, or pointed* (often as a result of regrowth): (a 'keyhole' profile with a 'tail' is suggestive of branch loss);

5. *A scar which contains adze or axe marks* on the original scar surface is likely to be the result of human scarring. Their morphology and distribution may lend support to an interpretation of an Aboriginal origin: (marks produced after the scarring event may need to be discounted);

6. *The scar must date to the time of Aboriginal bark exploitation within its region*: The traditional Aboriginal exploitation of bark probably ceased in most regions between 100 and 150 years ago. However, in some locations associated with Aboriginal settlement, the Aboriginal removal of bark may have continued to the present day, or restarted as part of new cultural movements.

7. *The tree must be endemic to the region:* (and thus exclude historic plantings).

Field based identification of Aboriginal scars, is based on surface evidence only and will not necessarily provide a definitive classification. In many cases the possibility of a natural origin cannot be ruled out, despite the presence of several diagnostic criteria or the balance of interpretation leaning toward an Aboriginal origin. For this reason interpretations of an Aboriginal origin are qualified by the recorder’s degree of certainty.

The following categories were used:

- *Definite Aboriginal scar* - This is a scar which conforms to all of the criteria and/or has in addition a feature or characteristic which provides definitive identification, such as diagnostic axe or adze marks, or an historical identification. All conceivable natural causes of the scar can be reliably discounted.

- *Aboriginal scar* **-** This is a scar where an Aboriginal origin is considered the most likely. The scar conforms to all of the criteria and a natural origin is considered unlikely and improbable.

- *Probable Aboriginal scar* - This is a scar that conforms to all of the criteria and where an Aboriginal origin is considered to be the most likely. Despite this, a natural origin cannot be ruled out.

- *Possible Aboriginal scar* - This is a scar which conforms to all or most of the criteria and where an Aboriginal origin cannot be reliably considered as more likely than alternative natural causes. The characteristics of this scar will also be consistent with a natural cause.

3. ENVIRONMENTAL CONTEXT

3.1 Geology and Topography

The Parkes Shire is located on the western edge of the Great Dividing Range within the Central West Region of NSW. The Central West consists of the Tablelands, and the Slopes and Plains regions. Parkes Shire covers an area of 5919 square kilometres with the town of Parkes being the major urban centre, followed by Peak Hill. The other major centres are Bogan Gate, Trundle and Tullamore in the west of the Shire.

The topography in the shire can generally be described flat to gently undulating. The area forms part of the catchment for two main river systems, the Bogan and the Lachlan Rivers, which are major tributaries of the Murray-Darling Basin System. Most watercourses in the Shire are not permanent, being reduced to a series of waterholes for the majority of the year.

The Central West of New South Wales lies within a geological structure called the Lachlan Fold Belt. This is an area of ancient volcanic and sedimentary rocks that were folded and faulted during tectonic activity about 350 million years ago. The Belt cuts across the east of Australia, running north to south across central New South Wales through to the north-east of Tasmania (Figure 3.1).

The oldest rocks in the Central West section of the Lachlan Fold Belt are about 480 million years old. They are found between Molong and Wellington and west of Parkes. However most rocks in the Central West were laid down as sediments, with some lava flows, about 460 to 310 million years ago. Large granite masses are also present.

Younger sandstones and siltstones ranging from 300 to 150 million years in age cover the old rocks of the Lachlan Fold Belt. These sandstones and siltstones form the prominent cliffs and scarps that extend from Lithgow to Ulan and from Dubbo to Dunedoo. They also contain some coal seams.

Basalt flows as young as 10-12 million years in age also overlie the older rocks of the Lachlan Fold Belt. Mount Canobolas is one such example. Within the Lachlan Fold Belt there are three main "sub-belts" of ancient volcanic activity - the Parkes-Narromine Volcanic Belt, the Molong Volcanic Belt and the Rockley-Gulgong Volcanic Belt.

Numerous copper and gold deposits have been identified in these volcanic belts. The Parkes-Narromine Volcanic Belt includes the currently operating Northparkes copper mine and the Peak Hill gold mine. The Molong Volcanic Belt extends from Cowra to Wellington and contains the Cadia copper-gold deposits. Elsewhere in the Molong Volcanic Belt significant copper-gold deposits have been found near Cargo, Copper Hill and Wellington.

3.2 Previous land use and disturbance

Land surfaces in the study area have been significantly transformed. Currently the majority of the study area has been cleared for agricultural (wheat) production, which involves the ploughing and sowing of the topsoil layer.

The proposed gas easement route traverses approximately eight kilometres of agricultural land to the outskirts of the current town of Parkes and crosses over and runs along the road reserve for the Conndobolin Road before entering back into agricultural land. The road reserve has been heavily impacted by the creation of the road, additional gravel roads and vehicle impact areas. The pipeline route study area involves two alternative sections in addition to the proposed route, one at the crossing of the Condobolin Road and the other along Goldrush Road.

The eastern portion of the pipeline route (closer to the township of Parkes) crosses the historical mine workings of the *No Mistake* and *Deep Lead* gold reserves. These areas have been heavily disturbed as a result of mining activities, rail and road construction and housing developments. Tree cover is sparse, with the majority of the original vegetation now cleared.

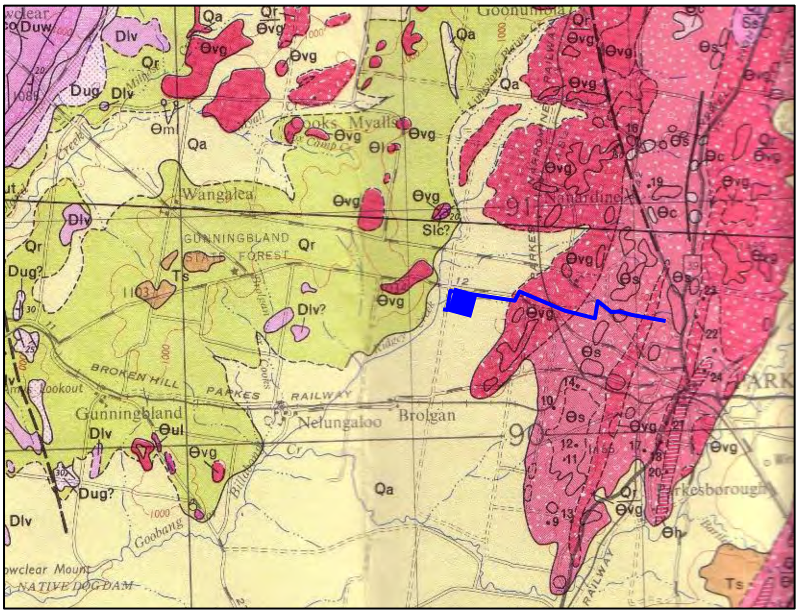


Figure 3.1 Parkes Geology map showing the approximate location of the study area (marked in blue)

4. ARCHAEOLOGICAL CONTEXT

4.1 Ethnohistory

Tribal boundaries within Australia are based largely on linguistic evidence and it is probable that boundaries, clan estates and band ranges were fluid and varied over time. Consequently 'tribal boundaries' as delineated today must be regarded as approximations only, and relative to the period of, or immediately before, European contact. A reconstruction of clan boundaries based on Tindale (1974) indicates that the study area fell within the tribal boundaries of the Wiradjuri people.

Wiradjuri country extends from the western slopes of the Great Dividing Range, near Lithgow, and is bounded by the three rivers: Macquarie (Wambool), Lachlan (Kalari), Murrumbidgee (retained its original name). It was a land described by early European explorers as fertile, abundant in fish and game. Wiradjuri people had their own language and a rich culture of stories and songs.

Clashes between European settlers and aborigines were very violent and have been termed the 'Wiradjuri Wars'. The loss of fishing grounds and significant sites and the killing of Aboriginal People was retaliated through attacks with spears on cattle and stockmen. In the 1850s there were still corroborees around Mudgee but there were fewer clashes. European settlement had taken hold and the Aboriginal population was in Decline.

Information about the lifestyle of the Wiradjuri at the time of European contact and in the years that followed may be found within the writings and observations of explorers and settlers. These records may give some insight into the traditional activities of the Aboriginal people.

A review of ethno-historic references to the Aborigines of the Dubbo area has been provided by Koettig (1985:17-43) and of the Wiradjuri tribal area by White (1986). The reader is referred to these documents for detailed ethnohistoric information for the region under consideration in this present study.

4.2 Regional Overview

The area of the Western Slopes and adjoining plains region of NSW has been the subject of considerable archaeological investigation. Studies have been conducted within an academic research framework (Bell 1979, 1980, 1982; Pearson 1981), as archaeological planning and management tools (Koettig 1985, McChecney 1995) and in a cultural resource management context (Thornill 1977, Lance 1985, Egloff 1987, Davies 1993, Brayshaw 1993, Kelton 1995, Navin Officer 1997). The latter include surveys and investigations for telecommunication cables, electricity transmission line easements, gas pipelines and residential subdivisions.

