MUDGEE STONE COMPANY PTY LTD

ABN: 89 100 974 365

Oberon White Granite Quarry

Aboriginal Heritage Assessment

Prepared by

Archaeological Surveys & Reports Pty Ltd

ABN 67 075 625 722

Specialist Consultant Studies Compendium

Part 6

November 2010

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Oberon White Granite Quarry

Aboriginal Heritage Assessment

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1 INTRODUCTION

1.1 INTRODUCTION

This investigation was performed for R.W. Corkery & Co. Pty Limited (RWC) on behalf of Mudgee Stone Company Pty Ltd (MSC). MSC is a wholly owned subsidiary of Mudgee Dolomite and Lime Pty Ltd, and has been operating the Oberon White Granite Quarry since 2005. MSC proposes to extend its existing extraction and processing operations and increase production at its existing quarry, hereafter referred to as the Project Site.

This report forms part of the *Environmental Assessment* prepared under the provisions of Part 3A, Section 75 of the *Environmental Planning and Assessment Act 1997*.

Subsequently, the Department of Planning reviewed the application and issued the company with *Director-General's Requirements, Oberon White Granite Quarry Project: Project Application No: 07_0122*. Key Issues of the Requirements were:

1. The EA should address and document the information requirements set out in the draft "Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation" involving surveys and consultation with the Aboriginal community.
2. Identify the nature and extent of impacts on Aboriginal cultural heritage values across the project area.
3. Describe the actions that will be taken to avoid or mitigate impacts or compensate to prevent unavoidable impacts of the project on Aboriginal cultural heritage values. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.
4. The EA needs to clearly demonstrate that effective community consultation with Aboriginal communities has been undertaken in determining and assessing impacts, developing options and making final recommendations.

RWC engaged Archaeological Surveys & Reports Pty Ltd (ASR) to undertake an archaeological investigation of the Project Site to identify sites and/or places of Aboriginal cultural significance, and to address the issues raised by the Director-General's Requirements.

Footnote:

Pejar Local Aboriginal Land Council (LALC) undertook a survey of the Project Site in November 2006, but without the participation of a qualified archaeologist, and without representatives from any other Aboriginal organisation. No Aboriginal sites were found during the survey. Subsequently, when the Company decided to apply for Part 3A Approval it was necessary to undertake consultation with all registered Aboriginal stakeholders with an interest in the project, in accordance with "Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation" (Department of Environment and Climate Change [DECC] 2005).

1.2 SCOPE, OBJECTIVES AND REPORT FORMAT

1.2.1 SCOPE

The scope of works was for ASR to consult with Aboriginal stakeholders in accordance with "Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation" (DECC 2005), and to undertake an investigation to identify any sites of Indigenous cultural significance within the Project Site with the assistance of representative/s of the Aboriginal stakeholders, to identify any Aboriginal sites and relics that might be present within the Project Site. The results of the investigation were to be presented in a report, which was to include an assessment of the significance of any cultural relics or places identified, an appraisal of the options and opportunities arising from the discoveries, and clear recommendations for the management of those cultural resources. In addition, the report was to address the key issues in the DGR's requirements as detailed above.

1.2.2 REPORT OBJECTIVES

The objectives of this report are to describe the consultation process and the archaeological investigation of the Project Site and to record the archaeological relics and sites that were identified. Further, the report documents the participation of the Aboriginal stakeholders, and their recommendations as to the future management of any sites identified during the investigation. In addition, the report includes a discussion of the results of the investigation in the context of other known sites in the area. Finally, the report includes a statement as to the recommendations for the future development of the proposed extension to the Oberon White Granite Quarry.

1.2.3 REPORT FORMAT

The report is presented in the following format:

i Executive summary

ii Contents

1. Introduction
2. Aboriginal Consultation
3. The Environmental Context
4. The Archaeological Record
5. Models for Site Location
6. The Survey
7. The Results
8. Discussion
9. Significance Assessment
10. Recommendations.

1.3 THE PROJECT SITE AND SURVEY AREA

The Project Site occurs approximately 6km east-southeast of Oberon in the Southern Highlands of New South Wales. The Project Site comprises part of Lot 2 DP 1089826, in the Parish of Norway, County of Westmoreland, in Oberon Shire. The Project Site is an irregularly shaped area, bounded by the limits of the property fence-lines.

The existing quarry operations currently have an approved area of disturbance of 1.409ha, and MSC has identified a total area of disturbance from the proposed operations / activities of approximately 11ha. The main components of the proposed operations include the following.

- Construction of a new site access road, internal access road, haul road and access track, office weighbridge, amenities, workshop and stockpiling areas.
- Construction of a series of water management structures.
- Extraction of granite within an extraction area of approximately 6ha with safety bund and channel.
- On-site crushing within the extraction area.
- Transportation of products via the site access road.
- Establishment of compensatory habitat areas.
- Progressive and final rehabilitation of the Project Site.

Figures on the following pages present the local setting of the Project Site. **Figure 1** places the Project Site in its regional context. **Figure 2** shows the proposed Project Site Layout of the current project, and **Figure 3** shows the proposed Project Site Layout superimposed over an aerial photograph of the area.

1.4 POTENTIAL IMPACT OF THE PROPOSED QUARRY

There is a potential for any archaeological contexts occurring within the footprint of the proposed disturbance areas (see **Figure 3**), to be severely impacted upon.

As a consequence of this survey, it is unlikely that the same area will ever be surveyed again. Thus, from an archaeological perspective, this was an opportunity to observe and record any sites that might be present and to propose a strategy for the management of any known or potential archaeological and/or cultural material in the future development of the area.

2 ABORIGINAL CONSULTATION

In accordance with the "Guidelines For Aboriginal Cultural Heritage Impact Assessment and Community Consultation" (DECC 2005), an advertisement was placed in the *Highlands Post* on 21st August 2008, inviting all Aboriginal stakeholders with an interest in the project to register their interest. A copy of the advertisement as it appeared in the newspaper is included as **Appendix i**. The only response to the advertisement was from Mr William (Bill) Allen representing Bathurst Wiradjuri.

