

A GUIDE TO THE CONSERVATION
AND MANAGEMENT OF
HISTORICAL HERITAGE ITEMS,
CADIA VALLEY OPERATIONS,
NEAR ORANGE,
N.S.W.



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Archaeology • History • & Heritage

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FREQUENTLY ASKED QUESTIONS (FAQ) ON MANAGEMENT OF HERITAGE ITEMS.

When will heritage issues arise at Cadia Valley Operations?

Basically any activity or project that requires the preparation of an Environmental Impact Permit (EIP) will also potentially include heritage issues.

Heritage issues may include both items relating to historical settlement or industry or to prehistoric Aboriginal settlement.

This report is limited in scope to items of historical heritage.

Separate reports and assessments have been produced for items of Aboriginal heritage and should be consulted for the conservation and management of Aboriginal sites.

At this stage this scope of this report does not include specific procedures for heritage items in areas outside the mining leases.

Is an excavation permit (Heritage Act, 1977, as amended) required for minor works?

Cadia Valley Operations obtained an excavation permit for the monitoring of minor works and archival recording in 1997. Where the term “excavation director” or “archaeologist” is used in this report, it specifically refers to the archaeologist nominated on the 1997 permit approval or other permit approved by the NSW Heritage Office covering archaeological excavations at Cadia.

Most minor works, which have the potential to disturb heritage items can be undertaken under the conditions of this excavation permit.

This excavation permit:

1. is limited in its area of application (See Section 8 and Figure 8.1).
2. excludes works in the Cadia Engine House (SHR) Listing.

Minor works in areas not covered by the 1997 excavation permit will require separate approval in most cases.

Works within the Cadia Engine House (SHR) Listing will likewise require separate approval under s.60 of the Heritage Act.

Are major projects covered by the 1997 excavation permit?

Major works are specifically excluded from the scope of the 1997 excavation permit.

Major projects will require separate approval under the Heritage Act.

How are heritage issues addressed?

The Environmental Impact Permit (EIP) system requires liaison with the Environment Department on all issues.

The Environment Department will liaise with the excavation director / archaeologist on issues relating to the fulfilment of the conditions of the 1997 excavation permit or on other heritage issues.

What are the procedures for heritage items?

This report is intended to define a clear path through heritage management and conservation issues, in order to comply with regulatory requirements.

Sections 7 onwards of this report relate to conservation and management procedures. Unless you are interested in background information, Section 7 is the best place to commence the resolution of heritage issues. A checklist is also provided in the next section to take you through these procedures.

Where can I find background information?

Sections 1 to 6 of the report cover background material:

Section. 1. Introduction.

Section 2. Conservation and management documents – sources.

The primary conservation management documents relating to Cadia Valley Operations.

Section 3. Historical Background.

A summary of the historical development of the mines, village and rural landscape.

Section 4. Historical and archaeological assessment – sources.

List of reports providing detailed historical research, archaeological site survey and significance assessment.

Section 5. Mining and other development.

Map of the extent to which the landscape has been changed by mining and other development and its impact on heritage items.

Section 6. Management and conservation of heritage items.

Map showing the three zones for heritage management at Cadia.

A list of archaeological and heritage reports on Cadia is located in Appendix 1.

CHECKLIST FOR HERITAGE PROCEDURES.

The following checklist briefly summarises the procedures for activities and projects, which may involve the disturbance of heritage items.

This report does not include conservation and management procedures for items of Aboriginal heritage. Separate reports have been produced for Aboriginal sites.

This report assumes that all activities and projects likely to disturb heritage items will require the preparation of an Environmental Impact Permit (EIP).

Task	Completed
<p>1. Find the general location of the proposed activity or project on the maps provided in this report (see Figure 2.1 in Section 2).</p> <p>At present this report only covers procedures for activities and projects within the mining leases shown in Figure 2.1 in Section 2.</p>	
<p>2. Determine the zone in which the proposed activity or project is located (see Figure 6.1. in Section).</p> <p>Heritage management and conservation at Cadia is divided into a number of Zones, as indicated in Figure 6.1. in Section 6.</p> <p>The proposed activity or project should be located in either: Zone 1. Ridgeway. Zone 2. Cadia, or Zone 3. Cadia South.</p> <p>The Cadia Engine House is located in Zone 2, but is treated as a separate item, because of different heritage procedures in the State Heritage Register (SHR) Listing. See Section 9.4, Section 12, together with Figure 12.1.</p>	

Task	Completed
<p>3. Go to the relevant plans for each zone and determine whether or not the proposed activity or project will have an impact on any known heritage items.</p> <p>Maps of the heritage items in each zone are located in various sections, as follows: Section 10 and Figure 10.1 for Zone 1. Ridgeway. Section 11 and Figure 11.1 for Zone 2. Cadia. Section 12 and Figure 12.1 for the Cadia Engine House (SHR) Listing. Section 13 and Figure 13.1 for Zone 3. Cadia South.</p> <p>Some heritage items are not visible on the ground and may not be easily recognised. The item should first be located on the zone maps and then located on the ground.</p>	
<p>4. The Cadia Engine House (SHR) Listing is located in Zone 2, but is treated as a separate item, because of different heritage procedures in the State Heritage Register (SHR) Listing.</p> <p>If the proposed activity or project is located within the Cadia Engine House (SHR) Listing, refer to Sections 7, 8, 9.4 and 12.</p> <p>The remainder of this checklist excludes activities and projects in the Cadia Engine House (SHR) Listing.</p>	
<p>5. Read through Section 7 of this report.</p>	
<p>6. If the answer to any of the following questions is <i>yes</i> or <i>unsure</i>, then heritage procedures should be undertaken.</p> <ol style="list-style-type: none">1. Is the activity located within 10 metres of a heritage item?2. Is the activity located in a heritage area?3. Will the activity temporarily or permanently change the historical setting of a heritage item or the appearance of the landscape in the vicinity of a heritage item?4. Can the proposed activity or project be seen from a heritage item, or vice versa?5. Will the activity be visible in views of the Cadia Engine House from other parts of Cadia Valley?6. Will the activity physically impact on a heritage item?	

Task	Completed
<p>7. If it is determined in Task 6 above that there will be no visual or physical impact on any heritage item, then the heritage procedure is completed for minor works within the mining leases shown in Figure 2.1 in Section 2.</p> <p>Obtain sign off on heritage issues from the Environment Department and refer to Task 11 in this checklist.</p> <p>Where there are impacts on heritage items, proceed to the remaining tasks in this checklist.</p>	
<p>8. Determine whether the proposed activity or project can be defined as a minor work.</p> <p>To be considered as a minor work, the proposed activity or project should be covered by the conditions of the 1997 excavation permit.</p> <p>Section 8 and Figure 8.1 describes the coverage of the 1997 excavation permit and the various options if the proposed activity or project is excluded from coverage by the permit.</p> <p>If the proposed activity or project can be described as a minor work, then the procedures outlined in Section 9.1 should be completed.</p> <p>If the proposed activity or project is not covered by the conditions of the 1997 excavation permit, appropriate heritage procedures are described in Sections 9.2 onwards.</p>	
<p>9. In some cases a minor work will require procedures in addition to monitoring or archival recording. For those items requiring additional procedures, refer to the listings in each zone.</p> <p>Additional procedures for heritage items in each zone are located in: Section 10 and Figure 10.1 for Zone 1. Ridgeway. Section 11 and Figure 11.1 for Zone 2. Cadia. Section 13 and Figure 13.1 for Zone 3. Cadia South.</p> <p>Refer to Section 9.4 and Section 12 for procedures for the Cadia Engine House (SHR) Listing.</p>	
<p>10. Complete archaeological works as outlined in Section 9, as appropriate.</p>	

Task	Completed
11. Complete archaeological works as outlined in Sections 10-13, as appropriate. Section 10 and Figure 10.1 for Zone 1. Ridgeway. Section 11 and Figure 11.1 for Zone 2. Cadia. Section 13 and Figure 13.1 for Zone 3. Cadia South.	
12. Ensure that heritage items, located near to the proposed activities or projects are clearly recognised by all staff and employees. Ensure fencing and / or signage is erected to clearly define the extent of heritage items and their curtilage for the duration of the project or activity.	