In 1981 Pearson completed the only regionally based research investigation relevant to the study area. His thesis is an investigation of Aboriginal and early European settlement patterns within the Upper Macquarie River region of NSW. The majority of his field coverage was directed by information from informants and thus skewed towards large and obtrusive sites. He excavated three rock shelter sites which provided a regional record of Aboriginal occupation dating from c.7000 ago to the present.

In 1982 McKenzie surveyed the route of a proposed Telecom conduit between Dubbo and Narromine. Twelve scared trees were recorded during the survey.

Lance (1985) conducted a survey of a proposed 145km transmission line from Wellington to Forbes. He located 16 open campsites, two scarred trees and 14 isolated finds (10 including locations with more than 1 artefact). Most sites contained only small numbers of artefacts with 58% containing 10 or less, and 12% containing over 100.

In 1985 Koettig conducted an assessment of Aboriginal sites in the Dubbo City area concluding that archaeological sites could be expected to occur throughout the region, with artefact scatters, scarred trees and grinding grooves being the most commonly encountered site types. Site location was influenced by location to water and food resources.

In 1993 Davies surveyed a 192 km long telecom optic fibre route from Orange to Narromine. Five artefact scatters, one artefact scatter/scarred tree, one scarred tree and three isolated finds were located during the survey.

4.3 Parkes Region

In 1977 Thornill surveyed the route of 66kV transmission line from Parkes to Peak Hill. One site, a basalt quarry (DECC #35-6-2) was located approximately 40km north of Parkes and south of Trewilga. Thornill notes that 'a permanent water hole 200m from the sites was apparently a camping ground for 300-400 Aboriginals in the late 1800's'.

In 1986 Stone carried out a survey of the Goonumbla Mining Lease, 24km southwest of Peak Hill. Fifteen open campsites and one scarred tree was located in the study area with stone noting that most campsites were found close to water sources.

Dean Jones (1988) carried out a survey of a proposed 23ha gold mine at Mt Aubrey, northeast of Parkes, locating one scarred tree and an artefact scatter.

A further assessment of an additional area of land which was to be utilised as a tailings dam for the Goonumbla mine (now referred to as Northparkes Mine) was carried out by Nicholson in 1990. No sites were located in the survey area.

In 1993 Brayshaw surveyed a water supply pipeline to the proposed Northparkes Mine locating two open campsites.

In 1997 Navin Officer Heritage Consultants undertook a survey for a natural gas pipeline from Marsden to Dubbo passing through the Parkes township. This survey resulted in four scarred trees and an open artefact scatter being located. This gas pipeline is the termination point for the proposed gas easement.

In 1998 Mary Dallas completed an archaeological survey as part of the Environmental Impact Statement for the London-Victoria Gold Mine located southwest of Parkes. This survey resulted in ten scarred trees being identified. Despite the historical workings of the London and Victoria gold leads no historical heritage was identified during the survey.

4.4 The Study Area

A search of the DECC AHIMS indicates that no Aboriginal sites have been recorded as occurring within the study area or with a four kilometre area around the study area.

4.5 Predictive Archaeological Statement

Archaeological research throughout the Western tablelands has established a set of generalised criteria for predicting the location of Aboriginal sites within the landforms represented in this environment (Pearson 1981, Koettig 1985, Navin Officer 1997).

The type of sites known to occur in the region and the potential for their presence within the study area are listed as follows:

- *open scatters of stone artefacts* are most likely to occur on level, well-drained ground adjacent to sources of freshwater (creeks or swamps), particularly minor water courses. These sites are often buried in alluvial or colluvial deposits and only become visible when subsurface deposits are exposed by erosion or other types of ground disturbance. Considering the distance to water campsites are not expected to occur within the study area.

- *isolated finds* occur as single artefacts. Whether or not the isolated position of the artefact is a true reflection of artefact density or as a result of low visibility variables, it is considered to be the constituent component of the background scatter present within its particular landform unit. It is possible that isolated finds may occur within the study area.

- *burial sites* are generally found in landforms characterised by a relatively deep soil profile of soft sediments such as aeolian sand and alluvium. Usually burials are only identified when eroding out of sand dunes or creek banks, or when disturbed by development. The probability of detecting burials during surface field surveys is extremely low and not expected within the study area.

- *ceremonial sites (bora grounds)* are generally located away from campsites on level areas. Stone arrangements are also located away from campsites in isolated places and tend to be associated with small hills or flat land. These site types may occur within the study area.

- *potential archaeological deposit (PAD)* Most open artefact scatters in the Tablelands are associated with only shallow deposit, although some stratified sites are known (Koettig 1985). It is predicted that PADs are likely to be present on elevated, flat or low-gradient landform elements associated with drainage lines and the crest of spurlines, close to water. Considering the topography of the study area it is unlikely that PADs will occur.

- *scarred trees* may occur in areas of remnant vegetation which contain trees of sufficient age. Carved trees associated with burial grounds and other ceremonial places have been recorded in the wider region. Most trees have been cleared from the study area but some stands of remnant trees remain thus making the presence of scarred trees possible within the study area. Scarred trees are a common class of heritage item in the region and it is likely that scarred trees may occur in the study area.

5. HISTORICAL CONTEXT

5.1. The Parkes Region

The Parkes district contains some of the most productive agricultural and grazing land in NSW. Today the community represents a diversity of rural agricultural businesses but the original growth of the district was a direct result of the finding of gold in the area.

The first Europeans in the district were the exploratory party of John Oxley who passed by in 1817 on one of the first inland expeditions. In 1835 Thomas Mitchell's expedition passed through the area, encountering the local Wiradjuri people. Relations were cordial and Mitchell wrote of their sincerity, intelligence, resourcefulness and unaffected nature. The presence of squatters in the area was noted by Mitchell but the first official license for the Parkes area was issued in 1839 to Thomas Kite of Coobang Station. In September 1848 the first leases were gazetted giving details of their approximate boundaries, areas and estimates of carrying capacity. This gazettal shows the entire region having been divided among the big holdings by this date (Tindall 1982)

Despite the presence of the big homesteads the area around Parkes was relatively unsettled until 1862 when the discovery of gold (Pioneer Lead) led to a hastily erected 'canvas' town known as Currajong. This settlement accommodated thousands of hopefuls who flocked to the find area seemingly overnight. A further discovery of gold in 1871 at the No Mistake Lead resulted in the formation of the town of 'Bushmans' and consolidated the districts position of one of the richest gold producing areas in the colony (Andrews 1910).

In 1873 the Prime Minister of New South Wales Sir Henry Parkes visited the diggings and the township that had developed on the sites. On December 1, 1873 the name of the settlement was changed from Bushmans to Parkes in honour of the Prime Minister and his visit.

Further discoveries in 1874 of the McGuigans Lead were followed by the discoveries of the London, the Ben Nevis, the Tichbourne, the Fairy and the Wapping Butcher Leads. Within three months of the discovery of the McGuigans Lead 10,000 peopled had settled in the region. With the opening of these alluvial deposits towns such as McGuigans and Tichborne sprang into existence. So important were the finds considered to be that the Australian Joint Stock and Commercial banks as well as the Bank of New South Wales opened branches exclusively for the purchase of Gold (Andrews 1910).

By the time Parkes was declared a municipality in 1883 the initial wave of gold fever had passed and free selectors had begun to take advantage of the Robertson Land Act, taking up smaller allotments of land and establishing the agriculture which has since become a mainstay of the town and area.

Wheat was first grown three kilometres north of Parkes in 1865 and a local flour mill opened in 1871. Agricultural production expanded when the railway arrived in 1893 to the great economic benefit of the town - an effect enhanced when the line to Broken Hill was opened in 1927. When the standard-gauge rail system was completed in 1969 Parkes became the marshalling and dispersal terminal for eastern Australia.

The construction of the Northparkes copper and gold mine in 1994 and its ongoing operations have ensured the regions mining economy and economic development. This mine is the largest in NSW.

5.2. The study area

The pastoral leases in the Parkes region were first gazetted in 1848. This gazettal shows the area of the power station site as having been part of the pastoral lease of *Nelungaloo* station a holding of 66,000 acres. *Nelungaloo* (substation Brolgan) was bounded on the north by *Gunningbland* (70685 acres) and to the east by *West Billabong* (10555 acres) (Unger 1977). The proposed gas easement runs along the boundary between *Nelungaloo* and *Gunningbland* and then enters into *Gunningbland*.

In 1862 gold fever descended on the Parkes region with the discovery of the Pioneer Lead by James Pugh. The power station study area is located within the Billabong Goldfields to the west of the area of the main gold finds which were centred on the town of Parkes. The easement crosses over the old

workings of the *No Mistake* and *Deep Leads*. It was the discovery of the No Mistake Lead that led to the formation of the town of *Bushmans*. The name and extent of the Billabong Goldfield are shown on the historical parish maps. Historical records show mining was carried out within the study area and considering its closeness to the discovered reefs, and the large numbers of miners who converged on the area, it is highly possible that some mining activities (ie. prospecting) took place on the site and that some historical remains from this period may remain.

Figure 5.1 is a 1910 geological survey map of the Parkes goldfields showing the location of the study area relative to the worked gold leases and main ore bodies.