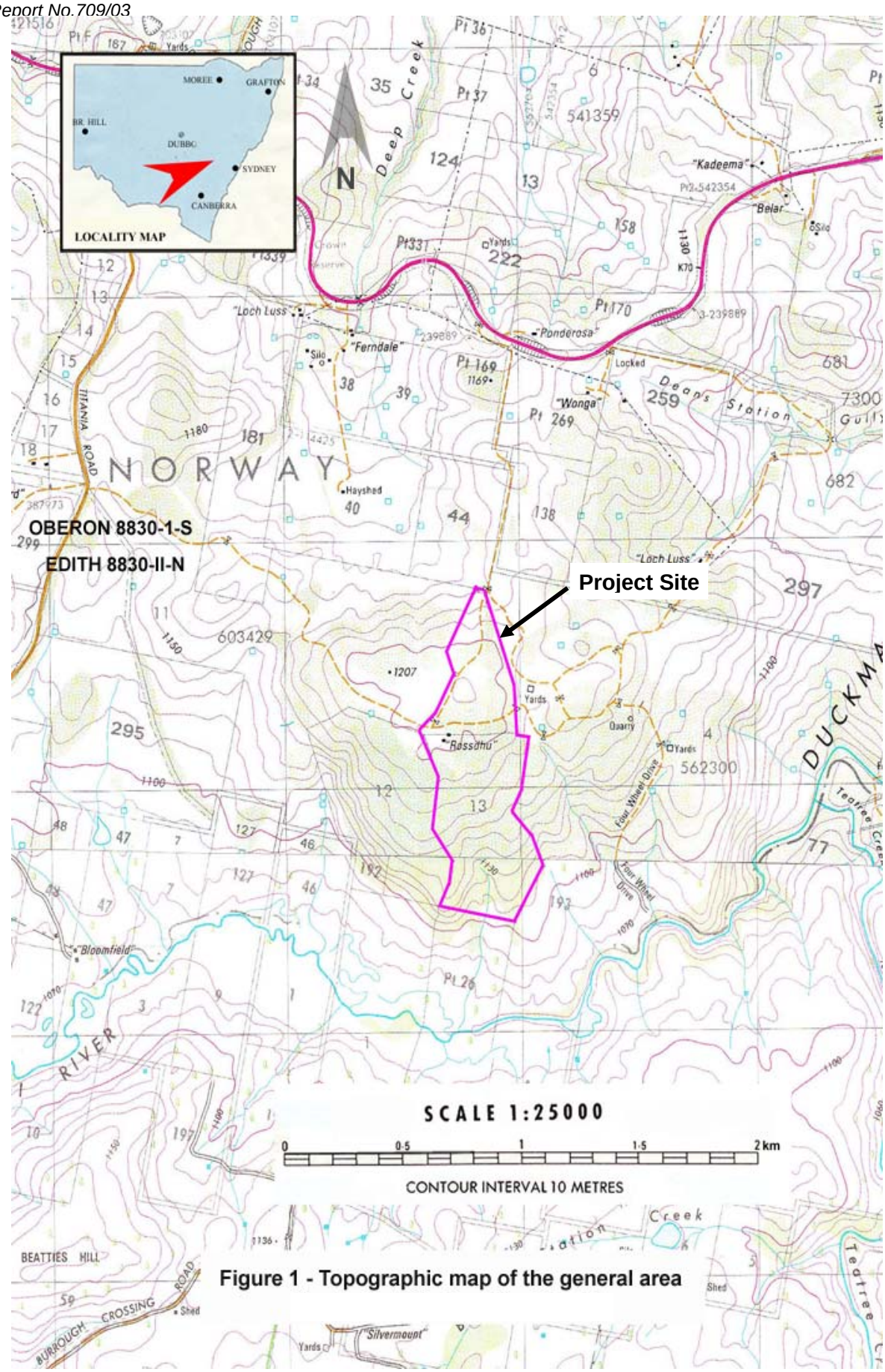

Figure 1 - Topographic map of the general area

Note: A colour version of this figure is included on the Project CD

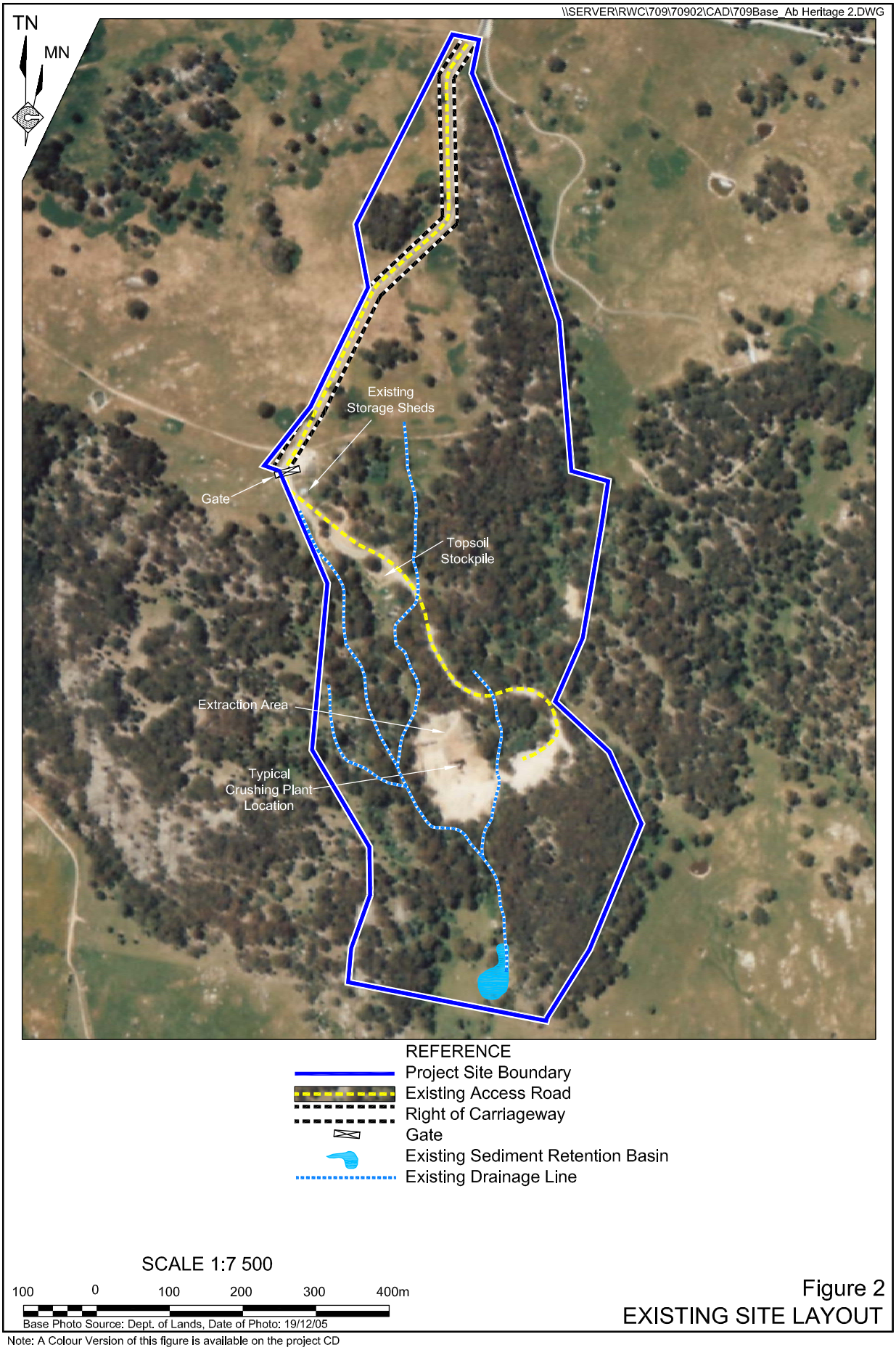

Figure 2
EXISTING SITE LAYOUT

Note: A Colour Version of this figure is available on the project CD

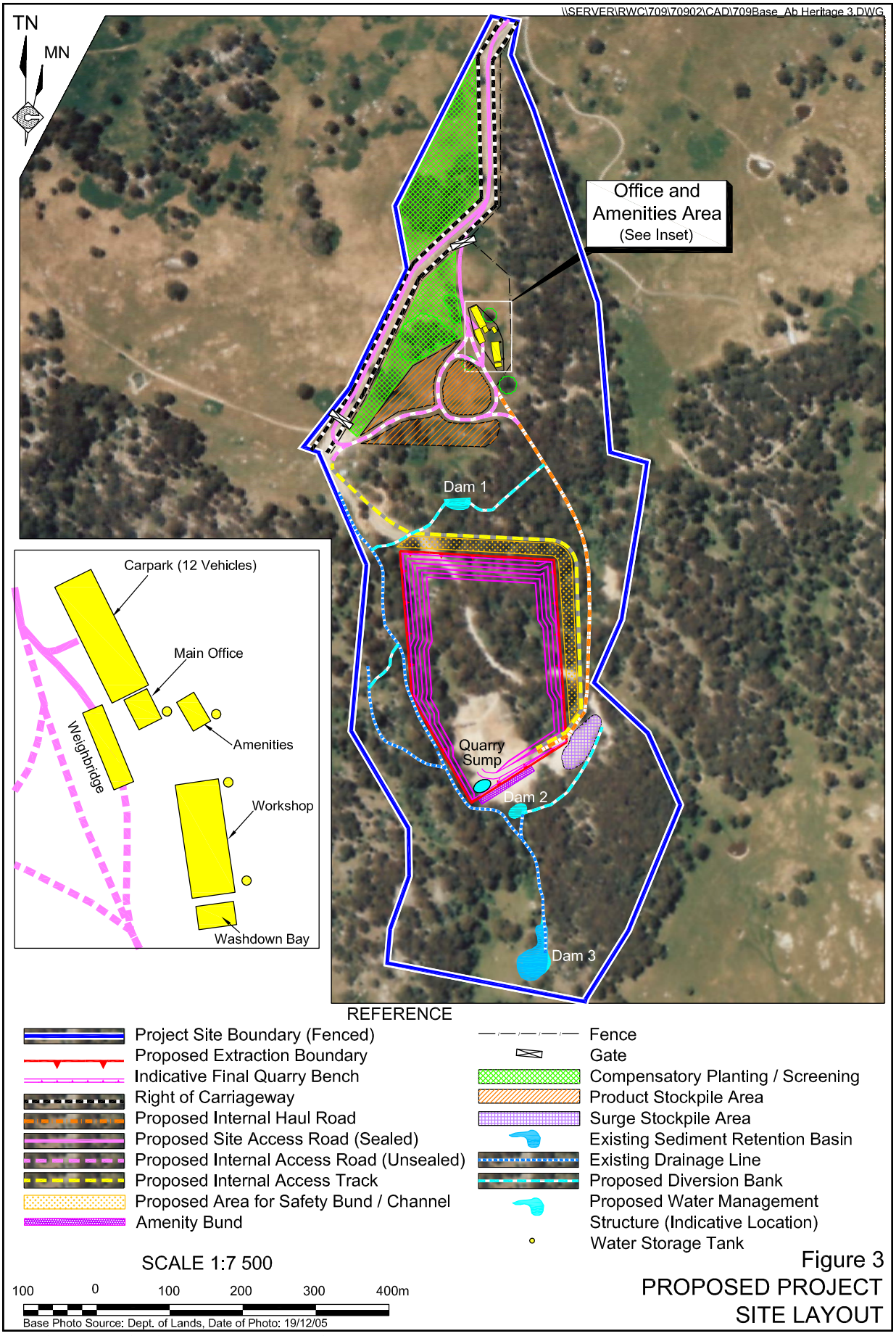

Figure 3
PROPOSED PROJECT SITE LAYOUT

Note: A Colour Version of this figure is available on the project CD

Subsequently, after 14 days had expired since publication of the advertisement ASR wrote to Pejar LALC, Mr Bill Allen, Dhuuluu-Yala Aboriginal Corporation (Dhuuluu-Yala), advising that the fieldwork would commence shortly. ASR also tried to contact Gundungurra Tribal Council Aboriginal Corporation on its Web site and on its listed telephone number but was unable to get a response. Pejar LALC responded to the letter with a suggested date for the survey; however, although it had not responded to the advertisement and was therefore not a 'registered stakeholder group' as defined by the guidelines, Dhuuluu-Yala requested that it be provided with a written survey methodology before it would agree to the fieldwork. No response to either the advertisement, or to direct written correspondence was received from Gundungurra Tribal Council Aboriginal Corporation.

After further delays when key personnel could not be contacted because they were on holiday, and because of the Christmas break, and the closure of the Pejar LALC office from Christmas Eve until 9th February, a Survey Methodology was Emailed to Mr Bill Allen and Dhuuluu-Yala on 16th February 2009. A copy of the survey methodology is included as **Appendix ii**.

On 10th March, 22 days having passed since the survey methodology had been sent to Mr Bill Allen and Mr Grant of Dhuuluu-Yala, ASR contacted Mr Grant to get feed-back on the proposal and to arrange a date for the survey. Mr Grant nominated Friday 3rd April 2009 for the survey and told ASR he would discuss the date further with Mr Allen.

In the meantime ASR contacted Pejar LALC to discuss the availability of a Sites Officer to assist in the survey, and was informed that a Sites Officer would be available on whatever date the other parties agreed to.

On 25th March ASR contacted Mr Grant to confirm the date for the survey, and was told that although Mr Allen would not be present another person representing Mr Allen would be available on 3rd April. Mr Grant also confirmed that he would be available on 3rd April.

On Wednesday, 1st April, Pejar LALC left a telephone message that its Sites Officer had no transport to get to Oberon. Appleton (ASR) contacted Delise Freeman, Co-ordinator, Pejar LALC to find out why it could not provide their Sites Officer with transport and was told that the Sites Officer's car registration had fallen due the previous day and that it had not yet been registered. Appleton then asked how long it would take to travel from where the Sites Officer lived (Goulburn) to Oberon and was told it was a two-hour journey. It would therefore add an additional 8 hours in travel time that Appleton would have to drive in addition to the 16 hour return journey from Armidale to Oberon if he had to collect the Sites Officer from Goulburn. Appleton stated that it was not a practical option, and asked Delise that as Pejar had already surveyed the Project Site in 2007, whether it was necessary for Pejar to be present during the current survey. Delise was not aware of the previous investigation and requested ASR to fax a copy of the Pejar 2007 report. A copy of the Pejar report was sent immediately – see **Appendix iii**. Having read the faxed report Delise advised Appleton that as Pejar had already surveyed the Project Site there was no need for it to resurvey the same area, as long as it was provided with a copy of the report of the current investigation.

As a consequence, Bill Allen representing Bathurst Wiradjuri, and Brian Grant representing Dhuuluu-Yala Yarranack Enterprises, accompanied by Scott Franks (Yarrawalk Aboriginal Corporation), assisted Appleton (ASR) in the survey which was undertaken on 3rd April 2009.

