



Tasman Extension Project Environmental Impact Statement

APPENDIX L

NON-ABORIGINAL HERITAGE ASSESSMENT



April 2012

**The Archaeology of the
Tasman Extension Project
Area, near West
Wallsend, NSW.**

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**The Archaeology of the Tasman Extension
Project Area, near West Wallsend, NSW.**

Prepared for: **Donaldson Coal Pty Ltd**

by: **MAXIM Archaeology & Heritage Pty Ltd**

Project No 111102



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Date 17 April 2012	Date 17 April 2012

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	OBJECTIVES OF THE STUDY.....	2
1.2	LOCATION OF THE STUDY AREA	2
1.3	METHODOLOGY AND REPORTING	3
1.4	STUDY PERSONNEL.....	4
2.0	CONTEXT OF THE STUDY AREA.....	5
2.1	THE CONCEPT OF CONTEXT.....	5
2.2	ARCHAEOLOGICAL CONTEXT	5
2.3	HISTORICAL CONTEXT	7
2.4	PHYSICAL CONTEXT	10
2.4.1	Methodology.....	10
2.4.2	Results of Field Surveys	10
2.5	SUMMARY OF CONTEXT, CURTILAGE & HERITAGE ZONING.....	11
3.0	THE HERITAGE VALUES OF THE STUDY AREA	13
3.1	INTRODUCTION.....	13
3.2	ASSESSMENT OF SIGNIFICANCE	13
3.3	PHYSICAL AND HERITAGE IMPACT.....	13
3.3.1	Summary of Physical Impact	13
3.3.2	Statement of Heritage Impact	14
4.0	HERITAGE MANAGEMENT.....	15
4.1	HERITAGE MANAGEMENT ISSUES.....	15
4.2	OPTIONS FOR SITE MANAGEMENT	16
4.3	RESEARCH QUESTIONS	17
4.4	RECOMMENDATIONS.....	17
5.0	REFERENCES	19
5.1	PRIMARY SOURCES	19
5.2	SECONDARY SOURCES.....	19

TABLES

1.1	LOCATION DATA.....	2
3.1	PRIVATE HOLDINGS, PARISHES TERALBA & STOCKRINGTON.....	10
4.1	A SUMMARY OF STATUTORY PROVISIONS (NSW).....	16

FIGURES

1.1	STUDY AREA LOCATION.....	FOLLOWS 2
1.2	DETAIL OF STUDY AREA.....	FOLLOWS 2

1.0 INTRODUCTION

Donaldson Coal Pty Ltd (the Company) commissioned Maxim Archaeology & Heritage Pty Ltd (Maxim) to undertake a study and analysis of the historical archaeology and heritage of the precinct of the Tasman Extension Project, associated with the Tasman Underground Mine, near West Wallsend, New South Wales (the study area). The Company has projected works that are likely to modify the surface and the underlying ground of the study area (the project), briefly described as follows:

- continued underground mining of the Fassifern Seam using a combination of total and partial pillar extraction methods within Mining Lease 1555;
- underground mining of the West Borehole Seam using a combination of total and partial pillar extraction methods;
- production of run-of-mine (ROM) coal up to 1.5 million tonnes per annum;
- development of a new pit top facility, associated ROM coal handling infrastructure and intersection with George Booth Drive;
- development of ventilation surface infrastructure;
- continued transport of Fassifern Seam ROM coal from the existing Tasman Underground Mine pit top to the Bloomfield Coal Handling and Preparation Plant (CHPP) via truck on public and private roads to approximately 2015 (inclusive);
- transport of West Borehole Seam ROM coal from the new pit top to the Bloomfield CHPP via truck on public and private roads;
- progressive development of sumps, pumps, pipelines, water storages and other water management equipment and structures;
- ongoing exploration activities;
- ongoing surface monitoring, rehabilitation and remediation of subsidence effects and
- other associated infrastructure, plant, equipment and activities.

Any such work is subject to the need for management of any historical heritage resources and values that might suffer impact in consequence of the project. The collective works involved in the project are referred to in this report as 'the project works'.

This report documents the archaeological and heritage study and analysis of the study area, according to standardised criteria by reference to:

- the determinable material evidence of its past and present archaeology and historical heritage; and
- its collective values as components of the historic heritage of the study area and its locality.

The report does not address the potential of the study area as a resource for Aboriginal cultural heritage.

1.1 Objectives of the Study

Historical material relating to the development and evolving use of the study area is relatively diverse and episodic. This study integrated the results of investigation of the archaeological and historical records and the physical evidence of the study area. The principal objectives of the study were to identify, evaluate and propose appropriate management protocols for material cultural evidence that may be located on the study area and/or at some risk from direct or peripheral effects of the development.

Within the framework of this general objective, the study was undertaken on the basis that it may identify archaeological resources within, and provide insights into the development of, the study area and its occupational and social fabric (if any) that are not available from the historical record. In abstract, archaeological interpretation of the study area individually, and collectively/comparatively with other archaeological and historical studies, may advance the pursuit of such relevant themes as:

- the socio-economic development and use of land and resources in remote locations during the late 19th and the 20th Centuries (the period);
- the social component of working in a location, originally remote from close settlement, during the period;
- the original technology and evolution of any industrial undertaking(s) within the study area during the period;
- the relationship between any industrial undertaking, population, effective land-use and external economic forces; and
- in respect of all of the above, the different emphases and inferences that may attach to the historical phases of use/occupation/development of the study area.