GLOSSARY OF TERMS.

Archaeological investigation means all fieldwork undertaken by archaeologists. It can range from site survey, archival recording, the collection of relics or moveable items of heritage significance, archaeological monitoring, test-trenching to large scale area excavation. Where the term ‘archaeological investigation’ is used, it usually refers to more than one of the above activities, which will be defined whenever the term is used.

Archaeologist / excavation director. In this report the terms “archaeologist” and “excavation director” have a specific meaning. The “excavation director” is the archaeologist nominated on the excavation permit that applies to a particular project or area. The “archaeologist” is either the “excavation director” or a person under the direction of the “excavation director”.

1 INTRODUCTION.

1.1 Background.

This report was commissioned by Cadia Valley Operations in 2005.

1.2 Brief.

The purpose of this report is to provide a guide to the management and conservation of historical heritage items located within the mining leases at Cadia, worked by Cadia Valley Operations, Newcrest Mining Ltd.

At this stage this scope of this report does not include specific procedures for heritage items in areas outside the mining leases.

1.3 Location of site.

The study area is located on various parish portions, Parishes of Clarendon and Waldegrave, County of Bathurst and comprises the following mining leases, ML 1405, 1449, 1472 & 1481.

1.4 Heritage Listings.

The Cadia Engine House and surrounds are listed on the State Heritage Register (Blayney LGA) and the Cadia Copper Mine including Engine House and ruins is listed on the State Heritage Inventory (Cabonne LGA).¹

1.5 Study methodology and limitations.

This report is prepared as a guide to the current application of previous conservation management documents. It is therefore not prepared in accordance with standard guidelines for Conservation Management Plans.

This report is based on two principal conservation management documents:

Godden Mackay, Cadia Mining Project, Final Conservation Plan. Newcrest Mining Limited. 1995.

Heritage Management Consultants. *Appendix N. European Heritage Survey & Assessment*, in Resource Strategies. Ridgeway Project. Environmental Impact Statement. Cadia Holdings Pty Limited. 2000.

¹ Research of NSW Heritage Office Web Site.

Both these sources now require update or review, because of a number of factors, including progress in mine construction, changes to heritage legislation and advances in policies for the conservation and management of heritage sites.

The purpose of this guide is not to review or update these conservation management documents, but simply to provide a guide to their application to Cadia Valley Operations under present conditions.

1.6 Author identification.

This report was completed by Dr. Edward Higginbotham.

1.7 Acknowledgements.

The author would like to thank Mr. Greg Morris, Ms. Alex Reid and the Environmental Department at Cadia Valley Operations.

2 CONSERVATION AND MANAGEMENT DOCUMENTS – SOURCES.

A conservation management document has been prepared for each part of Cadia Valley Operations within the boundaries shown in Figure 2.1. The principal sources are listed below.

Cadia – ML. 1405 (yellow outline).

Godden Mackay, Cadia Mining Project, Final Conservation Plan. Newcrest Mining Limited. 1995.

Ridgeway – ML. 1449 & 1472 (blue outline – Ridgeway only).

Heritage Management Consultants. *Appendix N. European Heritage Survey & Assessment*, in Resource Strategies. Ridgeway Project. Environmental Impact Statement. Cadia Holdings Pty Limited. 2000.

The heritage assessment for Ridgeway was based upon:

Edward Higginbotham & Associates Pty Ltd. Historical and archaeological assessment of the Cadia Ridgeway Project on 'Tunbridge Wells', Four Mile Creek Road, Near Orange, N.S.W. Resource Strategies Pty Ltd. 1998.

Mining Leases – ML. 1449, 1472, un-numbered lease and ML. 1481 (blue and pink outlines).

Heritage Management Consultants. *Appendix N. European Heritage Survey & Assessment*, in Resource Strategies. Ridgeway Project. Environmental Impact Statement. Cadia Holdings Pty Limited. 2000.

Both these sources now require update or review, because of a number of factors, including progress in mine construction, changes to heritage legislation and advances in policies for the conservation and management of heritage sites.

The purpose of this guide is not to review or update these conservation management documents, but simply to provide a guide to their application to Cadia Valley Operations under present conditions.