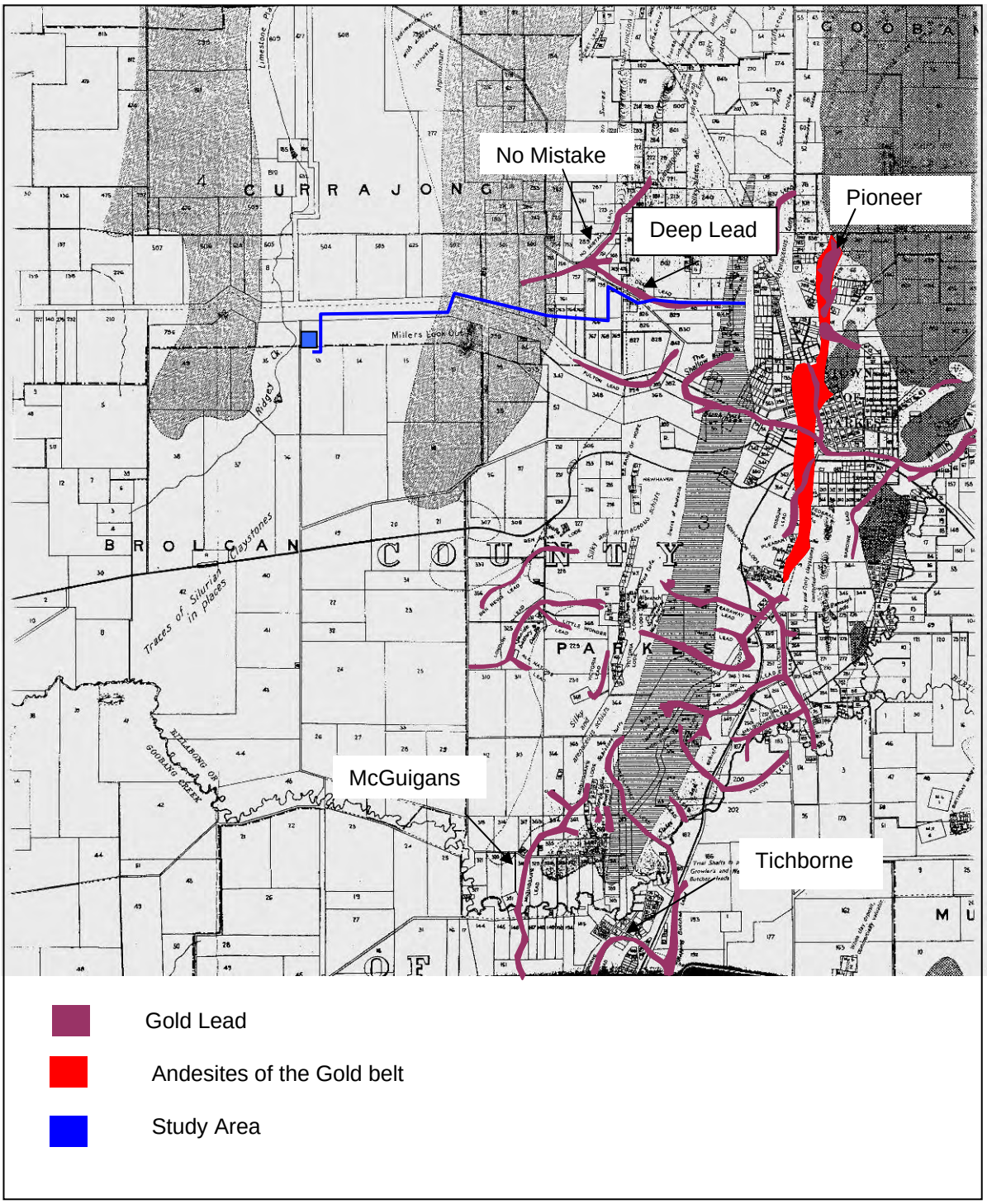


Figure 5.1 Geological Map of the Parkes Gold Field.
Department of NSW Mines 1910.

The *Land Act of 1884* made available a large number of farms to cater for the increasing demand for closer settlement. Under this Act approximately half of the leasehold area of each station was resumed and surveyed into farms. This process applied to *Nelungaloo* and *Gunningbland* and according to the Parish maps for Currajong, the study area lies within the area of land resumed under this Act.

The earliest available Parish Map of Currajong dates from 1901 (Figure 5.2) and shows land across the study area having been granted previously into agricultural holdings. It is highly probable that land was cleared for agriculture from the time of the initial grants Later parish maps (Figures 5.3 and 5.4) show that land boundaries remained static with no further subdivisions occurring.

Figure 5.2 Extract from Parish of Currajong Map 1901 Map Info number 14831501 (NSW Dept. of Lands)

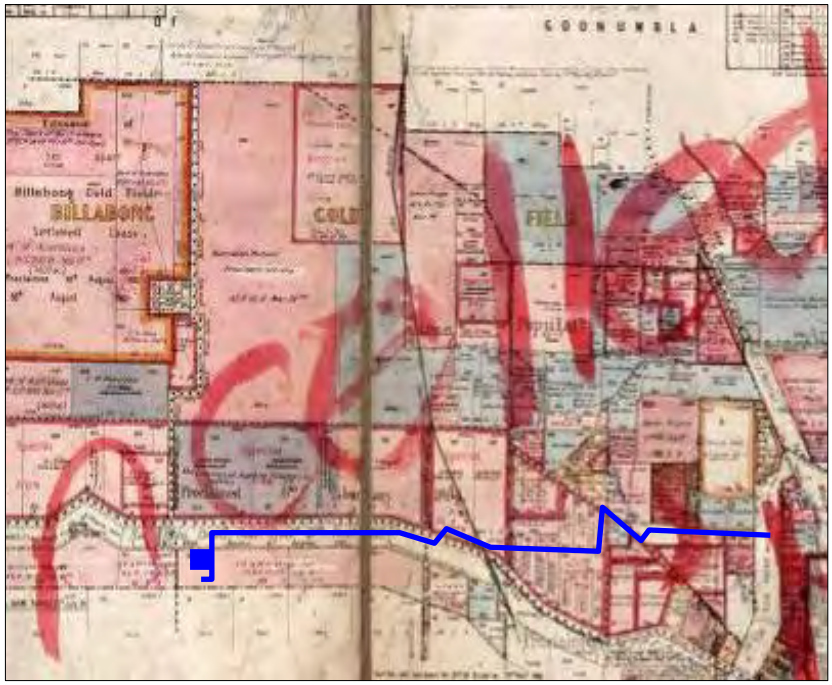


Figure 5.3 Extract from parish of Currajong 1912. Map info number 14831601 (NSW Dept of Lands)

Figure 5.4 Extract from Parish of Currajong 1957 Map info Number 11311501 (NSW Dept of Lands)

6. RESULTS

One (possible) Aboriginal site - a 'possible' Aboriginal scarred tree, and one European heritage site - a house site, were located in the field survey of the study area. The Aboriginal scarred tree is located to the north of the impact area and the European heritage site is located within the proposed gas pipeline easement.

6.1 Aboriginal Sites

A search of the AHIMS database (NSW DECC) indicated that no Aboriginal sites have been previously identified in the study area.

One Aboriginal site, a possible scarred tree (P1), was identified in the course of the field survey outside of the study area. Details of this tree are listed below.

No areas of archaeological sensitivity or potential were identified in the study area.

Possible Aboriginal Scarred Tree (P1)

AGD: 603525.6336275 Parkes Topographic Map 8531-1 &1V 1:50 000 1st edition

Site P1 consists of a Eucalypt tree which carries two scars on its main trunk. This tree has rough bark persistent to the upper branches and may be a Box Eucalypt. It is located within a belt of trees on a flat plain adjacent to creekline to the north of Condobolin Road, approximately 2-3 m from the fence line within the Sheridan property.

The tree is in good health, but retains some dead branches. The condition of the original cambium layer is good, and well preserved.

The scars are considered 'possible' on a scale of possible/probable/definite (refer section 2.4.2). The provenance of the scars is uncertain and they may well have a natural or European origin. Some of the attributes of the scars (and tree) do conform to the criteria for an Aboriginal origin. The ambivalence of the identification of the scars on the tree results from the uncertainty relating to the age of the tree, the age of scars and the morphology of the scars – as they are irregular in shape.

The location of P1 is shown on Figure 6.1. The detailed recording of the two scars is provided below, and photos of the scars are provided in Figures 6.2 and 6. 3.