Within this context, this study makes an evaluation of the cultural significance of any archaeological resource of the study area. After reviewing issues and options for management, recommendations are made about the management of the archaeological and heritage values of the study area and its environs, and about the impact on heritage values of the project.

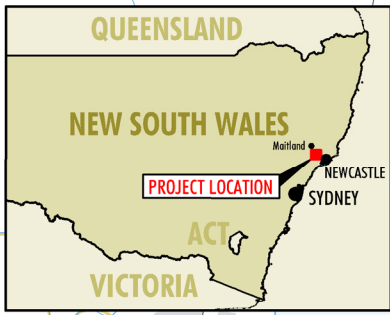
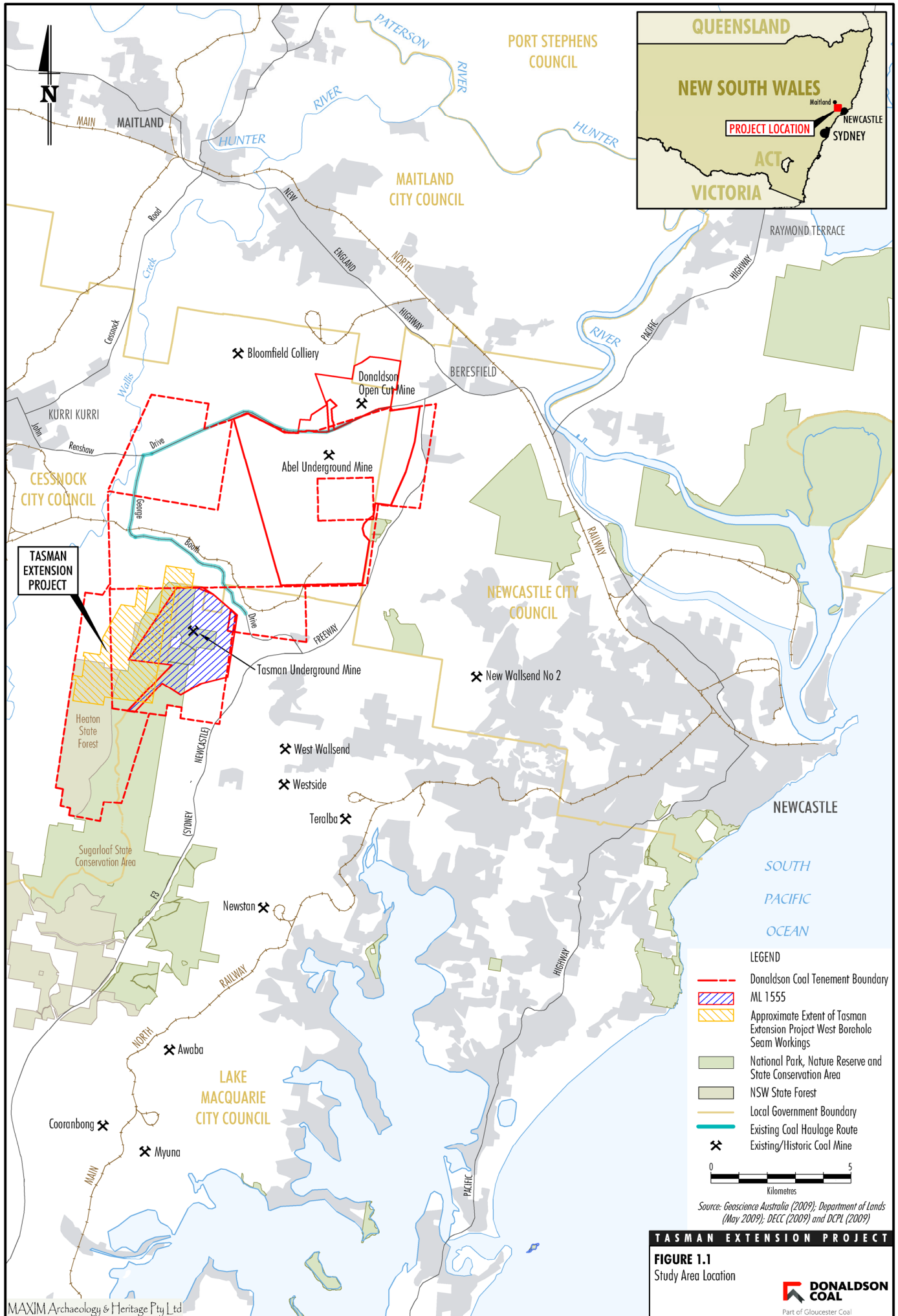
1.2 Location of the Study Area

The study area is located in the locality of Mt Sugarloaf, approximately 2.5 kilometres from the township of Seahampton, New South Wales. The study area lies west of the town and is accessible from George Booth Drive.

Other relevant information about the location of the study area is shown in **Table 1.1**.