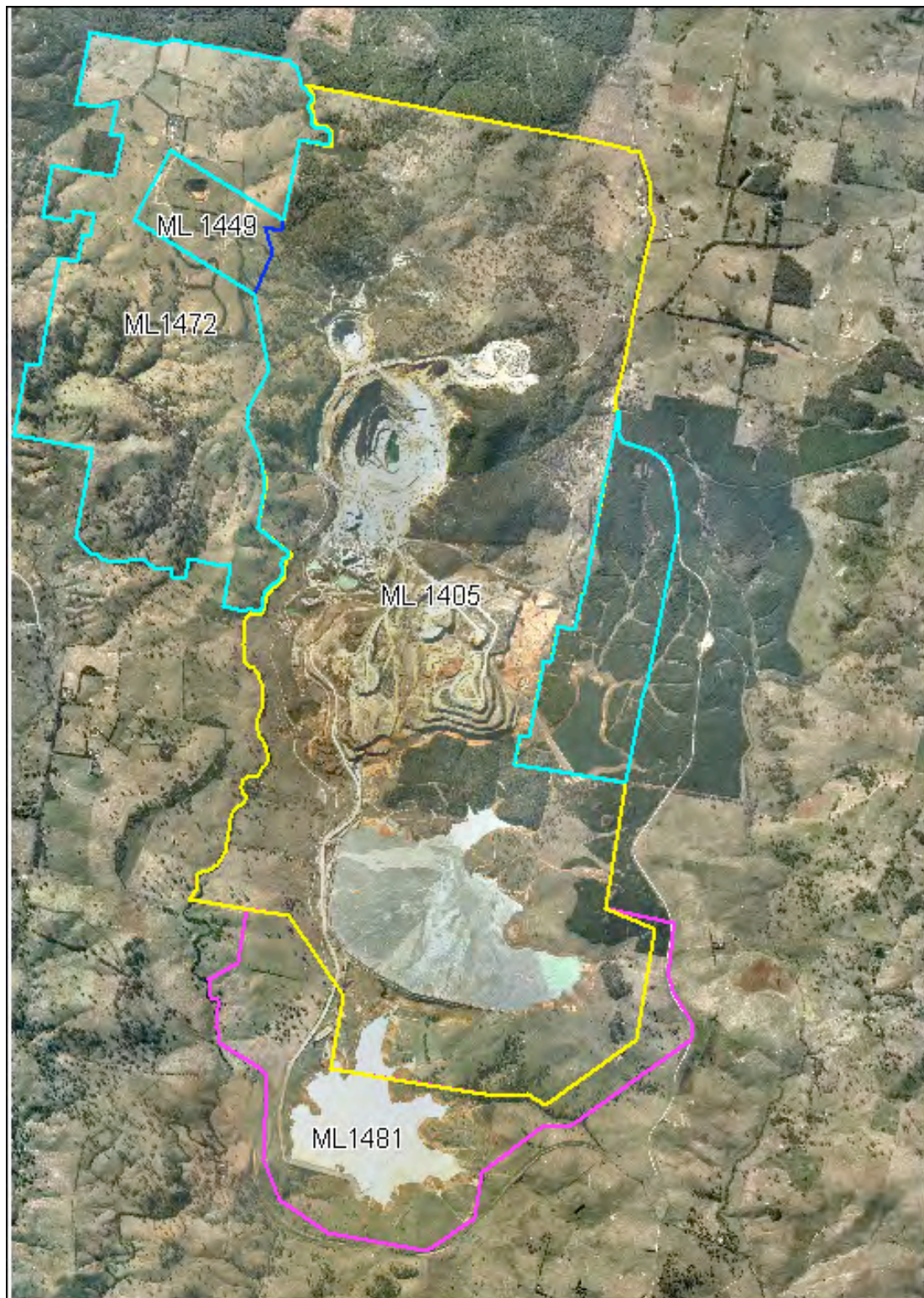


Figure 2.1. Map showing the boundaries of the Mining Leases.

3 HISTORICAL BACKGROUND.

The historical locations named in this historical summary (*in italics*) may be unfamiliar today. See Figure 3.1 at the end of this section for the location of historical place names.

1. Initial Phase of Copper Mining. 1858-1869

The earliest documentary evidence for mining at Cadia is dated to 1858. Some mining was undertaken at *East Cadia* prior to the lease to the Scottish Australian Mining Company.

The sources indicate that during the initial copper mining phase from 1861 to 1868 the population at Cadia was about 600 persons. Though Bailliere's Gazetteer suggests that the majority worked in the mines, the 1865 Sydney Mail article estimates that only 220 to 250 men, boys and girls worked for the company.

The main developments in the 1860s were the construction of *Smelter No. 1* (1861), the cessation of mining at *East Cadia* in 1863 and exploration during 1863 and 1864. A joint company was established between the Scottish Australian Mining Company and the landholder investors in 1864, named the Cadiangullong Consolidated Copper Mining Company. The new company opened up of the *North and South Section* mines in 1864 and constructed the *Cornish Engine House* at the *South Section Mine* in 1865. The mine closed in 1868.

There was a major hiatus in employment in 1868 to 1870. Josiah Holman, the mine manager, went to Queensland for the company in 1871 and he may have taken the best skilled miners and smelters with him. The population was down to 150 persons by 1871.

2. The Scottish Australian Mining Company and its quest for payable gold. 1870-1891.

Only a few people can have been employed in mining for gold in the 1870s, yet *Cadia Village* appears to have retained a population of around 150 persons. There are no other available population statistics for this period, although Brian French, historian, has suggested that there was an increase in mining activity between 1872 and 1877. This can only have been in the area of goldmining, as revealed by company and Department of Mines documentation.

Josiah Holman returned from Queensland in 1876. By 1880 he was again a yearly tenant, although gold mining appeared to be the main sphere of interest until 1888, then gold and copper to 1890-1891. About 30 men appear to have been the maximum number of miners during this period. Again Brian French recognises the period 1887-1890 as a period of resurgence in mining, although the number involved in mining could hardly have boosted the population of *Cadia Village* to any great extent.

The main developments during this period were the various shafts and adits for goldmining, principally on Trathen's Reef at *East Cadia* (between *East Cadia* and *Chilcott's Shaft*), but also at the top of the *Iron Duke*. Sluicing for gold took place

north of the *East Cadia Copper Mine* and between the *North and South Section Mines*.

3. The Scottish Australian Mining Company and litigation in the 1890s.

During the 1890s there was no work of consequence at the mine. Although the Company started exploratory work in 1897, litigation soon put an end to that. Only 2-5 men were employed by the Company from 1897 through to 1903.

4. The Scottish Australian Mining Company and its plans to exploit the Iron Duke. 1899-1928.

The next resurgence of copper and gold mining was in 1904. For copper mining this phase lasted until 1917, although there was less gold mining activity. The population figures indicate that there were between 150 and 250 men involved in mining in this phase, and up to 300 persons in *Cadia Village*. There is one estimate of 600 persons in the village, but this figure is not consistent with overall figures for the period. The 1911 Census may not give a realistic figure for most of this period either, since the census was taken during a year of slump in mining activity. Brian French again recognises the period 1909 to 1916 as a resurgence in mining and then the period 1918-1928 as the final period of mining activity, associated with iron ore quarrying. During this latter phase between 130 and 200 men were employed in quarrying, with a total of 300 in *Cadia Village*.

The main developments during this period centred on the lease to the Cadia Copper Mining and Smelting Company in 1905, a syndicate including a third share held by the Scottish Australian Mining Company. The new company developed the *West Cadia Copper Mine* (1905-1917) and built *Copper Smelters No. 2 and 4*, the first a set of reverberatory furnaces, constructed in 1905, the second a water jacket blast furnace erected at *West Cadia* in 1912.

With the cessation of copper mining in 1917, the Cadia Copper Mining and Smelting Company sub leased the property from 1917 to 1929 to G. & C. Hoskins to quarry the *Iron Duke* for iron ores to be smelted and made into steel at Lithgow. Hoskins constructed the *branch railway* line from Spring Hill in 1919, together with stone crusher and aerial ropeway to transport the ores to the rail terminus. The quarrying was carried out in benches using standard techniques, the ore being taken to the crushers via an inclined way.

5. The final years of mining. 1929-1945

There are no figures for the population of *Cadia Village* during the 1930s. It was clearly a period of decline. The population at Cadia during the final working of the *Iron Duke* is similarly unrecorded, but the fact that Australian Iron and Steel had to construct new houses and a “tent city” for their staff indicated how the village had run down in the preceding period.

The main developments in the final stage of iron ore quarrying from 1943 to 1945 included the quarrying of Benches 7 and 8, the top two benches of the *Iron Duke* and the construction of new inclined ways to replace the aerial ropeway. The rail sidings were extended to meet the new inclined way.

Copper Smelting

Major activity in copper mining is clearly indicated by the construction of smelters. This is true for the period 1861-1868, though not for the period 1888 to 1891, when *Smelter No. 1* received its last usage. The period 1904 to 1917 is marked by the construction of two major smelters, namely *Smelters Nos 2 and 4*, and marks a period of copper mining as intense as the 1860s. It is not surprising that the construction of smelters ties in with intense copper mining activity and hence population increases at *Cadia Village*.

The village and the rural community.