Both prior to and during the survey, Allen, Grant, Franks and Appleton discussed the potential for particular site types to be present, and the particular environments in which they might occur. The survey strategy and results were considered and discussed throughout the survey and at the completion of each survey unit. At the conclusion of the survey, the results were discussed as were the recommendations that each organisation would make in the letters they would provide ASR evidencing their participation in the investigation.

Copies of correspondence from Dhuuluu-Yala and Yarrawalk attesting to their inclusion in the consultation process are included as **Appendix iv**.

3 THE ENVIRONMENTAL CONTEXT

Any discussion of the likely presence of Aboriginal cultural remains or of the basis why such remains might be discovered must be within the context of the environment and the resources that would have been available to any Aboriginal occupants of the area.

3.1 THE GENERAL GEOLOGY AND TOPOGRAPHY

The Project Site occurs towards the eastern rim of an eastern branch of the southern section of the Molong-South Coast Anticlinorial Zone, a unit of the Lachlan Fold Belt. The Molong-Southcoast Anticlinorial Zone is described as a composite structural unit, comprising metasediments and volcanics intruded by large composite granitic bodies (Herzberger 1974).

The existing quarry and the area of the proposed quarry extensions occur on one of the granitic bodies referred to above. The Project Site generally is on the upper southern slopes and below the rim of the summit of a steep-sided hill overlooking the valley of Duckmaloi River, which flows west to east, a kilometre to the south of the hill.

Elevations in the Project Site descend from 1,210m AHD on the summit of the hill, down to 1,100m AHD in the south-eastern corner of the Project Site, and 1,170m AHD at the entrance on the northern side of the hill. The existing quarry occurs on the upper southern slopes of the hill between the 1,140m AHD contour and the 1,170m AHD contour, and the proposed extension to the quarry will extend further upslope towards the summit of the hill.

3.2 VEGETATION

As can be observed from the aerial photograph in **Figure 2**, much of the Project Site supports dry eucalypt woodland, partly cleared on the summit and on the northern slopes. The woodland in the north-eastern section comprises old growth dominated by ribbon-gums, but this gives way to regrowth woodland on the slopes above the existing quarry.

3.3 WATER RESOURCES

As **Figure 2** shows there are no clearly defined drainage lines in the Project Area other than two drainage depressions that converge below the existing extraction area into a sediment retention basin. Prior to the quarry operations any surface water on the steep slopes would have been rapidly discharged into the valley below. However, the nearness of the river to the Project Site would have meant that the absence of water in the Project Site would not have deterred the use of the Project Site by Aboriginal people camping along the banks of Duckmaloi River.

3.4 STONE RESOURCES

As referred to in **Section 3.1** the Project Site occurs on granitic bedrock, although some poor and highly fractured quartz angular pebbles were observed during the survey, none would have been useful as a knapping material with which to make tools or weapons,. It follows therefore that if there is any artefactual material within the Project Site that it would have been sourced from elsewhere – perhaps from pebbles in the river bed.

3.5 PREVIOUS IMPACTS

As the aerial photograph in **Figure 2** shows and as referred to above, a large part of the Project Site supports open dry eucalypt woodland. However the old growth woodland in the north-eastern section contained many large tree stumps logged for fence straining posts and/or firewood. However the woodland above and to the east of the quarry is predominantly regrowth, evidencing either clearing for grazing or the result of severe bush fires. The summit

of the hill has been cleared for pasture and presently supports a small herd of Angus cattle. Downslope and to the south of the existing quarry a Sediment Retention Basin or large dam has been constructed. Elsewhere there is a road in and a road out to the existing quarry and in addition to the quarry pit there is a large stockpile area, and overburden heaps.

4 THE ARCHAEOLOGICAL RECORD

The result of the search of the Aboriginal Sites Register (Aboriginal Heritage Information Management System – AHIMS) for all sites within the references Eastings 767000-774000, Northings 6258000-6267000 resulted in a listing of only one site in the 63 sq.km search area. Site #44-6-0008 was recorded as a Bora ground, "Oberon, Kings Stockyard Creek". However, the site is outside the map coverage of **Figure 1**.

The very low count of sites within the search area should not be interpreted as representing the frequency or distribution of sites in the area. Apart from the sites recorded in the late 1970s sites are usually only found and recorded during investigations for proposed developments, and as there have been no new developments in the search area since before the 1970s no sites have been found.

Also, unfortunately, many of the site references on the AHIMS Site Register are inaccurate. Since the first sites were recorded on the Sites Register in 1974 the computer programme written for the site register has been rewritten and/or upgraded at least three times, and each time the data was re-entered into the system there were errors, both in site names and in map references.

Also during that time there were considerable changes to the maps available to field workers, firstly from 1:63,360 (inch) scale (Imperial) military Topographic maps, to 1:250,000 military Topographic maps (printed in 1942), and then to 1:250,000 scale Topographic maps (printed at various times), and then to 1:100,000 and 1:25,000 scale Topographic maps (printed in 1983), and then more recently to 1:25,000 scale maps (printed in 2001). Features that were apparent in the earlier maps and may have been used as reference points for provenancing sites were changed or destroyed and the features removed from the maps.

Archaeologists have used various strategies to locate sites on maps, from compass and line-of-site, to sight referencing to topographic features, to using hand-held or vehicle-mounted Global Positioning Systems of varying degrees of accuracy. The current (2001) Topographic Map Series warns that "Satellite (GPS) derived values may be in error by up to 20 metres", but during the late 1980s and 1990s the satellite signals were deliberately 'warped' by the American controllers, to avoid the use of the satellites by enemy forces, and GPS readings during that period were out by as much as two-hundred metres. While there were computer programmes that could correct the warped references very few people went to the trouble to correct them.

A copy of the search AHIMS Site Register is included as **Appendix v**.

5 MODELS FOR SITE LOCATION

5.1 SITE TYPES AND THEIR LOCATION

In order to design an investigative strategy, it is firstly necessary to develop a predictive model for site location. This is not to determine where the investigation should be conducted, but to establish a theoretical model for the distribution of archaeological material against which the effectiveness and subsequent analysis of the survey results can be tested, compared and reasoned. The basis upon which the predictive model is derived must, however, be one of consideration of which archaeological material might realistically be expected to not only be present, but also detectable.

The first objective of any archaeological investigation must be to observe and record sufficient of the archaeological record that is present to be able to propose that it is representative of the record as a whole. The investigative strategy is therefore directed and designed to detect that which is representative of the record in the particular study area, and naturally, as different study areas will comprise variations in environment, vegetation, topography, etc., so the investigative strategy must be designed to best suit the circumstances. The objective must be to detect material evidence, and so it is necessary to consider the extent to which artefactual material may be present, and the degree to which it is visible or might be discovered.

There are several factors, which are likely to affect, firstly, where Aboriginal people are most likely to have been, secondly, where they have left evidence of their activities, and thirdly, the degree to which that evidence is observable in the present record.

People visited places mainly to obtain resources, and in general places that were richest in resources were more likely to have been visited by people than those places with fewer resources. Important resources were permanent water, ephemeral water, food resources, stone raw material sources, shelter (from sun, wind, and rain), and perhaps suitable surfaces for rock art, and proximity to mythological natural features. Those resources may have been a factor in the suitability of a location for particular ceremonial activities but cultural boundaries also influenced the choice of ceremonial grounds. Alternatively, sites frequently occurred along preferred access routes and particularly where that route coincided with a watercourse.

However, the attractions of such an environment frequently resulted in the archaeological record becoming discontinuous or significantly disturbed, as stock and vehicles impacted upon it in the post-European contact phase.

Frequency of visits and use of particular locations was also determined by the ‘accessibility’ or freedom from environmental constraints in the area. For example, whether there were alternative, preferred or easier ways to travel around or over natural barriers, be they geological, geographical, cultural, or imposed by fauna or flora, or whether they were only seasonally accessible, such as mounds on flood terraces, or the availability of water during periods of drought, or whether or not floods, fire or snow hindered access.

Few past Aboriginal activities are represented by surviving material evidence. This in part is because many activities did not leave material evidence (eg. tools were reused), but it is also because very little cultural material survived. An exception to this was shellfish, which was very durable.

The survival of material that is durable was also affected by recent European land use. Cultivation has destroyed many archaeological sites. However, cultivation can also help expose sites that might otherwise be covered. This brings us to the other important point about site distribution, which is that to a great extent site distribution recorded by archaeologists reflects the distribution of places where the ground surface is sufficiently eroded to expose artefactual material.

By far, the majority of recorded sites have been stone artefact scatters or isolated stone artefacts, and in the vast majority of sites they were found in one or more of the following contexts:

i) On or adjacent to deposits containing quartz, quartzite, jasper, silcrete, chert, chalcedony, metamorphosed greywacke, and other indurated or siliceous sedimentary rocks, or redeposited fine-grained volcanics, or

ii) On river banks or adjacent to river banks where the watercourse contains river pebbles of quartz, quartzite, jasper, silcrete, chert, fine-grained volcanics, basalts, etc., and particularly at the junctions of watercourses, or

iii) On ridges and spurs overlooking watercourses or on high vantage points affording uninterrupted views of swamps, water holes, saddles, passes, and any other likely access path into the observer’s area, or

iv) In the vicinity of outcrops of suitable raw material such as basalt, silcrete, chert, or other highly silicified sedimentary rock.

Other site types do occur and perhaps because of their lower and less predictable profile, are present in far greater numbers than we are aware of. People die but there are few recorded burials. One reason may be that in many instances the soils are too acid for the preservation of bone, but a far more likely reason is simply that burial frequently entailed subsurface internment, and a surface survey will only discover a burial where there has been erosion of significant disturbance to the surface deposits. As a consequence many burials have only been discovered when exposed by erosion of a sand body or river terrace.

Other site types such as carved trees, scarred trees, stone arrangements, Bora rings, etc., may once have been present, but are unlikely to have survived in easily accessible country from the attention of non-indigenous people. Thus, much of what might have existed is now lost or destroyed, and the archaeological record has become biased by the post-contact utilisation of resources, and by the selective exploitation and preservation of particular environments.

Other factors which affect the degree to which sites are recorded during an investigation include the time of year at which the fieldwork is performed (the seasonality of some vegetation growth) and the conditions under which the survey is performed – (wet, dry, cold, windy, poor light, etc.).