Table 1.1 - Location Data

Topographic Map Sheet	92323-S Wallsend
Parishes	Teralba, Stockrington and Mulbring
County	Northumberland
Local Government Area	Cities of Cessnock and Lake Macquarie



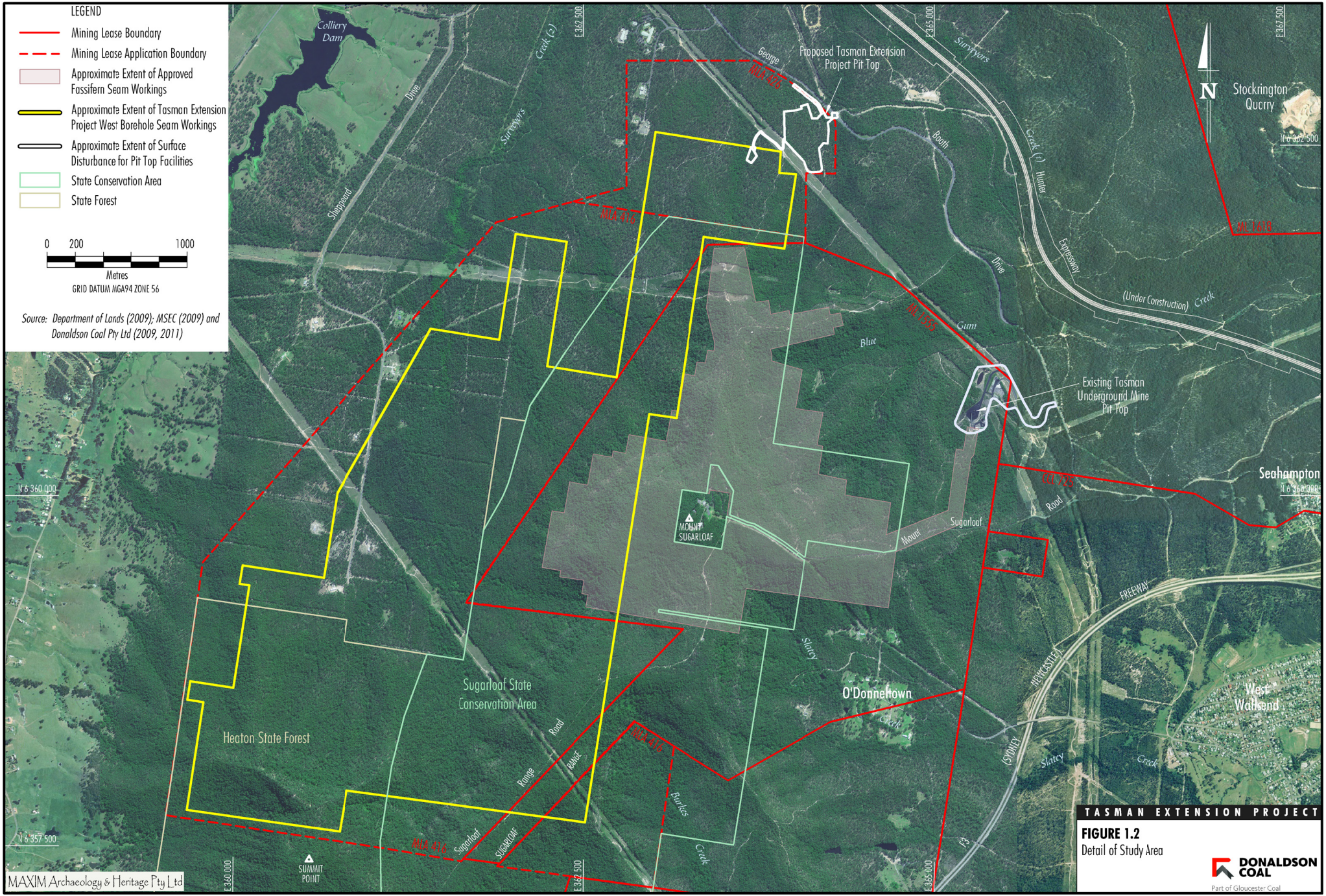
- LEGEND**
- Donaldson Coal Tenement Boundary
 - ▨ ML 1555
 - ▨ Approximate Extent of Tasman Extension Project West Borehole Seam Workings
 - National Park, Nature Reserve and State Conservation Area
 - NSW State Forest
 - Local Government Boundary
 - Existing Coal Haulage Route
 - ✕ Existing/Historic Coal Mine
- 0 5
Kilometres

Source: Geoscience Australia (2009); Department of Lands (May 2009); DECC (2009) and DCPL (2009)

TASMAN EXTENSION PROJECT

FIGURE 1.1
Study Area Location





LEGEND

- Mining Lease Boundary
- - - Mining Lease Application Boundary
- Approximate Extent of Approved Fossiliferous Seam Workings
- Approximate Extent of Tasman Extension Project West Borehole Seam Workings
- Approximate Extent of Surface Disturbance for Pit Top Facilities
- State Conservation Area
- State Forest

0 200 1000
Metres
GRID DATUM NGA94 ZONE 56

Source: Department of Lands (2009); MSEC (2009) and Donaldson Coal Pty Ltd (2009, 2011)

TASMAN EXTENSION PROJECT
FIGURE 1.2
 Detail of Study Area



Part of Gloucester Coal

The regional location of the study area is shown on **Figure 1.1** and the study area is defined in **Figure 1.2**.