The fact that *Cadia Village* survived outside these periods of intense mining activity must clearly indicate that the village was not totally dependent on the mines, but could rely on the surrounding rural settlement to a certain degree. This was even the case in the 1930s when one store, one boarding house and a hairdresser managed to function, though many of the buildings had been demolished. The 1930s decline of the village was the result of better transport, enabling people to travel to and from Orange and other centres on a daily basis. The fact that Australian Iron & Steel had to construct an encampment for its workers during World War II is a clear indication that the village no longer sustained the building stock (boarding houses, etc) to allow for major fluctuations in the workforce.

The story of *Cadia Village* is therefore about the establishment of a company mining settlement, sustained later by a rural population. It is the story of how the miners and rural population interacted and the diminishing role of the Cornish miners and Welsh smeltermen. It is also part of the story of Cornish and perhaps Welsh settlement in Australia and how this community survived half a world away from its ancestral home to maintain its identity albeit in diluted form.

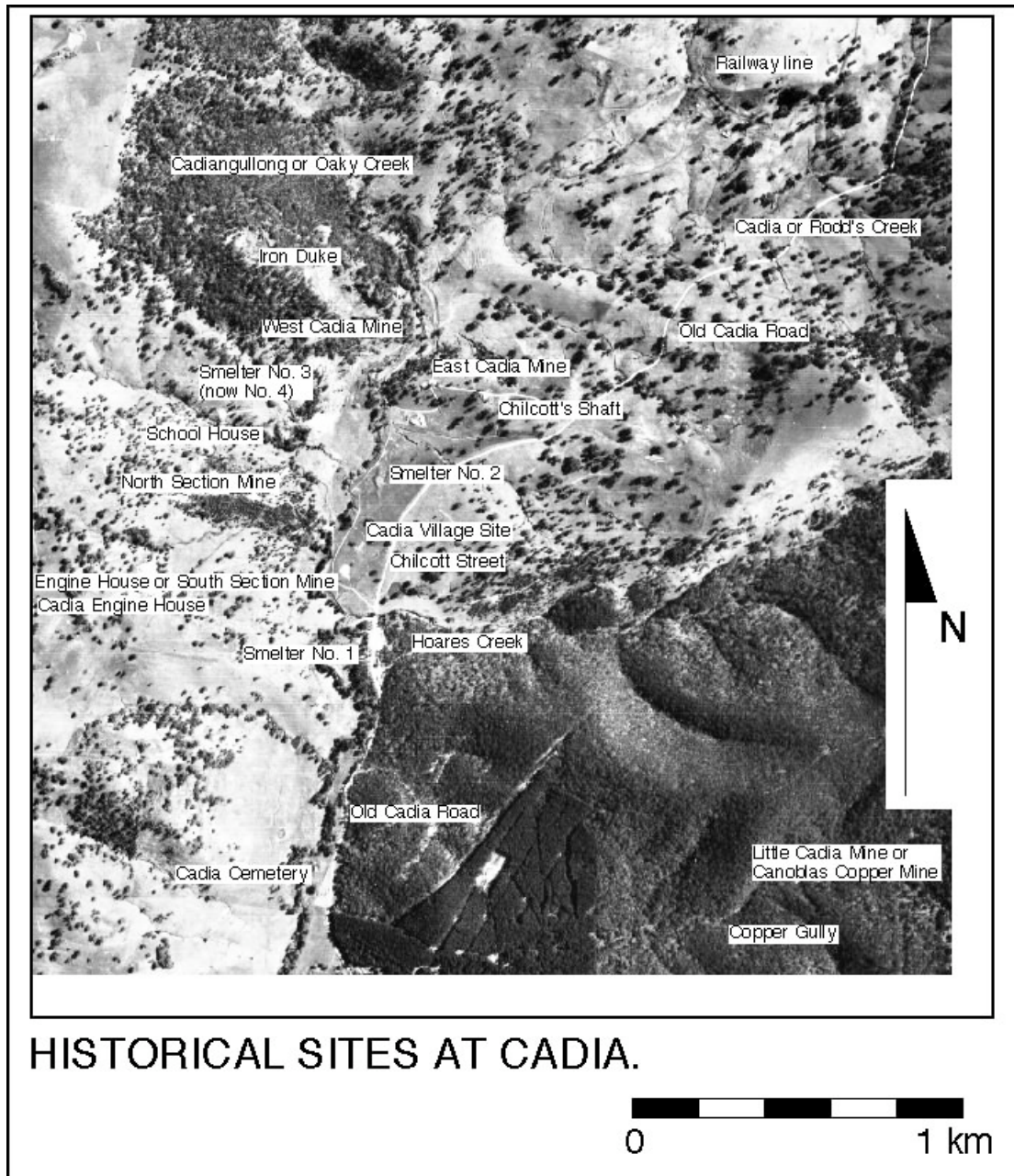


Figure 3.1. The location of historical place names at Cadia. See also Figure 10.1 in Section 10 for location of historical place names over current mine plan.

4 HISTORICAL AND ARCHAEOLOGICAL ASSESSMENT – SOURCES.

Subsequent to the preparation of the Conservation Management Plan in 1995, a number of assessment reports have been prepared for specific projects. These reports often provide more detailed historical research, assessment and site survey.

These reports are listed in accordance with the study areas shown in Figure 4.1.

Areas 1 & 2. Ridgeway.

Heritage Management Consultants. *Appendix N. European Heritage Survey & Assessment*, in Resource Strategies. Ridgeway Project. Environmental Impact Statement. Cadia Holdings Pty Limited. 2000.

The heritage assessment for Ridgeway was based upon:
Edward Higginbotham & Associates Pty Ltd. Historical and archaeological assessment of the Cadia Ridgeway Project on 'Tunbridge Wells', Four Mile Creek Road, Near Orange, N.S.W. Resource Strategies Pty Ltd. 1998.

Additional research on historical mine workings is included in:
Edward Higginbotham & Associates Pty Ltd. Historical and archaeological evidence for mining activity on the route of the proposed underground conveyor, Cadia Ridgeway Project (MLA 103), 'Tunbridge Wells', Four Mile Creek Road, near Orange, NSW. Ridgeway Project. 2001.

2 & 3. Cadia.

Godden Mackay, Cadia Mining Project, Final Conservation Plan. Newcrest Mining Limited. 1995.

The most up to date history of the Cadia mines, Cadia Village and rural community is included in the report on the excavations of Cadia Village in 2002:
Edward Higginbotham & Associates Pty Ltd. Report on the archaeological excavation of part of Cadia Mining Village, near Orange, NSW. Volumes 1-3. Cadia Holdings Pty Limited. 2005.

4. Little Cadia.

Godden Mackay, Cadia Mining Project, Final Conservation Plan. Newcrest Mining Limited. 1995.

The most detailed and up to date historical and archaeological assessment of Little Cadia and surrounding parish portions is included in:
Edward Higginbotham & Associates Pty Ltd. Historical and archaeological assessment of proposed development, Little Cadia Copper Mine and neighbouring property, near Orange, NSW. Cadia Holdings Pty Limited. 2005

5. Waringa.

Edward Higginbotham & Associates Pty Ltd. Archival recording of Waringa Homestead, Cadia Hill Gold Mine, near Orange, N.S.W. Cadia Holdings Pty Limited. 2001.

Edward Higginbotham & Associates Pty Ltd. Report on the archaeological excavation of Waringa Hut, near Cadia, N.S.W. Cadia Holdings Pty Limited. 2003.