Scar 1

Approximate height of tree:	15-20 m
Girth of tree (at breast height)	2.2 m
Maximum scar length (including regrowth):	c.115 cm
Inside scar length (excluding regrowth):	93 cm
Maximum scar width (including regrowth):	c.47 cm
Inside scar width (excluding regrowth):	24 cm
Maximum width of regrowth:	19 cm
Maximum depth of regrowth:	10 cm
Height of inside scar above ground:	105 cm
Height of lowest scar extent incl. regrowth above ground:	95 cm
Scar faces	NW
Axe marks?	No

Scar 2

Approximate height of tree:	15-20 m
Girth of tree (at breast height)	2.2 m
Maximum scar length (including regrowth):	c.76 cm
Inside scar length (excluding regrowth):	44 cm
Maximum scar width (including regrowth):	c.39 cm
Inside scar width (excluding regrowth):	9 cm
Maximum width of regrowth:	24 cm
Maximum depth of regrowth:	8 cm
Height of inside scar above ground:	73 cm
Height of lowest scar extent incl. regrowth above ground:	65 cm
Scar faces	NE
Axe marks?	No

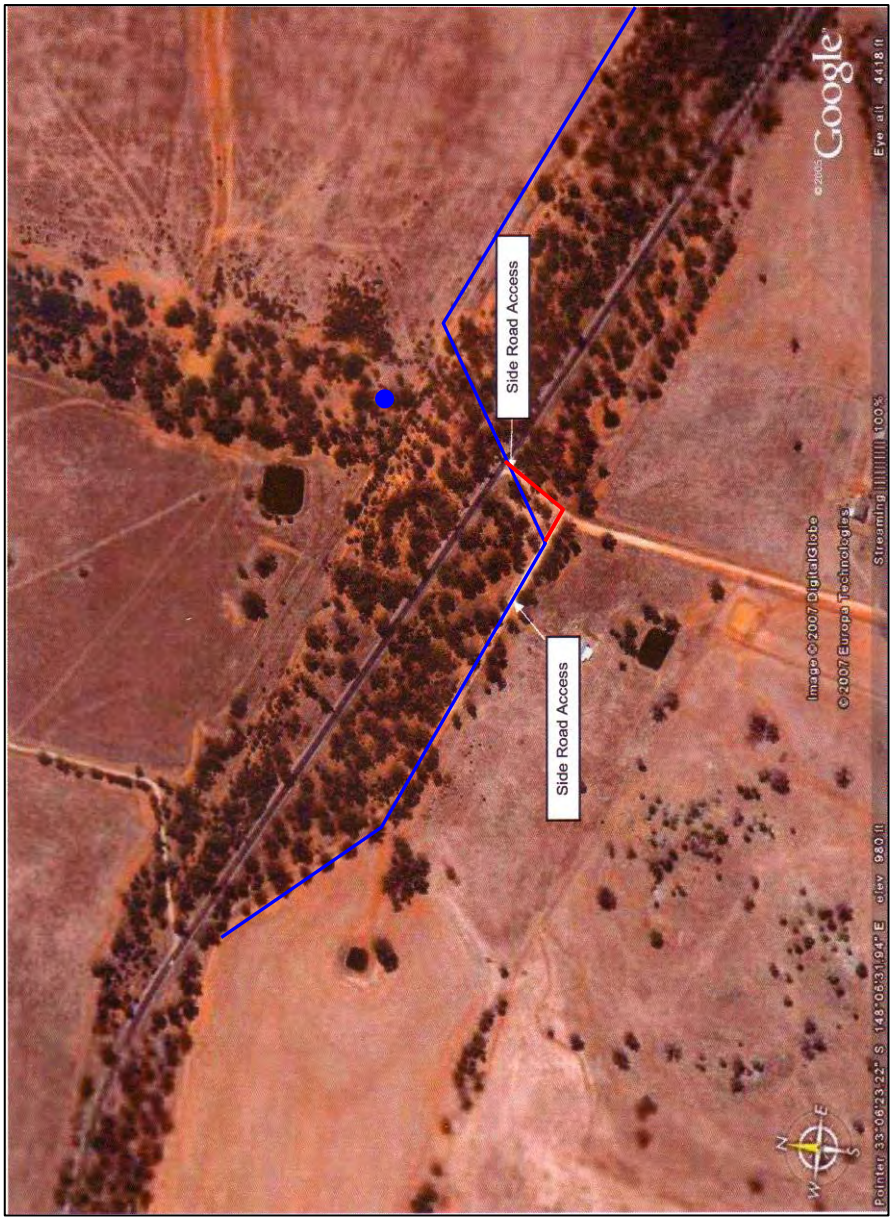


Figure 6.1 Location of Scarred Tree P1 (marked in blue) in relation to pipeline route
Base map supplied by URS

Visibility within the study area was high at approximately 80%. A thorough search of the surrounding area and adjacent trees was undertaken during the survey but no further sites were located. The potential for further artefacts to occur, or for P1 to be associated with subsurface archaeological deposit, is considered to be low.

Figure 6.2 Scar 1

Figure 6.3 Scar 2

6.2. European Heritage Sites

One European site was located in the course of the field survey.

Historic House Site (P2)

AGD 608318:6335493 (hand held GPS)

A historic site consisting of a levelled house platform, scattered broken red clay bricks and a semi-circular planting of trees was located to the south of Goldrush Road near the junction of Goldrush and Stock Roads at the end of the alignment and in the vicinity of the proposed compound.

This site does not meet any of the criteria for heritage listing or protection and poses no constraints on the proposed gas pipeline.

The location of the site is shown in Figure 6.4 and details of the site are shown in Figure 6.5.

Figure 6.4 Location of Heritage site P2

Figure 6.5 Historic House Site P2

6.2 Survey Coverage and Visibility Variables

The effectiveness of archaeological field survey is to a large degree related to the obtrusiveness of the sites being looked for and the incidence and quality of ground surface visibility. Visibility variables were estimated for all areas of comprehensive survey within the study area. These estimates provide a measure with which to gauge the effectiveness of the survey and level of sampling conducted. They can also be used to gauge the number and type of sites that may not have been detected by the survey.

Ground surface visibility is a measure of the bare ground visible to the archaeologist during the survey. There are two main variables used to assess ground surface visibility, the frequency of exposure encountered by the surveyor and the quality of visibility within those exposures. The predominant factors affecting the quality of ground surface visibility within an exposure are the extent of vegetation and ground litter, the depth and origin of exposure, the extent of recent sedimentary deposition, and the level of visual interference from surface gravels. Two variables of ground surface visibility were estimated during the survey:

- a percentage estimate of the total area of ground inspected which contained useable exposures of bare ground

- a percentage estimate of the average levels of ground surface visibility within those exposures. This is a net estimate and accounts for all impacting visual and physical variables including the archaeological potential of the sediment or rock exposed.

The obtrusiveness of different site types is also an important factor in assessing the impact of visibility levels. For example, artefacts made from locally occurring rock such as quartz may be more difficult to detect under usual field survey conditions than rock types that are foreign to the area. The impact of natural gravels on artefact detection was taken into account in the visibility variables estimates outlined above.

The survey area was located in cleared agricultural land, with the majority of the trees removed and 100% impact to the ground surface, areas of road reserve which had also been heavily impacted but retained some older tree growth with areas of regeneration and a section followed along the dirt road

within the stock reserve located along Goldrush Road. Areas that were not under cultivation had been ploughed in the past and had been heavily grazed.

Currently Goldrush Road, along which the eastern section of the pipeline route is aligned, has only been developed to a house driveway (Figure 6.6). Following the house site it is an area of road reserve currently used as a stock reserve which runs adjacent to the Laidley property. Areas of road verge and the stock reserve had been heavily impacted by vehicle tracks and animal traffic. A section of the pipeline route (marked in Figure 6.6 in blue as Alternative Section 1) was not surveyed due to access availability This section was inspected over the fence allowing for obvious large sites to be recognised, but providing no comprehensive field survey of the route and ground surface visibility conditions.