1.3 Methodology and Reporting

This study and analysis has been undertaken broadly within the framework of the *NSW Heritage Manual* of the Heritage Office and the Department of Infrastructure, Planning, and Natural Resources, NSW. The sequential steps of the study have been as follows:

- the relevant context of the study area has been researched and analysed:
 - the archaeological and historical records of the study area have been researched, with particular attention to dominant aspects of its post-contact occupation and land use. Research results are abstracted in **Sections 2.2** and **2.3** respectively,
 - the physical context of the study area has been determined by field survey, with particular attention for previously identified elements. The observations made during field survey were recorded by field notes and the results are presented in **Section 2.4**, and
 - on the basis of a synthesis of the elements of context, a predictive model of distribution has been developed. As a reflection of the predictive model of distribution, the curtilage of the study area has been determined and its sensitivity has been zoned into areas of high, moderate and low archaeological potential. The curtilage and zoning of the study area is defined and planned in **Section 2.5**;
- the heritage values of the study area have been defined in **Section 3**, in the following terms:
 - the cultural significance of the archaeological and heritage resource has been assessed and a formal statement of cultural significance is contained in **Section 3.2**;
 - the anticipated physical impact has been stated and a formal Statement of Heritage Impact made in **Section 3.3**;
- management of the heritage values of the study area, in the light of the project, has been addressed in detail in **Section 4**, by reference to:
 - the issues that have been raised for management (**Section 4.1**);
 - the options for management of the archaeological resource and its values (**Section 4.2**)
 - the research questions that should be directed to the study area in the course of management of the archaeological resource (**Section 4.3**);
 - recommendation for the management of the archaeological resource (**Section 4.4**).

1.4 Study Personnel

Paul Rheinberger, Principal Archaeologist, Maxim, conducted the research of the archaeological and physical contexts and the review and research of the historical context for this assessment. He wrote this report, which has been reviewed by Ross Gam, Senior Archaeologist, Maxim.

2.0 CONTEXT OF THE STUDY AREA

2.1 *The Concept of Context*

Archaeology exists within context: that is to say that the material evidence that is the target of archaeological study can only be properly understood in terms of those factors that have contributed to its creation, introduction to a site, use or function, deposition, survival, stratigraphy and exposure. In this environment, material evidence derives meaning particular to its site or location and similarly contributes enhanced meaning to and understanding of its site by complementing the oral or archival record. It is convenient to address the context of a study area in terms of its archaeological context (see **Section 2.2**), historical context (see **Section 2.3**) and physical context (see **Section 2.4**), where the first two headings indicate documentary research and review of previous archaeological and historical studies. The latter refers to the attributes identified in the course of physical inspection of the site.

The integration of the archaeological, historical and physical components of context assists in determining the area within which it is anticipated that archaeological sensitivity may exist. The study area may then be zoned accordingly using a three-level definition of sensitivity to assist in the determination of the extent of the curtilage of a place or relic (see **Section 2.5**).

2.2 *Archaeological Context*

The historical archaeology and historical cultural heritage values of the study area appears not to have been previously studied in detail, although the surrounding area was undoubtedly reconnoitred in the course of the heritage studies for:

- the Lake Macquarie City Heritage Study as part of the Draft Lake Macquarie Local Environmental Plan process (the Lake Macquarie LEP);
- the Cessnock Local Environmental Plan (2011) (the Cessnock LEP);
- and because the Cessnock LEP has zoned as 'deferred matter' some areas addressed under the Cessnock LEP (1989), the latter (the Cessnock LEP 1989);
- the Hunter Regional Environmental Plan (Heritage) (the REP); and
- has been studied in connection with the preparation of an Environmental Impact Statement and subsequent drilling programs for the existing Tasman Underground Mine.

Searches were routinely made of the Register of the National Estate (by local government area), the State Heritage Register and Inventory (by local government area), the Register of the National Trust (NSW) (by localities), the REP (by localities) and the LEPs. None of these resources recorded any site or heritage resource in close proximity to the study area.

Search of the Lake Macquarie LEP was undertaken under the geographical definitions of Killingworth, Seahampton and West Wallsend and within the 'Railways and Tramways' definition. The nearest recorded heritage elements in this LEP, with their respective schedule identifiers in brackets, appeared to be the following:

- (SH04) – the site of the former (now demolished) Seaham Colliery, Seahampton, ≈2.5 km south-east of the study area;
- (SH05) – Seahampton village, ≈2.5 km south-east of the study area;

- (SH03) – possibly the site of the first West Wallsend Rifle Range, the location of which has not been determined;
- (WW00) – West Wallsend Conservation Area comprising the township of West Wallsend and incorporating nearly 50 individual heritage items, centred ≈3.5 km south-east by south of the study area;
- (WW01) – Johnson Park, off Laidley Street West Wallsend, the home of the West Wallsend Football Club, ≈3.5 km south-east by south of the study area;
- (WW03) – the site of West Wallsend Colliery, containing substantial above-ground residual material evidence of surface infrastructure, off Wilson Street West Wallsend, ≈3.5 km south-east by south of the study area;
- (WW47) – the site of Mount Sugarloaf No 1 Colliery, containing substantial above-ground residual material evidence of surface infrastructure, ≈1.5 km south-west by south of the study area;
- (WW48) – the site of Joseph Holmes Tunnel mine on Mount Sugarloaf, ≈2.0 km south-west by south of the study area;
- (WW51) – the site of the abandoned/largely demolished village of Ladysmith, west of Ladysmith Road West Wallsend, represented by some above ground material, wells and landform components, ≈3.0 km south-east by south of the study area; and
- (RT09) – the residue of the permanent way of the 'Seahampton-West Wallsend-Fairley- Killingworth' Railway, at its closest point ≈2.5 km south-east of the study area.