A brief description of site types such as isolated artefacts, open scatters, camp sites, knapping floors, quarries, middens, mounds, hearths, carved trees, scarred trees, stone arrangements, Bora rings, burials, engravings, paintings, grinding grooves, occupation deposits (and PADs), and ceremonial and mythological sites is included as **Appendix vi**.

5.2 A PREDICTIVE MODEL FOR THE STUDY AREA

Based on all of the above, the following model for site distribution was proposed for the study area, in which there was no reliable water source, no exposures of sandstone bedrock, and no rock overhangs, and which in the absence of both water and shelter, there were unlikely to be any places where PADs (potential archaeological deposits) were likely to occur.

- Isolated artefacts may be present and visible in erosion features.
- Low-density artefact scatters may be present and visible in erosion features, but it is unlikely that any debitage will be visible
- There is a potential for trees more than 150 years old to exhibit scarred surfaces
- There is a potential for any trees more than 150 years old to exhibit carved surfaces
- There will be no engravings, and/or grinding grooves.
- There are unlikely to be any PADs.
- In the absence of shelters or overhangs there is no potential for shelters to exist and therefore no potential for art sites, and therefore no potential for undisturbed occupation deposits.
- There will be no Aboriginal stone quarries.
- There will be no shell middens
- There will be no visible evidence of burials
- There will be no surviving Bora rings

- There will be no stone arrangements
- There are no known cultural associations with the area.

6 THE SURVEY

6.1 THE SURVEY STRATEGY

Having studied the Topographic map and the aerial photograph Appleton determined that the objectives of the investigation were to undertake as full and as comprehensive a survey as possible. There was easy access to all parts of the area that were to be surveyed, and so the only constraints to an effective survey would be any constraint the groundcover would be to archaeological visibility.

The investigators walked in a clockwise direction around the Project Site, four-abreast, thereby covering a swathe of approximately 70-80 metres. Some areas such as the slopes above the existing quarry, where regrowth and grass groundcover were a constraint to archaeological visibility, were not surveyed, but close attention was paid to the drainage gullies into the Sediment Retention Basin and to the adjacent slopes.

6.2 DETAILS OF THE SURVEY

The field survey was undertaken by Appleton (ASR), assisted by Bill Allen representing Bathurst Wiradjuri, and Brian Grant representing Dhuuluu-Yala Aboriginal Corporation, accompanied by Scott Franks, on 3rd April 2009. The survey was made on foot, in dry conditions under a partly cloudy sky, in light ideal for observing any artefactual material present and observable.

6.3 SITE RECORDING

All relevant observations as to the topography, vegetation cover, and conditions, were recorded in a field-log, and photographs taken with an Olympus Camedia SP-510UZ Zoom Digital Camera, to record the character of the survey area, and to witness survey conditions.

6.4 EFFECTIVENESS OF THE SURVEY TECHNIQUE

The effectiveness of the survey in identifying scarred or carved trees was comprehensive, but groundcover in cleared areas, and leaf and bark detritus in the woodland areas, were constraints to a totally effective ground survey.

6.5 EFFECTIVE COVERAGE

The photographic record that follows provides a visual reference for the survey conditions and various aspects of past impacts to the study area. The series begins at the entrance to the Project Site and continues in a clockwise direction around the area, returning back to the entrance.

Plate 1 – The entrance to Oberon White Granite Quarry.

Plate 2 – Northern approach to the quarry.

Plate 3 – Old growth woodland in the north-eastern section.

Plate 4 – Looking westwards from the woodland across the cleared section of the summit.

Plate 5 – The woodland in the eastern section.

Plate 6 – Quarry approach road to the southeast of the summit.

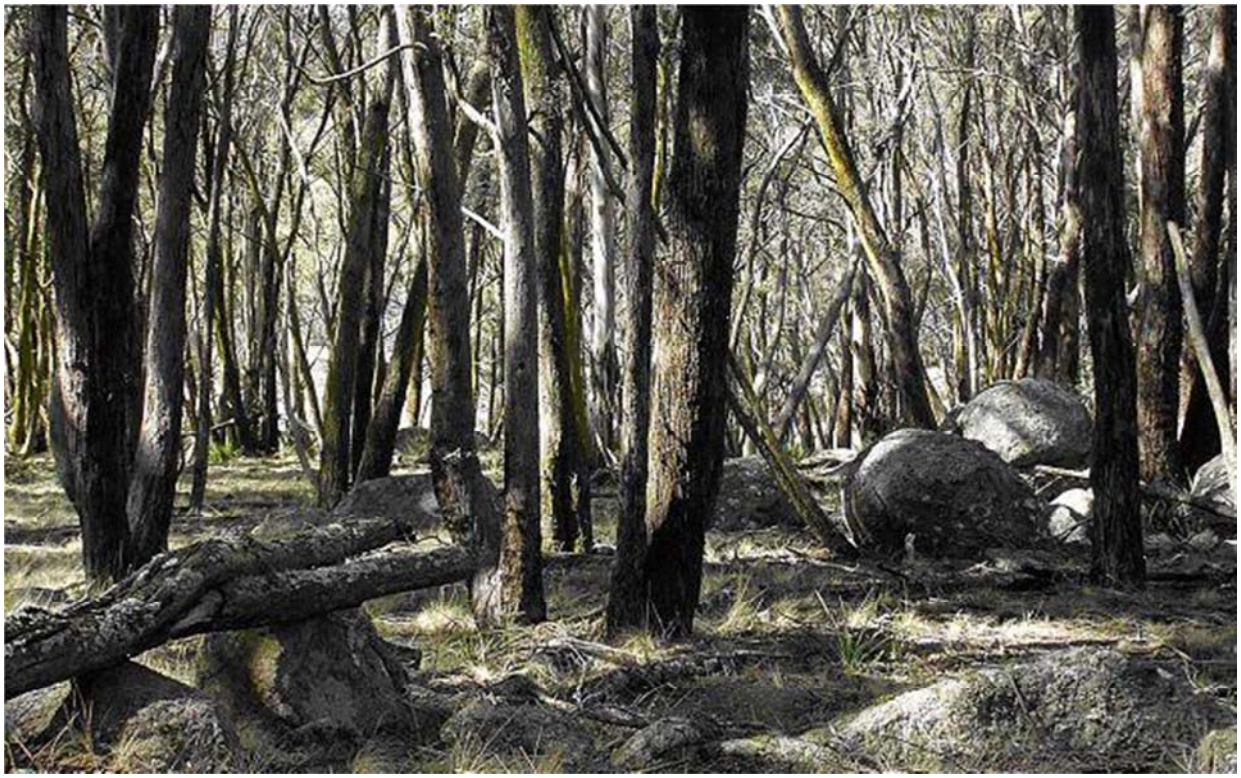

Plate 7 – Regrowth woodland on the southern slopes.

Plate 8 – Looking back up the slopes above the quarry.

Plate 9 – Looking southwards to the sediment retention basin.

Plate 10 – Looking towards the east across the bottom of the Project Site. The sediment retention basin is beyond the rise in the foreground.

Plate 11 – Entry to the quarry pit. Note the stockpiles.

Plate 12 – The quarry face.

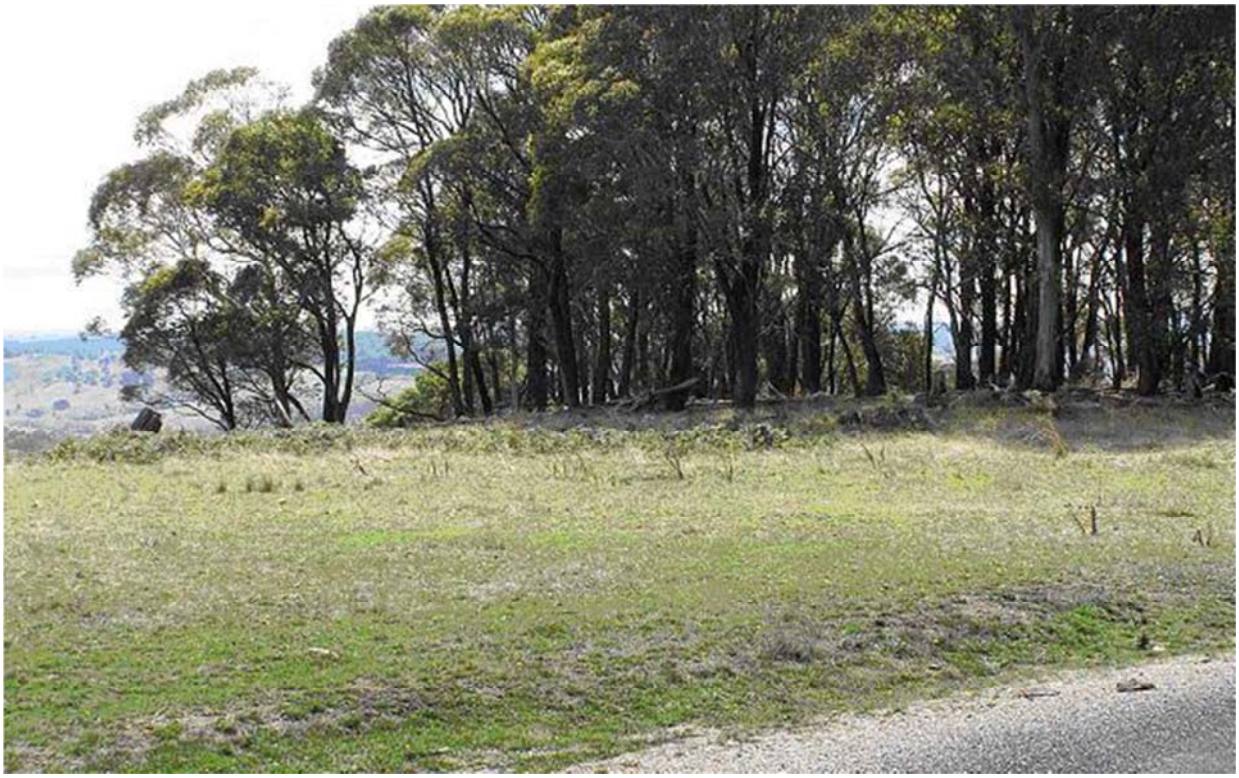

Plate 13 – Looking north-westwards to the woodland to the west of the summit.

Plate 14 – Looking northwards downslope towards the entrance.

7 THE RESULTS

No sites or places of archaeological or Indigenous cultural significance or locations of Potential Archaeological Deposits (PADs) were identified in the Project Site.