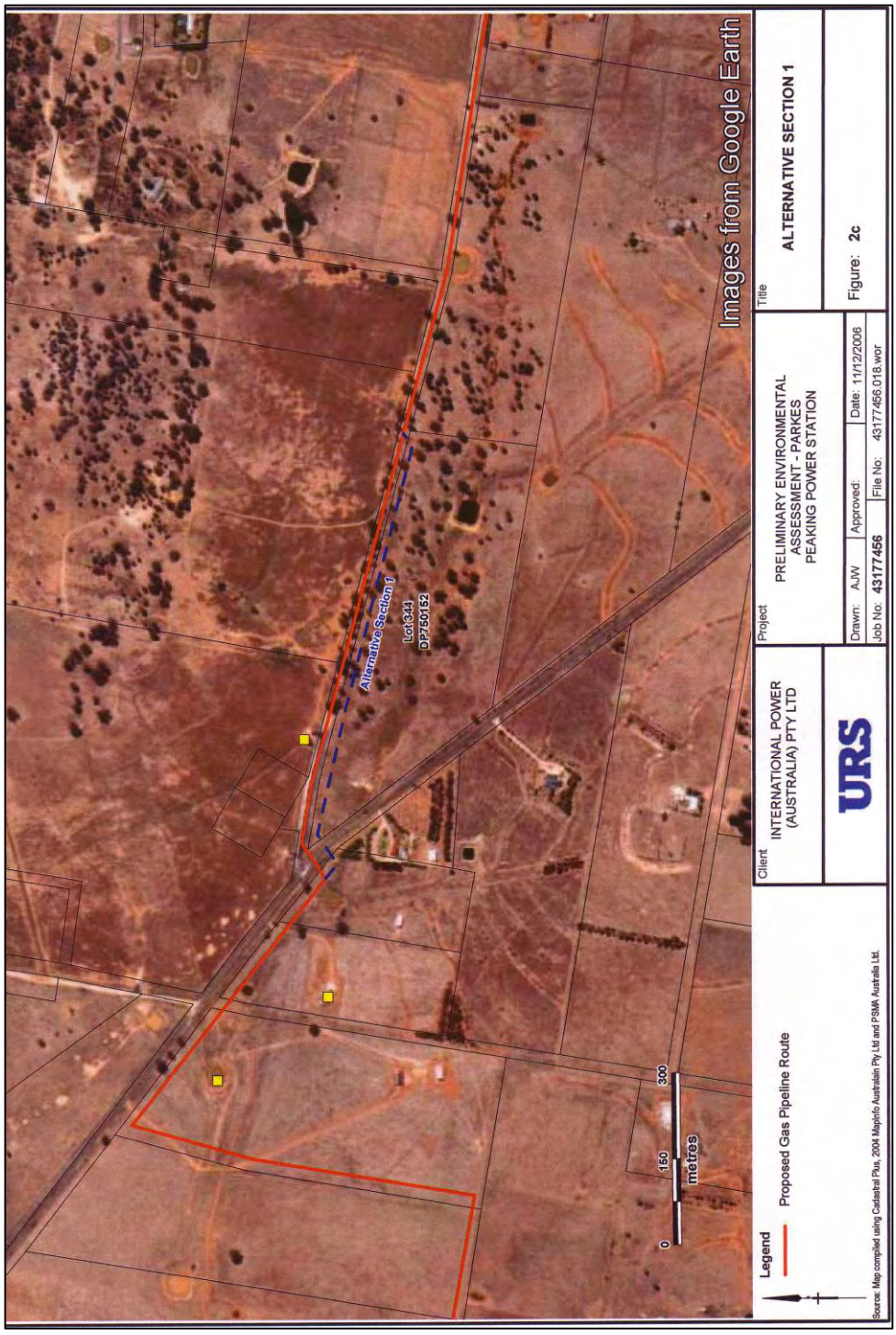


Figure 6.6. Pipeline route with alternative section
(Base map supplied by URS)

Table 6.1 summarises estimates for the degree to which separate landforms within the study area were examined and also indicates the exposure incidence and average ground visibility present in each case. A total of 54.3% of the ground area in the study area was inspected during the survey, with 62.5% providing useable archaeological exposures. Conditions during field survey are illustrated in Figures 6.7 – 6.18 following the order of survey.

Taking into account survey coverage, archaeologically useable exposures, and visibility variables, the effective survey coverage (ESC) was 34% of the total survey area. The ESC attempts to provide an estimate of the proportion of the total study area that provided a net 100% level of ground surface visibility to archaeological surveyors.

The ESC calculation is defined and required by the DECC and stated to be of use in assessing and cross comparing the adequacy of archaeological surface surveys. The actual utility of the ESC calculation however is challenged by many archaeologists. The limitations of the ESC calculation are emphasised by differences in the subjective assessment of exposure and visibility levels, variations in how survey units are defined and measured, and differences in how and which variables are estimated and combined. In reality, ESC results tend only to be meaningful when compared across surveys conducted by the same surveyors and ESC measurers.

Survey division	Survey unit	Landform	Survey mode	Main exposure types	Estimated Survey Unit area (ha)	Proportion of unit surveyed %	Area of unit surveyed (ha)	Exposure incidence %	Average exposure visibility %	Net effective exposure (ha)	Effective survey coverage of survey unit %	Heritage recordings
Power station	1	open plain	foot	ploughed furrows, failed crop areas, vehicle track	6.25	45	2.8125	85	90	2.1516	34.4	no
Easement	2	open plain	foot	ploughed furrows, failed crop areas, vehicle track	7.945	60	4.767	70	85	2.8364	35.7	no
	3	road verge	foot	vehicle tracks, animal tracks, tree falls and erosion areas	0.93	50	0.465	60	85	0.2372	25.5	no
	4	creek line	foot	vehicle and animal tracks, erosion areas	0.125	65	0.08125	90	90	0.0658	52.7	no
	5	stock reserve	foot	vehicle track, animal tracks, erosion areas and tree falls	3	60	1.8	60	85	0.9180	30.6	yes
Total					*18.25*		*9.92575*			*6.2089*	*34.0*	

Table 6.1: Survey Coverage Data

Figure 6.7 Power Station site looking north

Figure 6.8 Green property looking east

Figure 6.9 Road verge south side of Condobolin Rd looking northwest

Figure 6.10 Road verge crossing of Condobolin Rd

Figure 6.11 Road verge north side of Condobolin Rd

Figure 6.12 Creek line located on north side of Condobolin Rd

Figure 6.13 Sheridan Property looking east

Figure 6.14 Payne property looking east

Figure 6.15 McMaster Property looking north

Figure 6.16 McMaster Property looking east

Figure 6.17 Clark Property looking east

Figure 6.18 Goldrush Road stock reserve looking east

Figure 6.19 Stock reserve looking east

Figure 6.20 Stock Reserve looking east.

7. SIGNIFICANCE ASSESSMENT

7.1 Aboriginal Heritage

7.1.1 Assessment Criteria

The Burra Charter of Australia defines cultural significance as 'aesthetic, historic, scientific or social value for past, present and future generations' (Aust. ICOMOS 1987). The assessment of the cultural significance of a place is based on this definition but often varies in the precise criteria used according to the analytical discipline and the nature of the site, object or place.

In general, Aboriginal archaeological sites are assessed using five potential categories of significance:

- significance to contemporary Aboriginal people,
- scientific or archaeological significance,
- aesthetic value,
- representativeness, and
- value as an educational and/or recreational resource.

Many sites will be significant according to several categories and the exact criteria used will vary according to the nature and purpose of the evaluation. Cultural significance is a relative value based on variable references within social and scientific practice. The cultural significance of a place is therefore not a fixed assessment and may vary with changes in knowledge and social perceptions.

Aboriginal significance can be defined as the cultural values of a place held by and manifest within the local and wider contemporary Aboriginal community. Places of significance may be landscape features as well as archaeologically definable traces of past human activity. The significance of a place can be the result of several factors including: continuity of tradition, occupation or action; historical association; custodianship or concern for the protection and maintenance of places; and the value of sites as tangible and meaningful links with the lifestyle and values of community ancestors. Aboriginal cultural significance may or may not parallel the archaeological significance of a site.

Scientific significance can be defined as the present and future research potential of the artefactual material occurring within a place or site. This is also known as archaeological significance.

There are two major criteria used in assessing scientific significance:

1. The potential of a place to provide information which is of value in scientific analysis and the resolution of potential research questions. Sites may fall into this category because they: contain undisturbed artefactual material, occur within a context which enables the testing of certain propositions, are very old or contain significant time depth, contain large artefactual assemblages or material diversity, have unusual characteristics, are of good preservation, or are a constituent of a larger significant structure such as a site complex.

2. The representativeness of a place. Representativeness is a measure of the degree to which a place is characteristic of other places of its type, content, context or location. Under this criteria a place may be significant because it is very rare or because it provides a characteristic example or reference.

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

The principal aim of cultural resource management is the conservation of a representative sample of site types and variation from differing social and environmental contexts. Sites with inherently unique

features, or which are poorly represented elsewhere in similar environment types, are considered to have relatively high cultural significance.

The cultural significance of a place can be usefully classified according to a comparative scale which combines a relative value with a geographic context. In this way a site can be of low, moderate or high significance within a local, regional or national context. This system provides a means of comparison, between and across places. However it does not necessarily imply that a place with a limited sphere of significance is of lesser value than one of greater reference.

The following assessments are made with full reference to the scientific, aesthetic, representative and educational criteria outlined above. Reference to Aboriginal cultural values has also been made where these values have been communicated to the consultants. It should be noted that Aboriginal cultural significance can only be determined by the Aboriginal community, and that confirmation of this significance component is dependent on written submissions by the appropriate representative organisations.

7.1.2 The Study Area

Possible Aboriginal scarred tree (P1)

Further investigation of site P1 (possible Aboriginal scarred tree) is required before an informed assessment of archaeological significance for the site can be provided. The cultural significance of the tree can only be determined by the local Aboriginal community.

7.2 European Heritage

7.2.1 Assessment Criteria

The NSW Heritage Office has defined a methodology and set of criteria for the assessment of cultural heritage significance for items and places, where these do not include Aboriginal heritage from the pre-contact period (NSW Heritage Office & DUAP 1996, NSW Heritage Office 2000). The assessments provided in this report follow the Heritage Office methodology.

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

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

Criterion (a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area);

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.

(or a class of the local area's

- cultural or natural places; or
- cultural or natural environments).

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

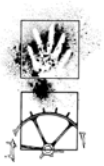
In using these criteria it is important to assess the values first, then the local or State context in which they may be significant.