Search of the Cessnock LEP was undertaken *in toto*. The nearest recorded heritage element in this LEP, with its schedule identifier in brackets, appeared to be the following:

- (I214) – Richmond Vale Railway: Multiple lots and locations, assessed as of State significance and, at its closest point ≈500m distant from the north-eastern corner of the study area; and
- otherwise, no other resource was located closer than at Mulbring, Mount Vincent and Richmond Vale villages/localities.

Search of the Cessnock LEP 1989 was also undertaken under *in toto*. The nearest recorded heritage element in this LEP, with its schedule identifier in brackets, appeared to be (again) the following, under the heading 'Areas, Complex and Group Listings':

- (I212) – Richmond Vale Railway (Cessnock LGA part 1340135): Multiple lots and locations... assessed as of State significance and, at its closest point ≈500m distant from the north-eastern corner of the study area.
- otherwise, no other resource was located closer than at Mulbring, Mount Vincent and Richmond Vale villages/localities.

The REP recorded no sites or heritage resources in the vicinity of the study area.

Research of:

- the Register of the National Estate maintained by the Australian Heritage Commission;

- the State Heritage Register and State Heritage Inventory maintained by the Heritage Council; and
- the Register of the National Trust (NSW);

revealed no recording of sites, localities or resources not identified in either the Lake Macquarie or Cessnock LEPs.

The locality enclosing the study area from north through east to south was addressed in the writer's previous studies, particularly in 2002¹. Reference is made to that report in the following section.

2.3 *Historical Context*

The historical research of the use, occupation and development of the study area has been limited specifically to those contexts that have a direct relationship to archaeological study and the evaluation of historic heritage of the study area. Observations on the social and industrial development of the study area and its surrounding district have been drawn from historical Parish Maps, relevant Crown Grants, regional mining maps and mine record tracings, and the very limited material available from local histories.

More than half of the surface of the study area is located within either the Heaton State Forest or the Sugarloaf State Conservation Area.

The land on which the study area is located was originally comprised partly in:

- portions of land granted to William Austin Horn in or about 1890, in Parishes Teralba and Stockrington;
- a small portion of 50 acres taken up by John McManus under CP 21/4 (10 June 1921) comprised in Portion 110, Parish Teralba. The land was taken up in virtue of a mining lease; and
- Portion 11 Parish Stockrington, taken up by William Mathews, date and title not disclosed on parish records. The land was taken for mining purposes by J & A Brown for the extension of Seaham Colliery.

and to a greater extent in the combination of the Heaton State Forest and the Sugarloaf State Conservation Area (see **Figure 1.2**). In particular, the minor projection of the study area into the Parish of Mulbring is wholly contained within the Heaton State Forest, which traces its history from the first years of the 20th Century.

Details of historic private holdings in the Parishes of Teralba and Stockrington are shown in **Table 3.1** (overleaf). There appear to be no private holdings relevant in the Parish of Mulbring.

¹ Rheinberger (Umwelt), 2002.

Table 3.1 - Private Holdings, Parishes Teralba & Stockrington

Parish	Portion	Area	Grant Particulars and Other Detail	Sold to/ Date of Disposal
Teralba	53	640a ex rd	Horn 1300/192, former MCP 82/2 of Mary P Lane (15/6/1882), includes site of future village of Seahampton	Various allotments in DP 3603 (village of Seahampton) to various purchasers; December 1899 to August 1901; residue not searched CT1407/185
Teralba	64	475a ex rd	Horn 1418/44	Seaham Colliery Company Limited, 8 August 1905
Teralba	66	250a, ex road and trig station reserve	Horn 1418/45, includes Mount Sugarloaf peak and reservation for Mount Sugarloaf Trig	Seaham Colliery Company Limited, 8 August 1905
Teralba	110	50a	McManus CP 21/4	lapsed
Teralba	95	200a	Horn 1418/46	Seaham Colliery Company Limited, 8 August 1905
Teralba	96	437a 1r, ex rd and Por 67	Horn 1418/47	Seaham Colliery Company Limited, 8 August 1905
Teralba	104	138a 2r	Horn 1418/48	Seaham Colliery Company Limited, 8 August 1905
Stockrington	87	320a	Horn 1418/115	J, W & S Brown, 7 April 1904
Stockrington	11	1280a	Mathews	J & A Brown, nd

Horn's holdings amounted to nearly 4050 acres, but histories of the locality do not appear to mention him, his family or his affiliations, and/or activities. Inquiries of local and oral historians concerning Horn's identity and undertaking have been similarly fruitless to date. Crown Grants indicate that he was a resident of Adelaide, South Australia, at the time of the issue of these documents, and he appears likely to have been a speculative absentee landowner. However, the time at which grants were made to him lies well after the high period of absentee pastoralism and his interest was almost certainly in mining. The grants were all expressed to have been made in virtue of prior-existing 'Conditional Purchases for the Purpose of Mining Other than Gold Mining'².

From a pastoral point of view, much of Horn's land, and the small area of Mathews' involved here, would have been less than attractive other than for open range grazing of dry cattle. It will be noted that Portions 64, 66, 95, 96 and 104 take in the greater part of the slopes of Mount Sugarloaf on the northern through eastern to south-eastern side, and the Mount Sugarloaf trig station and peak is located on a reservation within Portion 66. Much of the land is steeply undulating to steep and would have been heavily covered in old-growth

² Extracted from Crown Grant searches

timber until perhaps the late 19th/early 20th Century. The principal activity on Horn's land may well have been related to timber. Timber-getting had been a staple industry of the small West Wallsend and Ladysmith communities since the Lord family in the 1860s-70s, and possibly as early as the 1850s. A particular interest was in pit-propping for the Newcastle and Wallsend mines. With the opening of the West Wallsend, Killingworth, Seahampton and Mount Sugarloaf mines from 1885, pit-propping became more concentrated for the latter 19th and first half of the 20th Century.