8 DISCUSSION

The absence of sites within the survey area was not surprising given that the survey area was located on granite, on sloping ground, some distance from a reliable water source, and contained no useful resources. Such an environment would not have been a good place for a camp site when the river bank was only 2,500m away to the north. However, the absence of natural barriers in the survey area might have meant that it was that the summit of the hill might have been on a transit route across the ridge tops between the east and west, or for the occasional hunting and/or gathering forays. Either way such activities would not have resulted in the deposition of more than an occasional isolated artefact, dropped accidentally in transit, or discarded as no longer useful.

The absence of any stone suitable for knapping into tools or weapons in the survey area meant that there were no quarries where knapping material might have been collected, and it also meant that if there were any artefacts in the survey area that they would be only isolated artefacts or very low density scatters of material sourced from elsewhere.

The Project Site occurs in marginal country with few reliable resources, and while Aboriginal people probably passed through the area in transit to other places, it is unlikely that they would have chosen to occupy the area for any length of time, or that they would leave a lasting archaeological record.

This investigation was undertaken after extensive consultation with the “registered Aboriginal stakeholders”, and with the full participation of all “registered Aboriginal stakeholders”. In the absence of any sites or places of Aboriginal cultural significance there is no requirement for any impact mitigation strategies, or for a Management Plan for the avoidance, conservation or preservation of sites of Aboriginal cultural heritage value.

9 SIGNIFICANCE ASSESSMENT

9.1 INTRODUCTION

The DECCW policy to safeguard all sites, Aboriginal places, and archaeological material of significance wherever possible requires that some means of assessing the significance of the sites is necessary. This is not only for the purpose of determining whether the Project can proceed as proposed, but also to provide Cultural Resource Managers with the information for future management of the area.

9.2 CULTURAL SIGNIFICANCE

The Aboriginal or cultural significance of Aboriginal relics and sites can only be assessed by the Aboriginal community, and in particular, the Elders. It is the responsibility of the archaeologist to ensure that the Elders or elected representatives of the Aboriginal community are advised of the survey results, and are consulted as to their knowledge and opinion of the significance of the area, and to transcribe and present those expressions in report form.

In this instance the representatives of Pejar LALC, Bathurst Wiradjuri, and Dhuuluu-Yala and Yarrawalk Aboriginal Corporation have informed ASR that there are no places or sites of cultural significance in the Project Site, and that there are no constraints on cultural grounds to the proposed extensions to the Oberon White Granite Quarry. A copy of the Pejar LALC 2007 report is included as **Appendix iii**, and correspondence from Dhuuluu-Yala and Yarrawalk Aboriginal Corporation included as **Appendix iv**.

9.3 RESEARCH POTENTIAL

In the absence of any archaeological sites or places assessed to be of potential archaeological research (PADs) the Project Site is assessed to be of no research potential.

10 RECOMMENDATIONS

As a consequence of this investigation no sites of cultural or archaeological significance or places of potential research significance were identified. Pejar LALC, Bathurst Wiradjuri, and Dhuuluu-Yala and Yarrawalk Aboriginal Corporations have stated that there are no cultural grounds that would present a constraint to the proposed development. ASR agrees with its recommendations, and concludes that there are no cultural or archaeological grounds that present a constraint to the proposed Extensions to Oberon White Granite Quarry, however, MSC is advised that they are legally obliged to comply with the following provisions of the *National Parks and Wildlife Act 1974* (as amended), which state that:

1. The owners, and their employees, earthmoving contractors, subcontractors, machine operators and their representatives, whether working in the survey area or elsewhere, should be instructed that in the event of any bone or stone artefacts, or discrete distributions of shell, or any objects of cultural association, being unearthed during earthmoving, work should cease immediately in the area of the find.
2. In the event that any bone cannot be clearly identified by a qualified archaeologist as being of animal remains the police are to be informed of its discovery, and officials and/or their representatives of the Pejar LALC, Bathurst Wiradjuri, and Dhuuluu-Yala Aboriginal Corporation, and the Archaeologist, DECCW (Dubbo) advised that the bone is subject to police investigation.
3. Work should not recommence in the area of the find, until both the police (if bone has been found) and those officials or representatives have given their permission to do so. Those failing to report a discovery and those responsible for the damage or destruction occasioned by unauthorised removal or alteration to a site or to archaeological material may be prosecuted under the *National Parks and Wildlife Act 1974*, as amended.

11 GENERAL GLOSSARY:

The definitions that follow are for terms used in this and other reports written by the author, and do not necessarily apply to their use in different contexts.

ADZE :
A modified flake with at least one steeply-retouched working edge. While all adzes are generally considered to be wood-working tools it is probable that some also served as cores and others as scrapers. Adzes with a uniform butt were frequently hafted to make a chisel-like tool, but the intended use of the adze determined the size of the adze and whether it was hafted (Flenniken and White, 1985).

AHD:
Australian Height Datum

ARCHAEOLOGICAL DEPOSIT :
Sediments which contain evidence of past Aboriginal use of the place, such as artefacts, hearths, burials etc.

ARTEFACT :
Any object that has attributes as a consequence of human activity (Dunnell, 1971). In this report 'artefacts' has been used generally to describe pieces of stone that have been modified to produce flakes, flaked pieces, cores, hammerstones, or axes.

BACKED BLADE :
A stone tool manufactured from a flake on which one margin has been modified by the removal of small flakes to blunt the edge or margin opposite the cutting edge.

BORA GROUND :
A ceremonial site comprising of one or two connected circles composed of compacted or mounded earth, or defined by an arrangement of stones, of 2 to 30m diameter, generally used in male initiation rites.

CAMPSITE :
A place at which the density of artefacts and the variety of material indicates that people ‘frequently’ used the place as a stopping or resting place. Such places are also likely to contain or be close to water resources, food resources, or stone material resources. In this report a campsite is used to describe artefact scatters that are associated with hearths or fireplaces, as distinct from scatters that are not associated with hearths or fireplaces, which are described as Open Scatters.

CHALCEDONY :
A form of silica (partially translucent), which occurs as linings in cavities in rocks. When banded it is known as AGATE (Department of Mines, 1973). Chalcedony is uniformly coloured and agate has curved bands or zones of varying colour (Cook & Kirk, 1991).

CHERT :

Another name for sedimentary chalcedony. It occurs most frequently in limestones, or in marine sedimentary rock, or as pebbles in sedimentary rock. In its depositional context it is often concentrated in bedding planes. Chert found in deep-water limestones is formed from radiolaria and diatoms (siliceous planktonic micro-organisms) (Cook & Kirk, 1991).

Chert is a form of amorphous or extremely fine-grained silica, partially hydrous, found in concertions and beds. It is classified as a chemical sedimentary rock although it may be precipitated both organically and inorganically (Department of Mineral Resources, n.d.).

CONGLOMERATE :

Naturally cemented gravel. Conglomerate is a coarse-grained clastic sedimentary rock composed of generally rounded fragments of other rock types larger than 2 mm in diameter, set in a fine-grained matrix of sand, silt, or any of the common natural cementing materials (Department of Mineral Resources, n.d.).

CORE :

A piece of stone from which flakes have been removed, that cannot otherwise be described as a retouched or modified artefact.

CORTEX :

The naturally altered surface of stone – eg. the water-worn surface of river pebbles.

DEBITAGE :

The small waste material observed in knapping floors. Generally, waste material is described as all those fragments having a maximum dimension of less than 10mm

FLAKE :

A fragment of stone exhibiting features indicating that it has been deliberately removed from a core piece. These features are evident as:

i) Platform: Plane or point at which a blow was delivered to remove the flake.
ii) Bulb of Percussion: Convex surface that occurs on the face or ventral surface of a flake, radiating from the point of impact, produced as a consequence of the force pattern.
iii) Eraillure: see below.

Other terms:

i) Dorsal: The back or outer face of a flake as it would have been prior to removal from a core. Frequently either ridged or exhibiting negative flake scars when removed in secondary flaking, with a natural weathered cortex when removed in primary flaking.
ii) Ventral: The ‘chest’ or inner face of a flake as it would have been prior to removal from the core. The surface upon which the Bulb of Percussion occurs.
iii) Platform Preparation: The removal of flakes from a surface to produce a level platform. May be evidenced by retouch scars to the platform.
iv) Retouch: The removal of small flakes from an edge or margin of an artefact to modify its shape or resharpen its edge.
v) Proximal: The end of a flake closest to the striking platform.
vi) Distal: The end of a flake furthest from the striking platform.

vii) Margin: The edge of an artefact.

viii) Eraillure: A small circular to elliptical negative flake scar occurring on the surface of the bulb of percussion on flakes of very fine-grained or highly silicified material. It occurs 'naturally' as a consequence of internal forces generated at the time of flake removal.

ix) Split Cone: Occurs when the flake splits down its axis frequently removing part of the striking platform. Generally believed to be produced by faulty knapping technique, but is also probably a consequence of flawed material.

x) Transverse Snap: Occurs when a flake snaps across its axis. Generally believed to be caused by post-depositional impacts such as human or stock treadage, or vehicular traffic.

FLAKED PIECE :

A fragment of stone exhibiting flake scars indicating that it is an artefact, but not displaying diagnostic features, such as a Bulb of Percussion, Striking Platform, or an Eraillure.

GREYWACKE :

A type of sandstone, grey or greenish-grey in colour, tough and well indurated and typically poorly sorted (Clark & Cook, 1986).

A generally poorly sorted, dark sandstone containing feldspar and sand-sized rock fragments of metamorphic or volcanic rocks (Department of Mineral Resources, n.d.).

Usually a dark and coarse-grained rock compared to mudstones and siltstones that are much finer-grained and better sorted.

HOLOCENE PERIOD :

The period from 10,000 years ago to the present.

IGNEOUS ROCK :

Rock formed by the cooling and solidification of magma on or below the earth's surface (Geography Dictionary, 1985).

IN SITU:

In its original place – as deposited.

ISOLATED ARTEFACT :

A solitary stone artefact, at least 50m from its nearest neighbour. This is based on NPWS policy that two artefacts within 50m of each other constitute a site.

KNAPPING FLOOR:

A discrete scatter of artefacts in which at least two artefacts are recognisably of the same material, and derive from the same piece of stone. Also described as a stone tool manufacturing site or floor.

LOCATION :

The place at which an artefact is found, or a place identified as having either archaeological or Aboriginal significance.

MEASUREMENT :

I) Flake:
   i) Length: Measured along the percussion axis at right angles to the platform.
   ii) Width: The greatest width measured at right angles to the percussion axis.
   iii) Thickness: The greatest thickness measured at right angles to the percussion axis.