6. Wire Gully Gold Diggings.

Heritage Management Consultants. *Appendix N. European Heritage Survey & Assessment*, in Resource Strategies. Ridgeway Project. Environmental Impact Statement. Cadia Holdings Pty Limited. 2000.

Edward Higginbotham & Associates Pty Ltd. Archival recording of sites in advance of the extension of mining works, Cadia Valley Operations, Cadia, NSW. Cadia Holdings Pty Limited. 2003.

7. Te Anau.

Godden Mackay, Cadia Mining Project, Final Conservation Plan. Newcrest Mining Limited. 1995.

The most detailed and up to date historical and archaeological assessment of Little Cadia and surrounding parish portions is included in:

Edward Higginbotham & Associates Pty Ltd. Historical and archaeological assessment of proposed development, "Te Anau" Homestead and Outbuildings, Old Cadia Road, Near Orange, NSW. 2006.

Edward Higginbotham & Associates Pty Ltd. Archival Report for "Te Anau" Homestead and Outbuildings, Old Cadia Road, Near Orange, NSW. 2006.

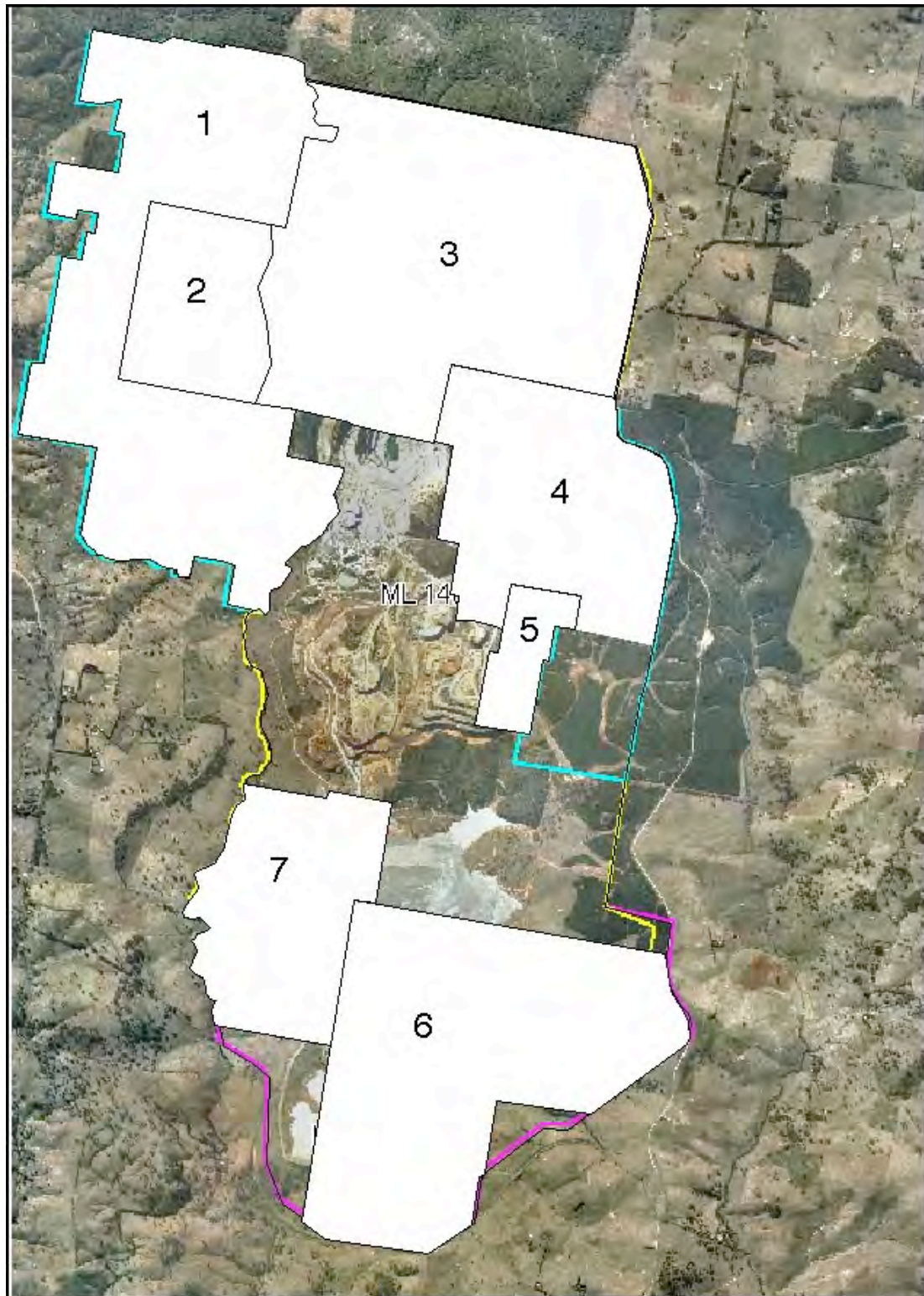


Figure 4.1. Map showing the study areas for assessment reports listed in Chapter 4.

5 MINING AND OTHER DEVELOPMENT.

Sites relating to historical mining and settlement have been impacted by two principal developments as shown in Figure 5.1:

1. Gold mining and related activities by Cadia Valley Operations, 1996 onwards.
2. Timber plantations.

Both these activities have caused the disturbance and removal of archaeological sites. The extent of disturbance is indicated in Figure 5.1.

Where sites have been disturbed and/ or destroyed by mining activities, Cadia Valley Operations have undertaken the necessary archaeological assessments, permit applications and investigations.