Different components of a place may make a different relative contribution to its heritage value. For example, loss of integrity or condition may diminish significance. In some cases it is constructive to note the relative contribution of an item or its components. The following table provides a guide to ascribing relative value:

Grading	Justification	Status
Exceptional	Rare or outstanding item of local or State significance. High degree of intactness Item can be interpreted relatively easily.	Fulfils criteria for local or State listing.
High	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.	Fulfils criteria for local or State listing.
Moderate	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils criteria for local or State listing.
Little	Alterations detract from significance. Difficult to interpret.	Does not fulfil criteria for local or State listing.
Intrusive	Damaging to the item's heritage significance.	Does not fulfil criteria for local or State listing.

8.2.2 The Study Area

All that remains of the historic house site P2 located in the course of the survey building is its footprint and some tree plantings. The site does not reach a threshold where it would be considered significant under the above criteria. The site does not warrant listing or protection.



8. STATUTORY OBLIGATIONS[1]

8.1 The National Parks and Wildlife Act 1974

The following summary is based on:

- The provisions of the current National Parks and Wildlife Act 1974 (NP&W Act) as amended. It should be noted that amendments to this Act were passed by both houses of the NSW State Government in 2001 (no.130, assented 19/12/2001). Some of these amendments are yet to be proclaimed.

- Department of Environment and Conservation policy as presented in the 1997 Standards and Guidelines Kit for Aboriginal Cultural Heritage provided by the (then) NSW NPWS, and as communicated orally to the consultants on a periodic basis. The 1997 Standards and Guidelines Kit is currently under review and subject to change in the near future.

The guideline documents presented in the 1997 Standards and Guidelines Kit were stated to be working drafts and subject to an 18 months performance review. The Standards Manual was defined not to be a draft and subject to periodic supplements.

With the exception of projects subject to the provisions of Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act), the National Parks and Wildlife Act 1974 (as amended) provides the primary basis for the legal protection and management of Aboriginal sites within NSW. The implementation of the Aboriginal heritage provisions of the Act is the responsibility of the Department of Environment and Conservation (DECC).

The rationale behind the Act is the prevention of unnecessary or unwarranted destruction of relics, and the active protection and conservation of relics that are of high cultural significance.

With the exception of some artefacts in collections, or those specifically made for sale, the Act generally defines all Aboriginal artefacts to be 'Aboriginal objects' and to be the property of the Crown. An Aboriginal object has a broad definition and is inclusive of most archaeological evidence The Act then provides various controls for the protection, management and disturbance of Aboriginal objects.

An Aboriginal object is defined as:

> 'any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.' [Section 5(1)].

In practice, archaeologists use a methodology that groups 'Aboriginal objects' into various site classifications according to the nature, occurrence and exposure of archaeological material evidence. The archaeological definition of a site may vary according to survey objectives, however a site is not recognised or defined as a legal entity in the Act. It should be noted that even single and isolated artefacts are protected as Aboriginal objects under the Act.

The investigation, use or destruction of Aboriginal objects is managed through a system of Permits and Consents under the provisions of Sections 87 and 90 of the Act. Section 87 relates to actions which do not involve direct damage to Aboriginal objects, and Section 90 relates to damage or defacement of Aboriginal objects.

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[1] The following information is provided as a guide only and is accurate to the best knowledge of Navin Officer Heritage Consultants. Readers are advised that this information is subject to confirmation from qualified legal opinion.

Under Section 87 of the Act, it is an offence to do any of the following without a Permit from the Director-General of the Department of Environment and Conservation: disturb or excavate any land for the purpose of discovering an Aboriginal object; disturbing or moving an Aboriginal object; take possession of or removing an Aboriginal object from certain lands; and erecting a building or structure to store Aboriginal objects on certain land (Section 86). The maximum penalty is $11,000 for individuals and $22,000 for corporations.

Under section 90 of the Act, a person who, without first obtaining the consent of the Director-General knowingly destroys, defaces or damages, or knowingly causes or permits the destruction or defacement of or damage to, an Aboriginal object or Aboriginal Place is guilty of an offence against the Act.

Where salvage actions (such as collection or re-positioning) are proposed in conjunction with an application to destroy Aboriginal objects, then an application for a section 87 permit must accompany the section 90 application. This is because a consent issued solely under section 90 of the Act is not considered to permit actions other than those which destroy, deface or damage Aboriginal objects.

In January of 2005, the DECC introduced Interim guidelines for Aboriginal Community Consultation with regard to the preparation of applications for a consent or permit under Part 6 (section 87 and 90) of the NP&W Act. The DECC anticipate that the guidelines will be replaced with a more detailed policy later in 2005 following consultation with the Aboriginal community and other stakeholders. The Interim guidelines include a required process of notification of intended applications in the local media, an invitation for stakeholder groups to register interest, and various time periods providing an opportunity for registered stakeholders to comment and review proposed methodologies and assessments. A transition phase has been specified for the application of the Interim guidelines. Any project where a Planning Focus Meeting was held before the 1st of January 2005, or where the proponent can demonstrate that cultural heritage assessment work commenced prior to this date, may continue to prepare Part 6 applications according to the former processes. Alternatively a proponent may choose to comply with the new guidelines.

It should be noted that section 75U of the EP&A Act 1979 (as amended) establishes an exception to the application of sections 87 and 90 of the NP&W Act. It states that a Permit under section 87 or a Consent under section 90 of the NP&W Act 1974 is not required for an approved project subject to the provisions of Part 3A of the EP&A Act.

Section 175B of the NP&W Act outlines circumstances where corporation directors may be taken to have contravened these provisions, based on the acts or omissions of that Corporation.

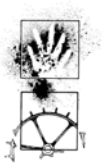
The processing and assessment of Permit and Consent applications is dependent upon adequate archaeological review and assessment, together with an appropriate level of Aboriginal community liaison and involvement (refer Standards for Archaeological Practice in Aboriginal Heritage Management in 1997 NPWS Standards and Guidelines Kit).

The Minister may declare any place which, in his or her opinion, is or was of special Aboriginal significance with respect to Aboriginal culture, to be an Aboriginal place (Section 84). The Director-General has responsibility for the preservation and protection of the Aboriginal place (Section 85). An area declared to be an Aboriginal place may remain in private ownership, or be acquired by the Crown by agreement or by a compulsory process (Section 145).

The Director General may make an interim protection order and order that an action cease where that action is, or is likely to, significantly affect an Aboriginal object or Aboriginal place. Such an order is current for 40 days (Section 91AA, Schedule 3[10]). Such an order does not apply to certain actions, such as where they are in accordance with development consents or emergency procedures.

8.1.1 General Management Constraints and Requirements

Except where a project is subject to the provisions of Part 3A of the EP&A Act, the NP&W Act, together with the policies of the Department of Environment and Conservation provide the following constraints and requirements on land owners and managers:



- It is an offence to knowingly disturb an Aboriginal object (or site) without an appropriate permit or consent (Sections 87 and 90);

- Prior to instigating any action which may conceivably disturb an Aboriginal object (this generally means land surface disturbance or felling of mature trees), archaeological survey and assessment is required (refer Standards for Archaeological Practice in Aboriginal Heritage Management in 1997 NPWS Standards and Guidelines Kit).

- When the archaeological resource of an area is known or can be reliably predicted, appropriate landuse practices should be adopted which will minimise the necessity for the destruction of sites/Aboriginal objects, and prevent destruction to sites/Aboriginal objects which warrant conservation (refer Standards for Archaeological Practice in Aboriginal Heritage Management in 1997 NPWS Standards and Guidelines Kit).

- Documented and appropriate consultation with relevant Aboriginal Community representatives is required by the Department of Environment and Conservation as part of the prerequisite information necessary for endorsement of consultant recommendations or the provision of Consents and Permits by the DECC (refer Standards for Archaeological Practice in Aboriginal Heritage Management in 1997 NPWS Standards and Guidelines Kit).

8.1.2 Statutory Constraints Arising from Artefacts which Constitute Background Scatter

Background scatter is a term used generally by archaeologists to refer to artefacts that cannot be usefully related to a place or focus of past activity. There is no single concept for background 'scatter' or discard, and therefore no agreed definition. The recognition of background material within a particular study area is dependent on an appreciation of local contextual and taphonomic factors. Artefacts within a ‘background’ scatter can be found in most landscape types and may vary considerably in density.

Standard archaeological methodologies cannot effectively predict the location of individual artefacts within background scatters. Surface survey may detect background material either as individual artefacts (‘isolated finds’), or even as small, low-density ‘sites’. Subsurface testing may sample, and through analysis, characterise background material. However, beyond the scope of archaeological sampling, the potential to encounter background artefacts within the context of development related ground disturbance will always remain.

Most previous cultural resource management archaeological methodologies have acknowledged that there is little scientific justification for the conduct of archaeological salvage or ground disturbance monitoring to effect the recovery of background artefacts. The intrinsic scientific value of any recovered artefacts does not, in general, outweigh the expense of conducting the monitoring. However, low density distributions of artefacts are a current subject of interest by some heritage practitioners and DECC policy regarding this issue may change in the future. The monitoring of construction related ground works by Aboriginal groups is now increasingly practiced. The recovery of background scatter artefacts is often a probable outcome of such monitoring exercises.