II) Flaked piece:
   i) Length: The longest dimension
   ii) Width: The greatest width measured perpendicular to the length.
   iii) Thickness: The greatest thickness measured perpendicular to the length.

III) Core:
   i) Length: The longest dimension.
   ii) Width: The greatest width measured perpendicular to the length.
   iii) Thickness: The greatest thickness measured perpendicular to the length.

MIDDEN :

A refuse heap or stratum of food remains, such as mollusc shells, and other occupational debris (Dortch, 1984 – see also Meehan, 1982).

MUDSTONE :

A fine-grained detrital rock, usually quite massive and well consolidated. May be black through grey to off-white, browns, reds and dark blues/greens. Frequently found in association with sandstones (Cook & Kirk, 1991). Identification is often aided by colour variations in layering. A source for stone material tool manufacturing material found as river pebbles in creek beds, and artefacts often display a water-worn cortex.

NEGATIVE FLAKE SCAR :

A concave surface resulting from the removal of a flake, occurring on the surface of the rock from which a flake has been removed.

PLEISTOCENE PERIOD :

The period from about 10,000 years ago to 2 million years ago.

POTENTIAL ARCHAEOLOGICAL DEPOSIT (PAD) :

Synonymous with Potentially Archaeologically Sensitive : Having the potential to contain archaeological material although none is visible.

QUARTZITE :

Quartzites are formed by the regional or contact metamorphism of quartz arenites, siltstones, and flints (cherts). They are composed essentially of quartz, and usually have a fine-grained granoblastic (grains are roughly the same size) texture. Generally massive, but may sometimes show sedimentary structures (Cook & Kirk, 1991).

ROTATION :

The removal of flakes from a core by blows directed at different angles, to different platforms. May be evident on the dorsal surface of a flake as negative flake scars, which do not follow the same direction as the percussion axis of the flake. This may be confused with scars produced during core preparation.

SCAT :

The solid waste material produced by an animal – dung, droppings, manure (Triggs, 1985).

SCATTER :

Two or more artefacts occurring within 50 metres. Scatter may also be used in the context of 'background scatter', meaning the general distribution of artefacts across the landscape that cannot be recognised as discrete concentrations.

SILCRETE :

A near surface or surface siliceous induration (Desen & Peterson, 1992).

A conglomerate consisting of surficial sand and gravel cemented into a hard mass by silica.

A siliceous duricrust (Bates & Jackson, 1980).

Crusts may form as a result of low, infrequent rainfall, on reasonably flat surfaces. These are known as duricrusts – those cemented by silica are known as silcretes (Clark & Cook, 1986), sometimes referred to locally as 'billy' (Gentilli, 1968), or 'grey billy'.

Silcrete on the northern tablelands of NSW forms at the surface contact between sediments of the Sandon Beds and the Armidale Beds with overlying basalt, where groundwater (more rich in silica than surficial water) interacts with surficial water and precipitates new quartz as the matrix to the sediments (N.D.J. Cook, Dept. of Geophysics, UNE, pers. Comm.).

In softer formations of quartz sands, groundwater has apparently been responsible for the formation of concretionary layers of silcrete. Under altered climatic conditions, the less competent beds erode away leaving concretions. Since they are often the size of old-fashioned woolsacks and are greyish and white, they are popularly known as gray billy (slang for billy goat) (Fairbridge, 1968).

SITE :

A discrete area or concentration of artefactual material, place of past Aboriginal activity, or place of significance to Aboriginal people.

SOIL SCIENCE TERMS (taken from Banks, 1995, and others as referenced).

BEDROCK : Outcrop of *in situ* rock material below the soil profile.

BENCH : A strip of relatively level earth or rock breaking the continuity of a slope.

BLOWOUT : A closed depression formed in the land surface by wind eroding sands and depositing them on adjacent land.

CHERT: A very fine-grained amorphous silicate sedimentary rock, commonly a layer of chemical precipitate or micro-organism skeletal remains (Milford 1999).

CLAY: Soil material composed of very fine particles less than 0.002 mm size. When used to describe a soil texture group, such a material contains more than 35% clay (Milford 1999).

CLAYPAN : A depression caused by the aeolian deflation of sediments, or by the presence of a prior lake.

CONGLOMERATE: A poorly-sorted detrital sedimentary rock composed of rounded gravels, stones or cobbles in a matrix of much finer material (Milford 1999).

DUNE : A ridge built up by wind action composed of sands, silts, or sand-sized aggregates of clay.

FLOODPLAIN : A large flat area, adjacent to a watercourse, characterised by frequent active erosion and aggradation by channelled and overbank stream flow.

GIBBER : A level surface covered by a thick deposit of gravel or broken siliceous pebbles, occurring in the more arid parts of the continent, thought to have been formed from the break-up of a siliceous (silcrete) surface crust, and termed gibber plains (Whittow, 1984) – see also silcrete.

GILGAI : Surface microrelief associated with soils containing shrink-swell clays. Gilgai consists of mounds and depressions, or irregularly distributed small mounds and subcircular depressions varying in size and spacing. Vertical interval usually <0.3m; horizontal interval usually 3-10m, and surface almost level. Sometimes called ‘crab-hole’ soils.

GREYWACKE: A tough, well-indurated type of sandstone distinguished by detrital quartz crystals and rock fragments set in a finer-grained matrix (Milford 1999).

GULLY : An open incised channel in the landscape generally greater than 30cm deep and characterised by moderately to very gently inclined floors and steep walls (Milford 1999).

HUMMOCK : A small raised feature above the general ground surface.

LANDFORM ELEMENTS :

Crest : Landform element standing above all points in the adjacent terrain.

Flat : Neither a crest or a depression <3% slope.

Upper slope : Adjacent to and below a crest or flat but not a depression.

Midslope : Not adjacent to a crest, a flat or a depression.

Lower slope : Adjacent to and above a flat or a depression but not a crest.

LITHOSOLS : Shallow soils showing minimal profile development and dominated by the presence of weathering rock and rock fragments.

METAMORPHIC: Rocks whose composition, texture and/or structure have been altered through tectonic pressure and/or heat (Milford 1999).

METASEDIMENTARY: Partially-metamorphosed sedimentary rock (Milford 1999).

MUDSTONE: A fine-grained dark-coloured sedimentary rock, formed from lithified mud; similar to shale but more massive (Milford 1999).

pH A measure of the acidity or alkalinity of a soil. A pH of 7.0 denotes neutrality, higher values indicate alkalinity, and lower values indicate acidity. The pH scale is logarithmic, i.e., a pH of 4.0 is ten times as acid as a pH of 5.0, and one hundred times as acid as a pH of 6.0. (DLWC 1999).

RILL : A small channel cut by concentrated runoff through which water flows during and immediately after rain.

A small ephemeral channel, generally no more than 30 cm deep, created by concentrated runoff (Milford 1999).

RUNOFF : That portion of precipitation not immediately absorbed into or detained upon the soil and which thus becomes surface flow.

SCARP/CLIFF : A steep slope terminating a plateau or any level upland surface.

SCRUB : vegetation structure consisting of shrubs 2-8m tall.

SHEET EROSION : The removal of the upper layers of soil by raindrop splash and/or runoff.

SOIL PROFILE :

"A HORIZON": The top layer of mineral soil. This may consist of two parts:

A_1 HORIZON: Surface soil and generally referred to as the topsoil.

A_2 HORIZON: similar in texture, but paler in colour, poorer in structure, and less fertile.

" B HORIZON": The layer below the A Horizon. This consists of 2 parts:

B_1 HORIZON: A transitional horizon dominated by properties characteristic of the underlying B_2 horizon.

B_2 HORIZON: typically contains concentrations of silicate clay and/or iron, and/or aluminium and/or translocated organic material.

"C HORIZON": The parent rock. Recognised by its lack of pedological development, and by the presence of remnants of geologic organization.

"R HORIZON": Hard rock that is continuous (Charman & Murphy, 1993; 350-1).

SPUR : A ridge which projects downwards from the crest of a mountain as a water-parting (Whittow, 1984).

SUBSOIL : Sub-surface material comprising the B and C Horizons of soil with distinct profiles; often having brighter colours and higher clay contrasts.

SURFACE CONDITION :

Gravelly : Over 60% of the surface consists of gravel (2-69mm).
Hardsetting : Soil is compact and hard.
Loose : Soil that is not cohesive.
Friable : Easily crumbled or cultivated.
Self-mulching : A loose surface mulch of very small peds forms when the soil dries out.

SWALE : A linear level-floored open depression excavated by wind or formed by the build-up of two adjacent ridges.

SWAMP : Watertable at or above the ground surface for most of the year.

TOPSOIL: The surficial layers of the soil profile, typically the A Horizon, which is usually darker, more fertile, better structured and contains more organic matter than underlying soil materials (Milford 1999).

TERRACE : A flat or gently inclined surface bounded by a steeper ascending slope on its inner margin and a steeper descending slope on its outer margin (Whittow, 1984).

TOPSOIL : A part of the soil profile, typically the A_1 horizon, containing material that is usually darker, more fertile and better structured than the underlying layers.

UNDERSTOREY : A layer of vegetation below the main canopy layer.

WEATHERING: The physical and chemical disintegration, alteration and decomposition of rocks and minerals at or near the earth's surface by atmospheric and biologic agents (Milford 1999).

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APPENDICES

Appendix i **Advertisement to "interested Aboriginal stakeholders"**

Appendix ii **Survey Methodology**

Appendix iii **Pejar LALC Report of 2007**

Appendix iv **Correspondence from Dhuuluuu-Yala and Yarrawalk Aboriginal Corporations**

Appendix v **Results of the search of the AHIMS Site Register**

Appendix vi **Site Types**

Appendix vii **Coverage of Environmental Assessment Requirements**

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Appendix i

Advertisement to “interested Aboriginal Stakeholders

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ARCHAEOLOGICAL INVESTIGATION
Application is to be made for Part 3A Approval for proposed extensions to the Oberon White Granite Quarry, Lot 2 DP 1089826, Ferndale Road. Pejar Local Aboriginal Land Council has previously surveyed the Project Site and reported that no sites of Indigenous Cultural Significance were observed.
In accordance with 'Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation', Part 6 Approvals of the National Parks & Wildlife Act 1974 ((as amended)) Aboriginal Stakeholders with an interest in the project are invited to register their interest within 14 days, with John Appleton
Archaeological Consultant
Tel. 02 6772 6512
Fax. 02 6772 4567
Mob. 0428 651 789.