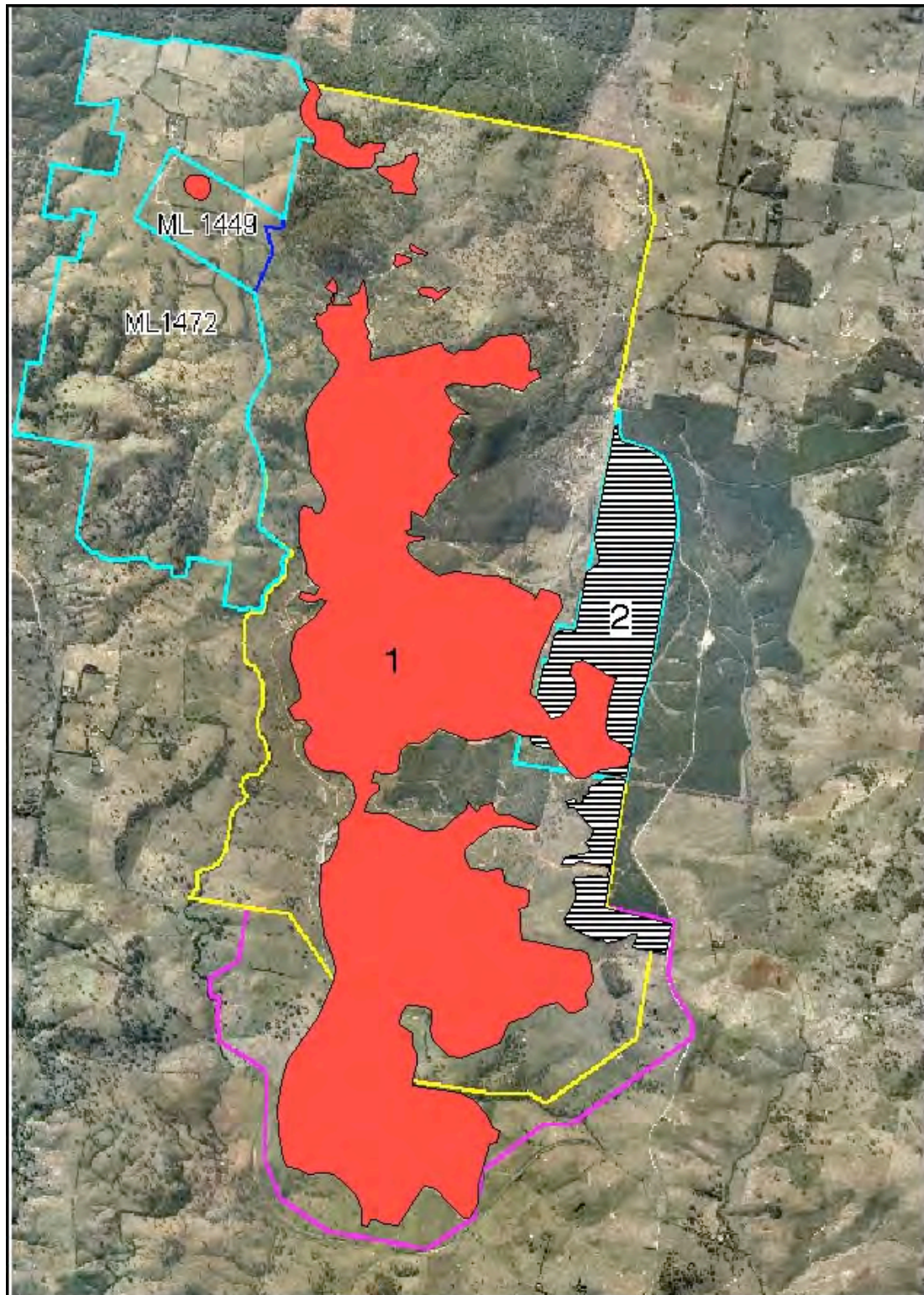


Figure 5.1. Map showing the extent of disturbance caused by development.
Key.

1. Mineral extraction.
2. Forestry plantations.

6 MANAGEMENT AND CONSERVATION OF HERITAGE ITEMS.

The framework for the management and conservation of heritage items at Cadia is based upon two principal documents, namely:

Godden Mackay, Cadia Mining Project, Final Conservation Plan.
Newcrest Mining Limited. 1995.

Heritage Management Consultants. *Appendix N. European Heritage Survey & Assessment*, in Resource Strategies. Ridgeway Project.
Environmental Impact Statement. Cadia Holdings Pty Limited. 2000.

Both these sources now require update or review, because of a number of factors, including progress in mine construction, changes to heritage legislation and advances in policies for the conservation and management of heritage sites.

The purpose of this guide is not to review or update these conservation management documents, but simply to provide a guide to their application to Cadia Valley Operations under present conditions.

The conservation and management of heritage items at Cadia is divided in this report into three zones, namely:

1. Ridgeway.
2. Cadia.
3. Cadia South.

The Cadia Engine House State Heritage Register Listing is located within Zone 2. Cadia, but is treated as a separate item.

See Figure 6.1 for the boundaries of each zone.



Figure 6.1. Map showing the three zones for heritage items.
Zone 1. Ridgeway.
Zone 2. Cadia.
Zone 3. Cadia South.
Cadia Engine House is in Zone 2, but is treated as a separate item.

7 BASIC CONSERVATION PROCEDURE.

Every effort should be made to conserve heritage items within the historical landscape of mining and rural settlement.

For this reason, heritage items should not be disturbed for temporary or mine construction works, unless this is unavoidable.

In addition, a 10 metre curtilage should be placed around all heritage items, within which there should be no disturbance.

All work in the vicinity of heritage items should be regulated through the standard Environmental Impact Permit (EIP) procedures used by Cadia Valley Operations.

Prior to and during the proposed activities or projects, persons involved in construction and development should liaise directly with the Environmental Department on issues including access, construction works, etc.

Where there is any impact on heritage items, the Environment Department will liaise with the archaeologist. Impacts include any physical disturbance, but may also include a visual impact on the historical setting of a heritage item or on the historical landscape.

Where possible outcomes causing minimal disturbance to heritage sites should be adopted.

Where activities and projects are undertaken in the vicinity of heritage items, fencing and / or signage should clearly define the extent of heritage items and their curtilage.

8 EXCAVATION PERMIT STATUS.

Cadia Valley Operations obtained an excavation permit for the monitoring of minor works and archival recording in 1997. Where the term “excavation director” or “archaeologist” is used in this report, it specifically refers to the archaeologist nominated on the 1997 permit approval or other permit approved by the NSW Heritage Office covering archaeological excavations at Cadia.

Most minor works, which have the potential to disturb heritage items can be undertaken under the conditions of this excavation permit.

The 1997 excavation permit covers most of Cadia Mining Lease (ML. 1405) and some additional land (see Figure 8.1). The permit excludes:

1. The Cadia Engine House (State Heritage Register Listing).
2. The Ridgeway Mining Leases (ML. 1449 & 1472).
3. Mining Lease (ML. 1481), at the southern end of the mine site.
4. Major activities or projects.

The excavation permit is limited to archaeological monitoring of minor works and archival recording.

The archival recording of heritage items can also be undertaken without an excavation permit.

Minor works in areas not covered by the 1997 excavation permit will require separate approval in some cases.

Works within the Cadia Engine House (SHR) Listing will likewise require separate approval under s.60 of the Heritage Act.

Major works are specifically excluded from the scope of the 1997 excavation permit.

Major projects will require separate approval under the Heritage Act.

If repeated disturbance of heritage sites is envisaged on Ridgeway, it is recommended that a second excavation permit for archaeological monitoring of minor works and archival recording should be obtained to cover these mining leases.