Given the nature of statutory and DECC policy requirements in NSW, the detection of background artefacts during monitoring can be problematic. Except where a project is subject to the provisions of Part 3A of the EP&A Act, or where an Aboriginal object is covered by a current Consent or Permit (or Heritage Impact Permit (HIP)), from DECC, all further impact to an Aboriginal object detected during development works, and to the ground in its immediate vicinity, must cease until an appropriate Permit or Consent is gained. It may take up to eight weeks for this to occur. In the past, however, DECC has not as a general rule granted Consents to cover artefacts within background scatters which remain undescribed and undetected. This is because DECC sought to provide Consents where the significance and location of the Aboriginal objects to be impacted could be reliably defined. By their very nature, this may not be possible for artefacts that constitute a background scatter.

The present application of policy by the DECC does not provide for a consistent or proactive means of dealing with the statutory constraints posed by the detection of background scatter artefacts during development works. In those cases where the provisions of Part 3A of the EP&A Act do not apply, an option is the provision by the DECC of a section 87 Permit or section 90 Consent which includes all

Aboriginal objects situated within the defined development site rather than specific sites or finds within it. This approach has been adopted by some DECC branch jurisdictions where an assessment has been provided which suitably investigates the known and predicted incidence of Aboriginal objects potentially subject to disturbance. Other DECC jurisdictions do not accept this approach and only provide Permits and Consents for known and defined Aboriginal object occurrences.

It should therefore be noted, that in the event that an Aboriginal artefact ('Aboriginal object') is detected during ground disturbance within a development study area, and that area or Aboriginal object is not covered by a Permit or Consent to Destroy (or Heritage Impact Permit), there may be considerable delays to development works while an application for a Consent to Destroy is processed.

8.2 The National Parks and Wildlife Amendment Bill 2001

Although this Act was passed by both houses of the NSW parliament in 2001, a number of its provisions with regard to Aboriginal cultural heritage have yet to be gazetted and are not yet law. These include the following provisions:

- The requirement for a section 90 'Consent to Destroy' from the Director General will be replaced by a 'heritage impact permit' (Schedule 3[1], 3[3-8]).

- The offence under section 90 of the Principal Act of 'knowingly' destroying, defacing or damaging Aboriginal objects and Aboriginal Places without Consent will be changed so that the element of knowledge will be removed (Schedule 3 [2]). The amended section 90, subsection 1 will read:

  'A person must not destroy, deface, damage or desecrate, or cause or permit the destruction, defacement, damage or desecration of, an Aboriginal object or Aboriginal place.'

- Section 90 subsection 1 will not apply when an Aboriginal object or Aboriginal place is dealt with in accordance with a heritage impact permit issued by the Director-General (Schedule 3[3], Section 90(1B) in amended Act).

- It will be a defence to a prosecution for an offence against subsection 1 if the defendant shows that:

  (a) 'he or she took reasonable precautions and exercised due diligence to determine whether the action constituting the alleged offence would, or would be likely to, impact on the Aboriginal object of Aboriginal place concerned, and

  (b) the person reasonably believed that the action would not destroy, deface, damage or desecrate the Aboriginal object or Aboriginal place.' (Schedule 3[3], Section 90(1C) in amended Act)

- A court will be able to direct a person to mitigate damage to or restore an Aboriginal object or an Aboriginal place in appropriate circumstances when finding the person guilty of an offence referred to in section 90 of the Principal Act (Schedule 3[9]).

- Schedule 4[8] of the Bill provides for the Director-General to withhold in the public interest specified documents in the possession of the DECC which relate to the location of Aboriginal objects, or the cultural values of an Aboriginal place or Aboriginal object.

8.3 The NSW Heritage Act (1977)

Overview

The purpose of the NSW Heritage Act 1977 is to ensure that the heritage of New South Wales is adequately identified and conserved. In practice the NSW Heritage Act has focused on items and

places of non-indigenous heritage to avoid overlap with the NP&W Act, 1974 which has primary responsibilities for nature conservation and the protection of Aboriginal relics and places in NSW.

The *Heritage Amendment Act 1998* came into effect in April 1999. This Act instigated changes to the NSW heritage system, which were the result of a substantial review begun in 1992. A central feature of the amendments was the clarification and strengthening of shared responsibility for heritage management between local government authorities, responsible for items of local significance, and the NSW Heritage Council. The Council retained its consent powers for alterations to heritage items of state significance.

The Heritage Act is concerned with all aspects of conservation ranging from the most basic protection against damage and demolition, to restoration and enhancement. It recognises two levels of heritage significance, State significance and Local significance across a broad range of values. Some key provisions of the Act are:

- the establishment and functions of the Heritage Council (Part 2),
- interim heritage orders (Part 3), the State Heritage Register (Part 3A),
- Heritage Agreements (Part 3B),
- environmental planning instruments (Part 5),
- the protection of archaeological deposits and relics (Part 6), and
- the establishment of Heritage and Conservation Registers for state government owned and managed items (Part 7).

Generally this Act provides protection to items that have been identified, assessed and listed on various registers including State government section 170 registers, local government LEPs and the State Heritage Register. The Interim Heritage Order provisions allow the minister or his delegates (local government may have delegated authority) to provide emergency protection to threatened places which have not been previously identified. The only ‘blanket’ protection provisions in the Act relate to the protection of archaeological deposits and relics greater than 50 years old.

Protection of Archaeological Relics and Deposits

Section 139 of the Act specifically provides protection for any item classed as a relic. A relic is defined as "...any deposit object or material evidence -

(a) which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement; and

(b) which is 50 or more years old."

(Heritage Act 1977, Part 1, Section 4)

Section 139 of the Act disallows disturbance of a relic unless in accordance with an 'excavation permit' from the Heritage Council. This section also allows the Heritage Council to create exceptions to the requirement for an excavation permit with respect to certain types of relic, contexts, or types of disturbance (refer below).

Section 146 of the Act requires that the discovery of a previously unknown relic be reported to the Heritage Council within a reasonable time of its discovery.

Permits and Approval Requirements

The Act includes two key approval requirements;

- A permit must be obtained for works which have the potential to interfere with a heritage item or place which is either listed on the State Heritage Register or the subject of an interim heritage order (Section 57); and

- A permit must be obtained to disturb or excavate land where it is known (or there is reasonable cause to suspect) that such action will or is likely to uncover or affect a relic (Section 139). This permit is known as an excavation permit and can be applied for under section 140 of the Act. Current interpretation of the Act by the Heritage Office indicates that excavation permits are only applicable to relics which are situated below the ground surface.

It should be noted that section 75U of the EP&A Act 1979 (as amended) establishes an exception to the requirement for an excavation permit. It states that an approval under Part 4, or an excavation permit under section 139 of the Heritage Act 1977 is not required for an approved project subject to the provisions of Part 3A of the EP&A Act.

Exemptions from Permit Requirements

Certain activities are exempted from the Section 57 and 139 permit approval requirements. Exemptions from Section 57 requirements may be granted by the Minister, and the NSW Heritage Council may provide exemptions from Section 139 requirements.

A schedule of section 57 exemptions has been formulated which includes activities such as certain types of maintenance and repair, minor excavations, changes of use, some temporary structures and 'anything which in the opinion of the Director is of a minor nature and will not adversely affect the heritage significance of the item'. In many cases notification of such proposed activities must be made by the applicant to the Director, and written notification from the Director received regarding his satisfaction that the exemption criteria have been met.

A series of exemptions have also been established for Section 139 Permit approval requirements. This includes demolition and maintenance of bridges not listed on the State Heritage Register, some forms of excavation and maintenance of underground services, conservation and repair of monuments and grave markers, and the exposing of survey marks in the course of survey operations.

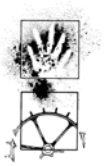
On the 5th March of 2003, the following section 139 exemptions were notified:

> Excavation or disturbance of the following land does not require an excavation permit under Section 139, provided that the Director is satisfied that the criteria in (a), (b) or (c) have been met and the person to undertake the excavation or disturbance has received a notice advising that the Director is satisfied:
>
> (a) where an archaeological assessment has been prepared in accordance with Guidelines published by the Heritage Council of NSW which indicates that there is little likelihood of there being any relics in the land or that any relics in the land are unlikely to have State or local heritage significance;
>
> (b) where the excavation or disturbance of land will have a minor impact on the archaeological resource;
>
> (c) where the excavation or disturbance of land involves only the removal of fill which has been deposited on the land.

A person proposing to excavate or disturb land according to the above criteria must write to the Director and describe the proposed excavation or disturbance and set out why it satisfies the criteria. The Director shall notify the applicant if he or she is satisfied that one or more of the criteria have been met.

The Heritage Council of NSW

The role of the Heritage Council is to provide the Minister with advice on a broad range of matters relating to the conservation of the heritage of NSW. It also has a role in promoting heritage conservation through research, seminars and publications. The membership of the Heritage Council is designed to reflect a broad range of interests and areas of expertise.