Account ID	5122955	
Name	ARCHAEOLOGICAL SURVEYS & REPORTS P/L	
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Rate	D1	
Charges	77.87	
Loading	0.00	0.0%
Discounts	0.00	0.0%
Override	77.87	
Tax	7.79	
Total	85.66	

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TWO BRACKETS IN FRONT
BACK OF ((AS)) PLEASE
DELETE ONE

Hi John.
Can you please proof, sign
& return.
Regards
Karen
Oberon Review
Fax: 63361811

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Appendix ii

Survey Methodology

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Archaeological
Surveys
&
Reports
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ABN 67 075 625 722

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OBERON WHITE GRANITE QUARRY

PROPOSED EXTENSIONS TO EXISTING QUARRY

PROPOSED INVESTIGATE STRATEGY

FOR THE ARCHAEOLOGICAL INVESTIGATION OF THE PROJECT SITE

1. BACKGROUND

The Mudgee Stone Co. Pty Limited (MSC) presently operates the Oberon White Granite Quarry on Lot 2 DP 1089826, Ferndale Road, approximately 6km east-southeast of Oberon. The company proposes to lodge an application for Part 3A Approval for extensions to the existing quarry. MSC has engaged R.W. Corkery & Co. Pty Limited (RWC) to prepare the *Environmental Assessment* to accompany the application, and RWC has commissioned Archaeological Surveys & Reports Pty Ltd to undertake an archaeological investigation of the proposed extension area, and to prepare a report of the results.

It is of interest to note that the property was previously surveyed in 2003 in accordance with DECC guidelines and no sites were found. However, as approval for the proposed extensions will now be sought as a Part 3A Major Project it is necessary for the property to be re-surveyed.

The proposed investigative strategy or methodology described below is in compliance with the requirements of the "Interim Community Consultation Requirements for Applicants", Part 6 Approvals of the National Parks & Wildlife Act 1974 (as amended), in-so-far-as they apply to the requirements for Part 3A Approval "Major Projects".

2. THE PROJECT SITE AND STUDY AREA

The Project Site (Lot 2 DP 1089826) comprises the area subject to the application for project approval for the extensions to the existing quarry – refer to attached figure. For the purposes of the survey, the Study Area boundary coincides with the boundary of the Project Site. Principle project components within the Study Area include the area within the Proposed Extraction Boundary, the proposed Stockpile Area, the proposed Sedimentation Basin, the proposed Office and Amenities area, the proposed Surge Stockpile Area, the proposed Internal Haul Road, the proposed Site Access Road, the proposed Internal Access Road, the proposed area for a Safety Bund, and the proposed Water Management Areas. In total, the areas to be investigated occur within an irregular-shaped area approximately 1,300m long by less than 300m wide, but constitute less than 50% of the Project Site or an area approximately equivalent to 500m by 250m.

As the attached figure shows, much of the area to be investigated is open woodland, and as the name of the quarry suggests, the hill is composed of granite. There are no shelters or overhangs, nor is there a reliable water supply. The Predictive Model for the site would therefore be as follows.

- Isolated artefacts may be present and visible in erosion features.
- Low-density artefact scatters may be present and visible in erosion features, but it is unlikely that any debitage will be visible.
- There is a potential for trees more than 150 years old to exhibit scarred surfaces.
- There is a potential for any trees more than 150 years old to exhibit carved surfaces.
- In the absence of sandstone there will be no engravings, and/or grinding grooves.
- There are unlikely to be any PADs.
- In the absence of shelters or overhangs there is no potential for shelters to exist and therefore no potential for art sites, and therefore no potential for undisturbed occupation deposits.
- There will be no Aboriginal stone quarries.
- There will be no shell middens.
- There will be no visible evidence of burials.
- There will be no surviving Bora rings.
- It is unlikely there will be any stone arrangements.

3. THE SURVEY METHODOLOGY

In accordance with OH&S Standards, all investigators will be required to arrive on site with steel-toe-capped boots, fluorescent vests, long-sleeved shirts, and long trousers. Hard hats will not be required, however, if the quarry is operating at the time of the investigation, all investigators will be required to wear hard hats – the quarry can provide the hard hats if necessary.

It is probable that the investigators will be required to undergo brief site induction as this is an operational quarry.

It is proposed that the Aboriginal representatives will be fully briefed on the investigation at the commencement of the survey.

It is proposed that the survey will be undertaken entirely on foot.

It is proposed that all of the areas described above as comprising the Project Site will be fully investigated.

It is proposed that all Aboriginal sites occurring within the Project Site will be fully recorded, both photographically and in writing (each artefact or feature will be measured and described in detail in accordance with best archaeological practice) – and that those sites will subsequently be recorded on the AHIMS Site Register. Part 3A Approval overrides any protection that might otherwise have applied to environmental or cultural issues. If any sites are recorded and Part 3A Approval is given there will be an opportunity to salvage any cultural or artefactual material.

It is proposed that the archaeologist will produce a report of the results of the investigation, and that copies of the report will subsequently be provided to each of the participating Aboriginal organisations, to DECC, and to the client.

John Appleton 5th February 2009

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Appendix iii

Pejar LALC Report of 2007

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25 Jan 07 11:05a Delise Freeman 02 - 48223551 p.1

RECORD OF FINAL SITE ASSESSMENT – INCLUDING RECOMMENDATIONS

Date: 25/1/07

Pejar LALC Representative: Justin Boney

Owner/Developer/Council or other Representative: Scott Murdoch – Mudgee Stone Company

Date of Inspection	28/11/06	**Comments**
DA Number		
Lot Number		
DP Number		
REF Number		
Other	Stone Quarry – Oberon area	

Has a Site Assessment been carried out by Pejar LALC? (Yes) No

Inspection carried out with: DEC Archaeologist (other)

Aboriginal Heritage identified during Pejar LALC inspection Yes (No)

Comments: Recommendations following

25 Jan 07 11:05a Delise Freeman 02 - 4[illegible]551 08/01/2007 13:11 P.2
SER.# : L5K490374

THE ELECTRICITY FAILED.
THE FOLLOWING DATA WAS LOST

FAX JOURNAL
TRANSMISSION MEMORY
RECEPTION MEMORY

Archaeological Report: (Yes) No

By Who:

Aboriginal Protocol Condition to be applied to DA: (Yes) No

Condition:
That a Pejar LALC representative is on site before and during any work, at least 7 days notice in writing will be required and a fee will be charged to the developer/owner or their representative of $100 per hour plus GST.

Authorised Pejar LALC Representative Signature: Delise Freeman

Recommendations (if any):

Pejar LALC was contacted to carry out further investigations on a new area approximately 4 hectares in measurement, including a new access road. During this inspection nothing of Aboriginal Cultural Heritage was located, however, if any previously undetected Aboriginal site or relic is uncovered or unearthed during any activity within this new area, then work at that location must cease immediately and advice on appropriate action be obtained from the Pejar LALC in conjunction with NSW Department of Environment and Conservation

Appendix iv

Correspondence from Dhuuluu-Yala and Yarrawalk Aboriginal Corporations

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DHUULUU-YALA ABORIGINAL CORPORATION

14 Duramana Road Eglinton NSW 2795

YARRAWALK

45 Coachwood Cres Picton NSW 2571

9 April 2009

ASR
John Appleton,
16 Curtis Street
Armidale, NSW 2350

Field Report and recommendation for

MUGEE STONE COMPANY

Dear John,

We would like to confirm that we attend the Field Survey on the 3 April 2009 to conduct a Field Assessment of the Mudgee Stone Company site at Oberon NSW in respect of Aboriginal Cultural Values in the area.

At the time we conducted the assessment the ground cover was in my opinion down to around 10 to 15% visibility from over growth.

This being the case we could not find any ground artefacts such as stone tools, flake or any physical evidence of occupation on a permanent basis.

There appears to have been a lot of early European impact with old growth trees being removed, possibly for fencing and heating.

Local Wiradjuri oral history of the area states that the area in question was used as a open camp site with a close association with the Fish, Cox and Campbell river systems, our people have used that area to gather the following food source.

Black Cockatoo, Wallaby, Sugar bag, (native bee). Possum, (whose skins were fashioned into cloaks that were traditionally worn by the Wiradjuri people). Porcupine, Fresh Water Mullet and Base, Turtle, Yabbies. Also native vegetation, on the day we did see Black cockatoo wallaby and native vegetation.

Both items pictured are today still readily available.

The area in question has also played a very significant part with our people for traditional ceremonies, rites of passage A ceremonial song line passes through the areas bound by the three rivers previously named which maintain our peoples continued connection to country.

Recommendation

The project be allowed and supported providing.

1. **An agreement is reach allowing Wiradjuri Traditional Owners the opportunity to enter the site to gather food and traditional medicine.**

2. **We are given exclusive right to any existing felled timber, any trees that may be felled during the expansion of the quarry together with the opportunity to cut and remove it.**

3. **Members from our community are considered for any general employment opportunities the company has or may have in the future.**

4. **Members of our community are considered concerning rehabilitation work (replanting and machine operators) with an agreement negotiated with the 3 groups that attend the field survey.**

5. That the owner considers an Aboriginal Management Plan consisting of;
   - Over-flow of water that will impact on the creek
   - Rehabilitation work
   - Replanting
   - Monitoring during the development of the roads within the site.
   - Monitoring of any land that may be disturbed from the development at present and in the future.

6. Any and all artefacts or relics that are found are to be retained by the Traditional Owners groups that attend in compliance with the requirements of DECC and NPWS and retained on site in a suitable safe keeping place.

7. That the mine has a Traditional Wiradjuri name associated with it placed at the front gate at the owners' expense.

All Correspondence should be emailed to the following,

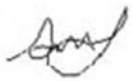
Yours faithfully

Brian Grant

Director and Aboriginal Heritage Officer bringail@bigpond.com.

Dhuuluu-Yala Aboriginal Corporation. Phn: 0401 747 523

Yours faithfully



Scott Franks

Director

Aboriginal Heritage Manager Yarrawalk@dodo.com.au

Yarrawalk Aboriginal Corporation. Phn: 0401 195 490

Appendix v

Results of the Search of the AHIMS Site Register

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Department of
Environment and Climate Change (NSW)

Your reference : Oberon Area
Our reference : AHIMS #23487

Archaeological Surveys and Reports
16 Curtis Street
Armidale NSW 2350

Wednesday, 10 September 2008

Attention: John Appleton

Dear Sir or Madam:

Re: AHIMS Search for the following area at Archaeolgical investigation Oberon area

I am writing in response to your recent inquiry in respect to Aboriginal objects and Aboriginal places registered with the NSW Department of Environment and Climate Change (DECC) at the above location.