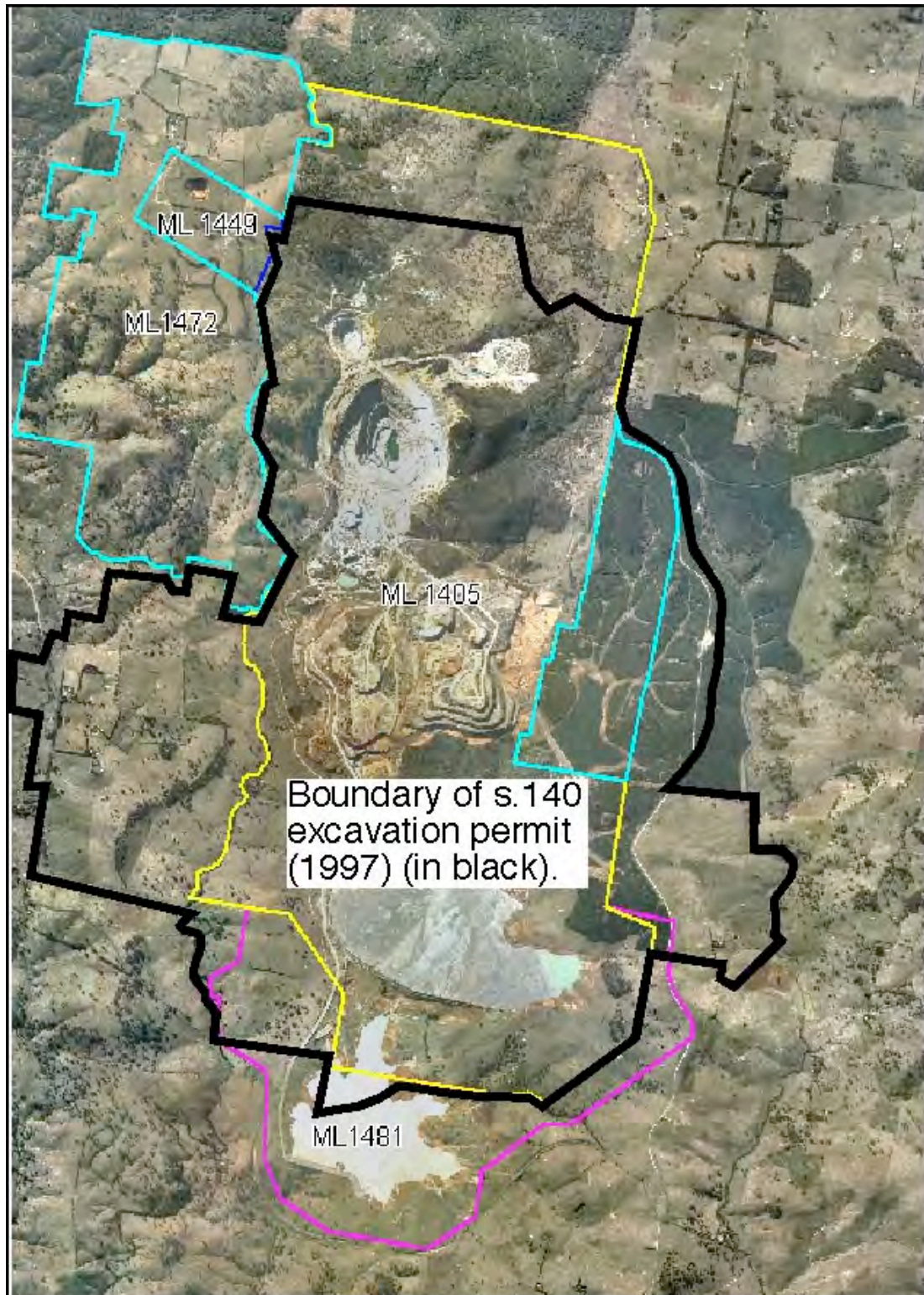


Figure 8.1. Map showing boundary of s.140 excavation permit, approved in 1997 for monitoring of minor works and archival recording.

9 CONSERVATION RECOMMENDATIONS.

The following heritage conservation and management procedures apply to activities and projects as described in Section 8, as follows:

1. Minor works, covered by the conditions of the 1997 excavation permit.
2. Minor works, not covered by the 1997 excavation permit.
3. Works within the Cadia Engine House (SHR) Listing, and
4. Major projects.

At this stage this scope of this report does not include specific procedures for heritage items in areas outside the mining leases.

9.1 Minor works, covered by the conditions of the 1997 excavation permit.

The standard procedure for minor works is as follows:

1. Consult with the archaeologist / excavation director nominated in the 1997 excavation permit.
2. Determine after consultation the appropriate heritage procedures.

Initial consultation should determine:

1. The nature of the impact of the proposed activity.
2. Whether or not the impact can be avoided or ameliorated.
3. Appropriate conservation and management procedures.

Appropriate conservation and management procedures for minor works will normally include the following tasks to be undertaken prior to the commencement of proposed activities or projects:

1. All sites will require detailed survey planning, showing contours and topographical features. Maps should be produced by Cadia Valley Operations and included in the archival recording (see below).

2. All sites will require archival recording. This work should be undertaken by a qualified heritage practitioner. This should be completed in accordance with standard guidelines.² The archival record should include:

1. Detailed contour survey plan, preferably showing topographic features (to be supplied by Cadia Holdings).
2. Archival photography (colour slide and monochrome).
3. Historical background (In many instances, existing research in previous reports should be sufficient, but in other cases additional research may be required).
4. Brief description of heritage items.

² Heritage Office NSW, How to Prepare Archival records of Heritage Items (1998) and Guidelines for Photographic Recording of Heritage Sites, Buildings and Structures (2001).

In the case of most minor works, the archival recording can be included in the progress reports required as a condition of the 1997 excavation permit. In this case the progress reports should be prepared in accordance with standard procedures for archival recording, as noted above. In other cases, independent archival reports should be completed.

3. Some sites may require archaeological monitoring of the proposed disturbance by the archaeologist. Again the results of the archaeological monitoring should be included in the progress reports.

4. As well as detailed survey plans, archival recording or monitoring, some items may require additional archaeological or heritage assessment, site survey, excavation or collection of moveable items of heritage significance.

The additional requirements for items are described in the sections on each zone, as follows:

Section 10 and Figure 10.1 for Zone 1. Ridgeway.

Section 11 and Figure 11.1 for Zone 2. Cadia.

Section 13 and Figure 13.1 for Zone 3. Cadia South.

The archaeologist / excavation director will be able to advise on how to complete these additional requirements.

See Section 9.4 and Section 12 for works within the Cadia Engine House (SHR) Listing

5. Where possible the disturbance of heritage items by minor works should be avoided, especially where such disturbance will result in the need for archaeological excavation. Refer to Section 9.4 for archaeological excavations.

9.2 Minor works, not covered by the 1997 excavation permit.

Minor works in areas not covered by the 1997 excavation permit may require separate approval in some cases.

The procedures in Section 9.1 should be followed initially to determine whether an excavation permit is required for the proposed activity or project.

In Zone 1. Ridgeway, archaeological assessment is complete and all major heritage items are identified. However any disturbance of heritage items on Ridgeway is not covered by the 1997 excavation permit.

If repeated disturbance of heritage sites is envisaged on Ridgeway, it is recommended that a second excavation permit for archaeological monitoring of minor works and archival recording should be obtained to cover these mining leases.

At this stage this scope of this report does not include specific procedures for heritage items in areas outside the mining leases.

The requirements will depend on the proposed activity or project and the nature of the heritage item or items.

9.3 Works within the Cadia Engine House (SHR) Listing.

Works within the Cadia Engine House (SHR) Listing will require separate approval under s.60 of the Heritage Act.

See Section 9.4 and Section 12 for works within the Cadia Engine House (SHR) Listing.

9.4 Major projects.

Major works are specifically excluded from the scope of the 1997 excavation permit.

Major projects will require separate approval under the Heritage Act.

There is no definition of major or minor works in the 1997 excavation permit conditions. Nonetheless, common sense will normally suffice to differentiate between minor works covered by the 1997 excavation permit and major projects that are not.

Again the initial consultation between the Environment Department and the archaeologist / excavation director will determine the status of a project as a minor work or major project.