Interim Heritage Orders

Under the provisions of Part 3 of the Act, the Minister can make an interim heritage order (IHO). A recommendation with respect to an order can come from the Heritage Council, either based on a request for the Minister, or the Council's own considerations. The Minister can also authorise Local Councils to make IHOs within their area. An interim conservation order may remain in force for up to 12 months, until such time as it is revoked or the item is listed on the State Heritage Register. A heritage order may control activities such as demolition of structures, damage to relics, places or land, development and alteration of buildings, works or relics.

The State Heritage Register

Changes to the Heritage Act in the 1998 amendments established the State Heritage Register which includes all places previously protected by permanent conservation orders (PCOs) and items identified as being of state significance in heritage and conservation registers prepared by State Government instrumentalities. Sites or places which are found to have a state level of heritage significance should be formally identified to the Heritage Council and considered for inclusion on the State Heritage Register.

Heritage Agreements

Under Section 39 of the Act, the Minister can enter into an Agreement with the owner of a heritage item listed on the State Heritage Register to ensure its conservation. Such an Agreement can cover a range of responsibilities including financial or specialist assistance and can be attached to the title of the land.

Environmental Planning Instruments

Part 5 of the Act gives the Heritage Council the authority to request that an environmental planning instrument be prepared covering certain lands. It also directs that the Heritage Council shall be consulted by others when preparing a draft planning instrument affecting land to which an interim heritage order applies or which includes an item listed on the State Heritage Register. In addition it gives the Heritage Council the authority to produce guidelines for the preparation of such planning instruments.

Heritage and Conservation Registers

Section 170 of the Act requires all state government instrumentalities to establish and maintain a Heritage and Conservation Register that lists items of environmental heritage. The register is to include items which are, or could potentially be, the subject of a conservation instrument, and which are owned, occupied or otherwise under the control of that instrumentality.

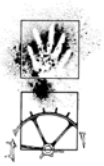
8.4 Environmental Planning & Assessment Act (1979)

The Environmental Planning & Assessment Act 1979 (EP&A Act) and its regulations, schedules and associated guidelines require that environmental impacts are considered in land use planning and decision making. Environmental impacts include cultural heritage assessment. The Act was recently reformed by the passage of the Environmental Planning and Assessment Amendment (Infrastructure and other Planning Reform) Act in June 2005.

There are four main areas of protection under the Act:

- Planning instruments allow particular uses for land and specify constraints. Part 3 governs the preparation of planning instruments. Both Aboriginal and Historic (Non-Indigenous) cultural heritage values should be assessed when determining land use.

- A separate streamlined and integrated development assessment and approvals regime for major infrastructure and other projects of significance to the State is defined by Part 3A.



- Section 90 lists impacts which must be considered before development approval is granted. Part 4 relates to the development assessment process for local government authorities. Impact to both Aboriginal and Historic (Non-Indigenous) cultural heritage values are included.

- State Government agencies which act as the determining authority on the environmental impacts of proposed activities must consider a variety of community and cultural factors in their decisions, including Aboriginal and Historic (Non-Indigenous) cultural heritage values. Part 5 relates to activities which do not require consent but still require an environmental evaluation, such as proposals by government authorities.

Under the *Environmental Planning & Assessment Act (1979*) the Minister for Planning may make various planning instruments such as regional environmental plans (section 51) and local environment plans (section 70). The Minister may direct a public authority such as a Local Council, to exercise certain actions within a specified time, including the preparation of draft Local Environmental Plans and appropriate provisions to achieve the principles and aims of the Act (section 117).

These planning instruments may identify places and features of cultural heritage significance and define various statutory requirements regarding the potential development, modification and conservation of these items. In general, places of identified significance, or places requiring further assessment, are listed in various heritage schedules that may form part of a Local Environmental Plan (LEP) or a Regional Environmental Plan (REP). Listed heritage items are then protected from certain defined activities, normally including demolition, renovation, excavation, subdivision, and other forms or damage, unless consent has been gained from an identified consent authority. The consent authority under a LEP is normally the local Shire or City Council.

In addition to the development of these environmental planning instruments, the Director of the Department of Planning (DoP) or a local Council may prepare a Development Control Plan (DCP), where it is considered that more detailed provisions or guidelines are required over any part of land covered by an REP, LEP or their Drafts (sections 51A and 72).

Recent amendments to the Act require a single LEP to be prepared according to a standard template, for each local government area within the next five years

In determining a development application (DA), a consent authority, such as a local Council, must take into consideration any of the following which are relevant to the subject application (section 79C(1) Potential Matters for Consideration):

- the provisions of any environmental planning instrument, or draft environmental planning instrument (which has been placed on public exhibition); any development control plan; and the regulations;
- the likely impacts of that development on the natural and built environments, and the social and economic impacts on the locality;
- the suitability of the site for the development;
- any submissions made in accordance with the Act or the regulations; and
- the public interest.

Best Practice Guidelines have been issued by DoP on the use of section 79C(1) and include an assessment of how the proposed development will affect the heritage significance of the property, or adjacent properties, in terms of the historic, scientific, cultural, spiritual and archaeological of Aboriginal, non-Aboriginal and natural heritage.

If a development consent is required from council under the provisions of a LEP and a permit or license is also required from a State Government Agency an integrated development must be submitted to the consent authority. A development is an 'integrated development' if it requires an approval under section 90 of the *NSW National Parks & Wildlife Act, 1974* or if the Director General of DECC is of the opinion that consultation with an Aboriginal group or organisation should be consulted prior to a determination being made. Any development approval issued for an integrated

development of this kind must be consistent with the general terms of approval or requirements provided by the relevant State Government Agency.

The *Environmental Planning & Assessment Act, 1979*, as amended, provides for the listing of heritage items and conservation areas and for the protection of these items or areas through environmental planning instruments (like LEPs and REPs) at the local government and State planning levels. These statutory planning instruments usually contain provisions for the conservation of these items and areas as well as an assessment process to reduce the impacts of new development on the heritage significance of a place, building or conservation area.

Part 3A of the Act is a recent amendment and establishes a separate streamlined and integrated development assessment and approvals regime for major State government infrastructure projects, development that was previously classified as State Significant development, and other projects, plans or programs declared by the Minister for Planning.

Part 3A removes the stop-the-clock provisions and the need for single-issue approvals under eight other Acts, including the National Parks and Wildlife Act 1974 and the Heritage Act 1977. Environmental planning instruments such as the heritage provisions within LEP and REPs, (other than State environmental planning policies) do not apply to projects approved under Part 3A.

Where warranted the Minister may declare any project subject to Part 3A to be a critical infrastructure project. These projects only require a concept approval in contrast to other Part 3A projects which require project approval. In most circumstances, a concept approval will be obtained to establish the environmental performance requirements and consultation requirements for the implementation of the subsequent stages of the project.

Under the provisions of Part 3A, proponents of major and infrastructure projects must make a project application seeking approval of the Minister. The application is to include a preliminary assessment of the project. Application may be for concept plan approval or full approval. Following input from relevant agencies and council(s), DoP will issue the proponent with requirements for the preparation of an Environmental Assessment and a Statement of Commitments. The Statement of Commitments will include how the project will be managed in an environmentally sustainable manner, and consultation requirements.

Following submission of an Environmental Assessment and draft Statement of Commitments to DoP, these documents are variously evaluated, reviewed, circulated and exhibited. The proponent may modify the proposal to minimise impacts in response to submissions received during this process. The proponent then provides a Statement of Commitments and, following any project changes, a Preferred Project Report. An assessment report is then drafted by the Director-General and following consultation with relevant agencies, a final report with recommendations for approval conditions or application refusal is submitted to the Minister. The Minister may refuse the project, or approve it with any conditions considered appropriate.

9. RECOMMENDATIONS

The project is proceeding as a Part 3A under the *Environmental Planning and Assessment Act* 1979. As such it does not require permits from the NSW DECC in regards to Aboriginal or historical heritage. As part of the approval process a statement of impacts to heritage, and the relevant mitigation strategies to be undertaken to minimise the impacts, is required in the *Statement of Commitments* for the development.

No Aboriginal or European sites were located with the proposed Peaking Power Plant site during the course of the field survey. There are no cultural heritage constraints to the power plant development.

One possible Aboriginal scarred tree **P1** was located near the gas pipeline easement. The current route of the pipeline easement avoids the location of the possible scarred tree and will not impact on any of its heritage values. As a consequence the tree does not pose any heritage constraint to the proposed development.

One historic house site (**P2)** was located within the gas pipeline easement. The site does not fulfil any of the criteria for heritage listing and does not pose any heritage constraint to the proposed development.

It is recommended that:

1. In the event that the route of the pipeline easement is changed and impact to the scarred tree P1 cannot be avoided, then further assessment of the tree should be undertaken. This would aim to more adequately determine the potential of the scar to be Aboriginal in origin and would involve ascertaining the age of the tree and the age of scar. This work should be conducted by a dendrochronologist. This would allow informed mitigation strategies to be put in place for the tree.

2. In the event that the possible scarred tree is to be impacted further consultation with the local Aboriginal community should be undertaken.

3. If any further discussions with the local Aboriginal community are undertaken the results should be taken into consideration and incorporated into the development proposal.

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