Having regard to the area held by Horn and the topography of his holdings, it seems very unlikely that any substantial residential or occupational developments would have been established on the study area. On balance, it seems more likely that any possible residential, farmstead and/or perhaps milling development for his holding would have centred in the southerly area, perhaps Portion 96. This portion had the advantages of relative proximity to the growing town of West Wallsend (first surveyed 1885), and to the private (ephemeral) village of O'Donnelltown apparently on Portion 67. Portion 67, of 60 acres, was surrounded by Portion 96 and was granted to Richard O'Donnell by Crown Grant Volume 773 Folio 204, probably about 1870. No subdivision was recorded on the Parish Map of 1897 but six lots had been subdivided by 1903. Portion 96, very practically, was also served by the permanent waters of Flaggy Creek. Prior to 1897, a road already existed that linked Portion 96 with West Wallsend village³.

Horn's appointment of different attorneys under power from 1899 to 1905, as disclosed in registered material on grants, throws into question the motivation for Horn's association with the land and district. His attorneys all appear to have been Adelaide solicitors and the clear suggestion is that Horn was not available to sign transfer documents in Adelaide and that he may not have been in Australia during this period.

McManus did not ever intend his (lapsed) Conditional Purchase for other than mining which appears to have been abortive so that it is unlikely that material evidence remains of any activity on this parcel.

Reviews of:

- i. Parish Mapping revealed one resource that apparently has not been previously identified in archaeological reviews of the resources of Lake Macquarie City. The permanent way of the Richmond Vale Railway dips southerly out of Parish Stockrington and passes through the northern part of Portions 53 and 63, Parish Teralba. The railway appears to be ≈1.0 km east of the study area at this point; and
- ii. Maps and tracings maintained by the Department of Primary Industries confirmed the location of the surface facilities of the following historical mine workings, none of which are closer than one kilometre to the study area:
 - from the Newcastle Workings Map, Parish Teralba:
 - Seaham No 1 Colliery [*Shaft, sub-surface workings on DMR RT.299*];
 - West Wallsend Colliery [*Shaft, sub-surface workings on DMR RT.220*]; and
 - Mount Sugarloaf Colliery, Nos 1 and 2 portals [*both tunnels, sub-surface workings on DMR RT.618*].
 - from the Newcastle Workings Map, Parish Stockrington: Stockrington No 2 Colliery [*Shaft, sub-surface workings on DMR RT.438*].

³ Parish Mapping

2.4 *Physical Context*

2.4.1 *Methodology*

The assessment of physical context results from observations made in the course of a physical archaeological surface survey of the study area. The study area was readily accessible by road:

- in the area designated for development of surface facilities, mobilisation was relatively unrestricted and visibility was good; and
- in the balance of the study area, where surface impact is unlikely in any event, mobilisation was restricted by vegetation although access to discrete areas was available from the Company's property roads and fire trails.

The survey was undertaken of the study area, with a particular emphasis on the area proposed for surface re-development. In general, the survey sought to identify and make a preliminary interpretation of material evidence of the former operations and occupation of the study area:

- > structures and/or the remains of structures or demolition material;
- signs of ground disturbance that might be associated with non-indigenous settlement and/or industrial activity, such as site levelling for buildings or infrastructure and the like;
- artefacts or the indication of the possible presence of artefacts that might have an association with the former use(s) or application(s) of the study area;
- non-building structural modifications on the ground, such as, fencing and yards or their residue; and
- features of landscape that may have an operational or spatial relationship with known or suspected non-indigenous activity on the study area;

...(nominally) in respect of any investigations leading to the discovery of material evidence, in respect of the latter to prepare preliminary site plan(s)/elevation(s) and a preliminary photographic record of its/their salient features.

2.4.2 *Results of Field Surveys*

Surface survey of the study area identified no individual or collective elements associated with former historical activities at/on the study area.

The only location carrying a distinctive historical cultural significance was located just outside the study area close to Mount Sugarloaf at an area locally known as Summit Point. The history of a cairn of stones, now no longer carrying any identifying memorial, is told in the following extract from the National Police Memorial:

*Sergeant 3rd Class Keith Alfred HAYDON
Mount Sugarloaf NSW
24 November 1980
Touchstone Location on Memorial:*

"About 12.20pm on 24 November 1980 Sergeant Haydon drove to Mount Sugarloaf following a report of shots being fired on the mountain. The Sergeant did not know at the time that the person firing the shots was wanted for a double murder at Bondi a few years earlier. When Sergeant Haydon located and confronted the offender he was shot to death. Police were quickly informed of the situation by members of the public who had found the Sergeant's body. A description of a suspect vehicle was then broadcast by Police Radio. A short time later the vehicle was spotted by Constable George Pietruszka of Beresfield Police. Due to confusing and continual radio transmissions (relating to the Sergeant's murder) and despite many attempts to do so, Constable Pietruszka was unable to ascertain the reason for the alert on the suspect vehicle. Having little choice in the matter the Constable stopped the vehicle and spoke to the driver. Constable Pietruszka was then also shot in the stomach and seriously wounded.