A search of the DECC Aboriginal Heritage Information Management System (AHIMS) has shown that *1* Aboriginal objects and Aboriginal places are recorded in or near the above location. Please refer to the attached report for details.

The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.

The following qualifications apply to an AHIMS search:

- AHIMS only includes information on Aboriginal objects and Aboriginal places that have been provided to DECC;
- Large areas of New South Wales have not been the subject of systematic survey or recording of Aboriginal history. These areas may contain Aboriginal objects and other heritage values which are not recorded on AHIMS;
- Recordings are provided from a variety of sources and may be variable in their accuracy. When an AHIMS search identifies Aboriginal objects in or near the area it is recommended that the exact location of the Aboriginal object be determined by re-location on the ground; and
- The criteria used to search AHIMS are derived from the information provided by the client and DECC assumes that this information is accurate.

All Aboriginal places and Aboriginal objects are protected under the *National Parks and Wildlife Act 1974* (NPW Act) and it is an offence to destroy, damage or deface them without the prior consent of the DECC Director-General. An Aboriginal object is considered to be known if:

- It is registered on AHIMS;
- It is known to the Aboriginal community; or
- It is located during an investigation of the area conducted for a development application.

PO Box 1967 Hurstville NSW 2220
43 Bridge Street Hurstville NSW 2220
Telephone (02) 9585 6345
Facsimile (02) 9585 6094
ABN 30 841 387 271
ahims@environment.nsw.gov.au
www.environment.nsw.gov.au

If you considering undertaking a development activity in the area subject to the AHIMS search, DECC would recommend that an Aboriginal Heritage Assessment be undertaken. You should consult with the relevant consent authority to determine the necessary assessment to accompany your development application.

Yours Sincerely

Freeburn, Sharlene
Administrator
Information Systems & Assessment Section
Culture & Heritage Division
Phone: (02) 9585 6471
Fax: (02) 9585 6094

List of Sites (List - Short)

Oberon

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 55, Easting From = 767000, Easting to = 774000, Northing From = 6258000, Northing to = 6267000, Requestor like 1714%, Service ID = 23487, Feature Search Type = AHIMS Features

Site ID	Site Name	Datum	Zone	Easting	Northing	Context	Site Features	Site Types (recorded prior to June 2001)	Recording (Primary)	Reports (Catalogue Number)	State Arch. Box No (for office use only)
44-6-0008	Oberon;Kings Stockyard Creek;	AGD	55	767880	6266624	Open Site	CMR : -	Bora/Ceremonial	ASRSYS	65	NRS/17798/1/208
		Status Valid									
		Primary Contact						Permit(s)			

Number of Sites :1 Page 1 of 1 Printed By Freeburn,Sharlene 10/09/2008 09:48:06

This information is not guaranteed to be free from error omission. The Department of Environment & Climate Change and it employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

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Appendix vi

Site Types

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Site types associated with Indigenous activities and culture

The definitions that follow are for terms used in this report, and do not necessarily apply to their use in different contexts.

Art sites are defined as places where any medium has been applied to a rock surface either as symbols, characters, drawings, paintings, or any other rendition, recognisable as not being a natural discolouration or feature. They also include markings to a rock surface, either by engraving, abrading, or pecking, and which cannot be identified as being a natural feature.

Bora rings are circles of 2-30 metres diameter of compressed earth (from repeated treading or dancing), or stone arrangements, at which men performed initiation ceremonies, and are the most frequently recorded ceremonial sites. Sometimes they occur as two rings joined by a central track in a barbell configuration. They usually occur on level or low-lying country, which is usually the first topographical unit to be cultivated, or utilised for highways and roads, but they may also occur as circular stone arrangements on elevated rock platforms and hilltops. If they are or were present then they are usually either already known and have been recorded, or they have long since been destroyed.

Carved trees are readily recognised by even the untrained observer. The carving is incised either into the outer bark, or more commonly, into the living wood after removal of a section of the bark. The designs frequently consist of 'diamond cross-cuts', but may also consist of stylised animal motifs. Previously unrecorded carved trees are still discovered in relatively remote or inaccessible areas. Carved trees frequently occur near burial sites and/or Bora rings, but in some regions they may have been tribal boundary markers.

Fish traps may occur either in rivers or on seashores. They are recognisable as unnaturally formed stone arrangements that were constructed to trap fish (or eels or turtles) carried into the enclosure in deep water, and which are left stranded within the enclosure as the water level drops. The fish were then caught by nets, hand, or by spear.

Grinding grooves are usually observed on the surfaces of large sedimentary boulders or exposed shelves and outcrops of sedimentary rock along creek banks and beds, or near water. They have been produced by Aborigines using the rock surface to shape and sharpen the edges of stone to produce ground-edged axes, or to sharpen wooden spears (the latter tend to be narrow and deep). Water was used to lubricate the surface of the rock. The grooves frequently occur as linear abraded depressions in the rock, and may each be between 10 and 50 centimetres long, up to 15 centimetres wide, and 2 to 5 centimetres deep. Some sedimentary rock surfaces may exhibit shallow ground depressions of roughly round or elliptical shape, and these are more likely to be associated with seed grinding, root crushing, or other food preparation.

Middens may be identified variously as beach, lagoon, lacustrine, or estuarine, and are most likely to be observed at or above the water line where erosion, topsoil removal, or mining has exposed the shell. The size of the midden can vary enormously, with the smallest comprising a 'one off', "dinner-time camp" (Meehan. 1982), with as few as two or three shells, or a shallow lens of only a few centimetres. The largest middens may extend for many kilometres and may comprise of a number of lenses and layers of shell and ash up to several metres deep. These large middens may be evidence of continuous exploitation of the resource over many thousands of years. Middens of fresh water mussel shell may be found in eroding creek banks or in eroding terraces, particularly near both existing and defunct water holes.

Isolated shell or fragments may occur on any surface and in any situation. A single shell may have been discarded by a bird, but the presence of use-wear would indicate Aboriginal use of

the shell as a tool, which was discarded after use. Such occurrence is likely to be where there is no immediate source of stone material suitable for tool manufacture.

Natural Mythological sites are places of significance to Aborigines, either because they are described in mythological stories or songlines, or because they were used in religious ceremonies. They may occur anywhere and while some are more predictable than others – as for example, permanent water holes, waterfalls, rock promontories, etc., others may have no particularly remarkable features. Seldom is there any recognisable artefactual evidence or anything to distinguish it from similar features in the vicinity. These sites must of necessity be identified by Aboriginal people with an association with the place.

Open sites, campsites, knapping floors, scatters, and isolated artefacts, are most likely to occur on eroded and exposed creek banks, particularly where slope wash or stock trails has removed the humic layer, or on eroded ridges and spurs, particularly near the junctions in watercourses.

Open sites are most likely to be present in greatest numbers near a source of either raw stone material, or potential food resources, or in a natural corridor between two differentially preferred environmental zones, or at the contact between two environmental zones containing different resources.

Artefacts in open scatters are likely to be manufactured from the dominant raw material available; i.e. Greywacke on greywacke-sourced soils, quartz on granite-sourced soils, silcrete and chert on relict sedimentary soils.

Artefact assemblages in open scatters are likely to consist predominantly of discard material, i.e., cores, flakes, flaked pieces, and debitage.

Artefacts exhibiting retouch scars and backing are most likely to occur in sites where secondary activity took place peripheral to the central camp site, although this is a generality and can only be observed where there is sufficient surface visibility to identify peripheral sites. Fragments of flakes with retouch or backing may occur on knapping floors indicating breakage occurring during manufacture, or maintenance areas in which damaged tools have been replaced and discarded.

Isolated artefacts are likely to be most frequently observed where the groundcover obscures all but the larger artefacts, such as cores, and large flakes, or where there is little contrast between the texture of artefactual material and the surface upon which it lies. Artefacts of materials contrasting with the matrix may be visible regardless of size; eg. quartz artefacts may be far more visible than much larger basalt artefacts against a background of dark humic terrace soils.

PADs or Potential Archaeological Deposits are deposits, usually in shelters (but they may also be identified where there are intact deposits in open areas), which although not containing any visible archaeological material, are considered likely to contain archaeological material below the surface. These ‘sites’ are not recorded as sites on the Aboriginal Site Register, but are identified as places that require subsurface testing to establish whether a site exists or not.

Rock shelters with art or occupation deposits, are most likely to occur where the character of the parent rock is sufficiently massive or consolidated for it to retain a structure that weathers differentially to form shelters and overhangs.

Scarred trees are perhaps the most difficult site type to determine as having been caused by deliberate removal of the bark by humans and not as a consequence of natural events; such as abrasion from falling trees or branches, natural branch attrition, fire damage, or contact from vehicles or

stock. They may occur in places wherever there are tree species that produce bark suitable for tool and implement manufacture. While some scars are clearly the consequence of deliberate bark removal by Aborigines (either evidenced by stone axe marks, or identified by Knowledge Holders), some scars were made by settlers, and stockmen, and surveyors who frequently blazed trails and property boundaries by scarring the trees, and by timber men who removed a strip of bark to test the suitability of a tree for logging.

Other site types such as hearths, burials, etc., are less easily predicted, although burials are frequently associated with carved trees, and Bora rings, and hearths with campsites, shelters, and shell middens.

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Appendix vii

Coverage of Environmental Assessment Requirements

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Environmental Requirements Raised by The Director-General Relating to Aboriginal Heritage	
	Relevant Section (s)
Key Assessment Requirements, namely: • Heritage – including Aboriginal and non-Aboriginal heritage;	
References Refer to the: • Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation (DECC). • Aboriginal Cultural Heritage Standards and Guidelines Kit (NSW EPA).	1.1

Environmental Requirements Raised by Government Agencies Relating to Aboriginal Heritage		
Government Agency	**Paraphrased Requirement**	**Relevant Section (s)**
Department of Environment and Climate Change (7/9/07)	Assess the potential impacts on Aboriginal Cultural Heritage.	8
	Address and document the information requirements set out in the draft "Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation".	1.1
	Identify the nature and extent of impacts on Aboriginal cultural heritage values.	8, 9
	Describe the actions that will be taken to avoid or mitigate impacts or compensate to prevent unavoidable impacts of the project on Aboriginal cultural heritage values.	10
	Demonstrate that effective community consultation with Aboriginal communities has been undertaken in determining and assessing impacts, developing options and making final recommendations.	2

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