Sergeant Haydon was born in 1943 and joined the New South Wales Police Force on 24 February 1964. At the time of his death he was stationed at West Wallsend."

While this site is one of particular social significance, it is not listed under any relevant registers (**Section 2.2**). In addition, this site is located outside the study area and therefore has not been considered any further in this assessment.

2.5 Summary of Context, Curtilage & Heritage Zoning

On the balance of data disclosed by study of the three levels of context – archaeological, historical and physical - there is no evidence to suggest that the study area possesses any elements of historical cultural heritage.

In the result, the failure of identification of any historical cultural element(s) or values attaching to the study area makes unnecessary the definition of a heritage curtilage and/or zoning scheme.

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3.0 THE HERITAGE VALUES OF THE STUDY AREA

3.1 Introduction

Fundamental to any consideration of the cultural heritage values of a non-Indigenous place or thing (a 'relic' – see below) is an appreciation of the impact of the *Heritage Act, 1977* (NSW – the Act) which defines heritage items to be:

*Those buildings, works, relics or places of historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic **significance** for the state of New South Wales. [Our emphasis]*

and defines a relic falling within that definition to be:

... any deposit, artefact, object or material evidence that:

- a) *relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and*
- b) *is of State or local heritage significance.*

Essentially, the evaluation of the heritage values of a relic depend upon the assessment of its significance, the level of its condition and integrity and, as a corollary, the potential it may possess to expand the existing level of knowledge. An appreciation of these factors qualifies the proper estimation of the impact that any disturbance, damage or destruction may have on such heritage values.

These aspects are dealt with in this section as follows:

- the question of significance in relation to the study area is discussed shortly in **Section 3.2**;
- the physical impacts that are foreseen to affect the study area and the consequent heritage impacts are determined in the Heritage Impact Statement contained in **Section 3.3**.

3.2 Assessment of Significance

Given that the study of the study area in terms of its three context element – archaeological, historical and physical – has identified no material evidence or suggestion of the likelihood of material evidence, the question of the cultural heritage values and technical significance does not arise for assessment.

3.3 Physical and Heritage Impact

3.3.1 Summary of Physical Impact

The project is likely to have the following maximum physical impact(s) on the study area:

- excavation and/or filling of the surface/sub-surface for the surface facilities of an underground coal mine, construction of buildings and industrial structures, access roads,

vehicle loading, manoeuvring and parking areas in association with the operation of such a mine;

- excavation for footings for, and construction/installation of buildings, plant equipment and services;
- soil movement, filling and landscaping of peripheral areas of the study area;
- the movement of machinery, vehicle and workers across the exposed surface of the study area in the construction process; and
- possible subsidence movements associated with extraction of coal as part of the underground mine.

The footprint and incidents of the projected development are shown collectively on **Figure 1.2**.

The cumulative impact of development might cause disturbance, damage or destruction of any residual material evidence and/or artefacts that might have been located in the sub-surface of the study area. There is no reason to expect any such material evidence.

3.3.2 Statement of Heritage Impact

This Statement of Heritage Impact forms part of this report and is made in respect of the study area defined in **Section 1** of this report. The statement addresses the study area and its components in terms of the research and findings documented in **Section 2**.

Having regard to the absence of any material evidence bearing cultural significance and/or historical cultural heritage values, the practical effect of the proposed development clearly appears to be that there will be no impact upon heritage values either in the study area or in the locality.

4.0 HERITAGE MANAGEMENT

4.1 *Heritage Management Issues*

Ideally, culturally significant archaeological resources might be conserved *in situ* within the framework of the Burra Charter. Such a course is frequently impossible or impractical and questions are posed by the conflicting claims of cultural heritage on the one hand and progress and development on the other. Relevant to the concurrent questions of site conservation and site management/usage are the following matters:

- *heritage legislation*, the major implications of which are summarised in **Table 4.1**. In particular this summary addresses the implications of the *Heritage Act 1977 (NSW)* and the *Environmental Planning and Assessment Act 1979 (NSW)*;

Table 4.1 - A Summary of Statutory Provisions (NSW)

The <i>Heritage Act, 1977 (NSW – the Act)</i> ...	<p>...provides for the protection of historic heritage and provides the process and criteria for listing of heritage deposits and/or relics that are of State significance on the State Heritage Register and those that are of Local significance on the State Heritage Inventory. Archaeological sensitivity and the potential for heritage value may be indicated by historical research and/or site-based archaeological study. Where historical research and/or archaeological study indicates sensitivity, the discovery of relics is highly likely if the ground surface is disturbed. Definitions in ss4 and 4A of the Act that are relevant for present considerations have been stated in Section 3.1 above.</p> <p>The Act further provides statutory protection from disturbance/destruction of sites and relics in a range of descriptions (ss.24-34, 35A-55B, 130, 136-7, 139) and for their registration or listing (ss.26(2)(b), 35A,36,37, 44). In particular, it provides that no disturbance or excavation may proceed that may expose or discover relics except with an excavation permit, and that an excavation permit is required, if a relic is:</p> <ul style="list-style-type: none"> • listed on the State Heritage Register, pursuant to s60; and • not listed on the State Heritage Register, pursuant to s140. <p>It must be noted, however, that state Significant Developments, such as the project, are exempt from the above requirements pursuant to s89J of the <i>Environmental Planning and Assessment Act 1979 (NSW)</i>.</p>
The <i>Environmental Planning and Assessment Act 1979 (NSW)</i> ...	contains similar protective measures to those contained in the <i>Heritage Act</i> . The act also provides for sites to be in Local and Regional Environmental Plans, as sites in development control plans or subject to development controls and/or as subject to planning controls or additional conservation provisions (ss.24-72, 76).

- the assessments of **cultural significance**, and **condition and integrity** of archaeological resources respectively contained in **Section 2.2** of this document;
- the anticipated **physical impact** of the project on the study area, and the consequent **Statement of Heritage Impact**, contained **Section 3.3** of this document.

4.2 Options for Site Management

The options for conservation management theoretically available to address the issues raised in the preceding sub-section range from taking no conservation management action to preserving all elements of archaeological resource *in situ*:

Option 1: Taking no conservation management action would (theoretically) allow development to proceed unobstructed but would almost certainly result in the destruction or irretrievable modification of any archaeological/heritage resource. In that the archaeological resource is non-renewable, such an option might result in the loss not only of the archaeological resource but also of the opportunity of recording and interpreting the resource and thereby preserving:

- for future study, an opportunity to incorporate data about the resource into further studies;
- the present and future, a tangible account of the heritage values of the study area.

In present circumstances, this option is considered appropriate, because appropriate study of the total context of the study area indicate the apparent absence of historical material evidence and/or heritage values.

Option 2: Preserving all elements of the archaeological resource would, on the other hand, restrict or prevent any modification or the destruction of the resource and thereby secure the archaeology at the expense of the projected re-development, in an environment where the existence and implications of any such resource would not be properly investigated, evaluated or recorded.

In present circumstances, this option is considered inappropriate, because of the apparent absence of historical material evidence and/or heritage values.

Option 3: Alternative courses lie in:

1. **varying (where necessary) projected or future development** to minimise impact on the archaeological resource; and/or
2. **detailed archaeological investigation** with or without excavation, of any part of the resource that has the potential to be disturbed, damaged or destroyed by development; and/or
3. **archaeological monitoring** concurrent with the development process; and/or
4. **archival recording**, by plane survey, text, plan and elevation drawings, and photography; or
5. **any appropriate combination of the above.**

The result of such alternative courses would be that either elements of the archaeological resource would be conserved or that those modified or destroyed would be fully and appropriately recorded and the nett loss in heritage values would be minimised.

In the present circumstances, an alternative course is considered an appropriate management addendum, involving:

- **maintaining an appropriately experienced archaeologist on call; and**

- **in the event that industrial modification of the surface of the study area exposes any unforeseen historical material evidence, engaging the archaeologist for site assessment and thereafter, and as necessary:**
 - **reporting the exposure to the appropriate authorities;**
 - **complying with the directions of the appropriate authorities; and**
 - **at least, undertaking the combination of alternatives 2, 3, and 4. above, with appropriate reporting**

4.3 *Research Questions*

The apparent absence of historical material evidence and heritage values renders unnecessary/ unworkable the formulation of research questions.

4.4 *Recommendations*

The following criteria for the management of the heritage values, research and/or further investigation of the study area have been made on the basis of:

- the synthesis of archaeological, historical and physical contexts of the study area; and
- appreciation of the actual and heritage impacts of the proposed development; and
- acknowledgement of the issues and options for management of the resource.

It is recommended that:

1. In general, in connection with the development, the attention of the developer and all contractors, sub-contractors and employees is directed to the provisions of the *Heritage Act 1977 (NSW)* and in particular to:

- i. the definition of relic under that Act;
- ii. the provisions of sections 24-34, 35A-59, 130, 136-7 139 and 146 of that Act;
- iii. the requirement for, and the conditions that may attach to, a grant of an Excavation Permit under s60 of the Act in respect of a site that is registered on the State Heritage Register; and/or s140 of the Act in respect of a site that is not so registered.
- iv. the basic requirements that if:
 - a. a relic is suspected, or there are reasonable grounds to suspect a relic in ground, that is likely to be disturbed damaged or destroyed by excavation; and/or
 - b. any relic is discovered in the course of excavation that will be disturbed, damaged or destroyed by further excavation;

the developer must notify the NSW Heritage Branch of the Office of Environment and Heritage (the Branch) or its delegate and suspend work that might have the effect of disturbing, damaging or destroying such relic until the requirements of the Branch have been satisfied.

2. In the planning of the project, the Company should provide time and resources for the completion of any heritage recording, investigation and study recommended below.
3. During the process of any future modification of the study area, the Company should maintain an appropriately experienced archaeologist on call to attend the site in the event that any unforeseen historical material evidence is exposed or suspected. Upon the exposure or suspicion arising, the archaeologist should attend the site to advise the Company on its appropriate course of action, which may involve:
 - i. notification of appropriate authorities;
 - ii. preparation of a formal assessment and/or research design;
 - iii. compliance with the directions of the relevant authorities;
 - iv. activities such as archival recording, monitoring and archaeological excavation; and
 - v. reporting of archaeological intervention.

Copies of any reports and all photography, plans, elevations and drawings will be provided to the Company, and to the Branch, the NSW State Library, Cessnock and Lake Macquarie Council and the local history section of their Libraries.

4. Otherwise than as above, on the grounds of the historical archaeology of the study area, there appears to be no reason for further constraint or modification of the project works.

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