Major projects are likely to require the following procedures:

1. Preparation of an archaeological assessment report, and in some cases a heritage assessment (for standing buildings).
2. Application for an excavation permit under s.140 of the Heritage Act. For works within the Cadia Engine House (SHR) Listing application should be made under s.60 of the Heritage Act.
3. Completion of conservation and management procedures as outlined in permit approvals.

The archaeological assessment report should be prepared in accordance with standard guidelines.³

Some sites in Zones 1-3 may require archaeological excavation. These sites are listed in the sections on each zone, as follows:

Section 10 and Figure 10.1 for Zone 1. Ridgeway.

³ Heritage Office and Department of Urban Affairs and Planning. 1996. NSW Heritage Manual.

Heritage Office and Department of Urban Affairs and Planning. 1996. Archaeological assessments.

NSW Heritage Office. 2000. Assessing Heritage Significance. A NSW Heritage Manual Update.

Section 11 and Figure 11.1 for Zone 2. Cadia.

Section 13 and Figure 13.1 for Zone 3. Cadia South.

Where archaeological excavation is required, the procedures for major projects should be followed.

Where projects and activities are proposed in the Cadia Engine House (SHR) Listing, the procedures for major projects should be followed.

9.5 Collection of moveable items of heritage significance.

Moveable items of heritage significance have been identified in association with a number of heritage items or areas at Cadia. Moveable items may also be identified during archival recording or other activities and should be included in the collection policy.

The “Relics Collection Policy” of the 1995 Conservation Plan needs to be updated.⁴ The basic requirements are as follows:

1. Items should be left in situ where possible.
2. Items should only be collected prior to disturbance.
3. The removal of items from their original location and context should be completed in accordance with standard guidelines.⁵
4. The storage and display options for items should be determined prior to removal, where possible.

At Cadia moveable items of heritage significance should be regarded as relics (as defined by the NSW Heritage Act, 1977, as amended).⁶ Their collection or relocation should then be only undertaken where an excavation permit has been approved. The 1997 excavation permit would include the collection of moveable items.

⁴ Godden Mackay, Cadia Mining Project, Final Conservation Plan. Newcrest Mining Limited. 1995. Volume III. Page 23.

⁵ NSW Heritage Office and NSW Ministry of the Arts. 2000. Movable Heritage Principles.

NSW Heritage Office, 1999, reprinted 2004. Objects in their place: An Introduction to Movable Heritage.

NSW Heritage Office and NSW Ministry for the Arts, 2001. Safe in the Shed. (This guide provides specific guidelines for farm equipment).

⁶ The legal definition of “moveable object” as opposed to “relic” in the Heritage Act is unhelpful. “**Moveable object**” means a moveable object that is not a relic”, whereas a **relic** is defined as:

any deposit, object or material evidence -

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

b) which is 50 or more years old

Most if not all moveable items located at Cadia, which are 50 years old or more, will relate to the settlement of New South Wales (simply by being abandoned on the land in a particular location) and hence are “relics” under the Heritage Act. In most instances these moveable items will also be associated with recognised heritage items or areas.

9.6 Interpretation and display.

Where excavation permits have been approved for archaeological excavations, the NSW Heritage Office has been increasingly aware and concerned for public outcomes in each case. Permit conditions now often include arrangements for interpretation, display and conservation of structures, moveable items and relics.

The excavation permits for both Copper Smelter No. 1 and for the South-Western part of Cadia Village both included conditions relating to the preparation of an Interpretation Plan. This Interpretation Plan has now been completed by Ms. Kylie Winkworth and has been submitted to the NSW Heritage Office for approval.

See Bibliography in Appendix 1.

10 ZONE 1. RIDGEWAY.

Description and Assessment.

See Section 4 for a list of assessment reports for all sites in Zone 1. Ridgeway. A complete list of references to reports may be found in Appendix 1.

Excavation Permit status.

See Section 8.

Conservation Recommendations.

See Section 9.

Archaeological excavation.

In addition to detailed survey planning, archival recording and monitoring, some items may require archaeological excavation (see below).

An excavation permit will be required for any site, which requires archaeological excavation. The procedures to be followed are the same as those for major projects (see Section 9.4).

The following sites should be subject to archaeological excavation prior to disturbance (Items 9, 13, 18, 22, 23, 24, 26, 28, 29, 30, 31). See Figure 10.1 for site location and the table below for identification of each site.

For more detailed information on each site, refer to the Inventory of Sites in: Edward Higginbotham & Associates Pty Ltd. Historical and archaeological assessment of the Cadia Ridgeway Project on 'Tunbridge Wells', Four Mile Creek Road, Near Orange, N.S.W. Resource Strategies Pty Ltd. 1998.

Archaeological excavation was a recommendation of the original assessment of Ridgeway. This recommendation was not carried through to the later conservation planning document (see Section 3 or 4 for references to these reports). The recommendation should be reinstated as archaeological excavations (Waringa Hut and Tynan's Slaughterhouse) have subsequently demonstrated the significance of these items (see Appendix 1 for references).

Collection of moveable items of heritage significance.

Sites with moveable items of heritage significance include Items 2, 8, 10 and 18. Moveable items may also be identified during archival recording and can be included in the collection policy. See Collection Policy in Section 9.5.

Cadia Engine House (State Heritage Listing).

See Section 12 for the Cadia Engine House (State Heritage Register) Listing.

Heritage Investigations – current status.

Archival recording has been completed for a number of sites within the Ridgeway Subsidence Zone, namely sites 11, 13 and 14.

The site of Tynan's Slaughterhouse was excavated prior to the extension of Cadia Hill Quarry.

See Bibliography in Appendix 1.

The remains of a hut (Item 18) were blown over in a storm in 2005. The site was cleared before any archaeological investigation.

At present no excavation permit has been obtained for the disturbance or removal of any heritage sites on Ridgeway.

List of sites on Ridgeway.

The following table is extracted from pages 22-23, Table 4.1 in Edward Higginbotham & Associates Pty Ltd. Historical and archaeological assessment of the Cadia Ridgeway Project on 'Tunbridge Wells', Four Mile Creek Road, Near Orange, N.S.W. Resource Strategies Pty Ltd. 1998.

Site Number	Item	Item type
1	House in Portion 128.	Building
2	Ship tanks in Portion 128.	Moveable items.
3	Site of former sawmill, Portion 127.	Archaeological/ historical site
4	Site of original woolshed, Portion 127.	Archaeological/ historical site
5	Shearers Quarters, Portion 93.	Building
6	House 1 in Portion 93.	Building
7	House 2 in Portion 93.	Building
8	Ship tanks in Portion 93.	Moveable items.
9	Site of house (original homestead?) in Portion 93.	Archaeological/ historical site
10	'Comet' Windmill, Portion 95.	Moveable items.
11	Shearing shed and farm outbuilding, Portion 93.	Building
12	Possible site of house, Portion 147.	Archaeological/ historical site
13	Possible site of house, Portion 97.	Archaeological/ historical site

Site Number	Item	Item type
14	Possible site of stockyards, Portion 147.	Archaeological/ historical site
15	Windbreak, Portions 147 and 148.	Archaeological/ historical site
16	Fig tree, Portion 148.	Relic
17	Site of former post and rail stockyards, Portion 149.	Archaeological/ historical site
18	Hut 1 on Portion 149.	Building
19	Hut 2 in Portion 149.	Building
22	Possible house site, Portion 87.	Archaeological/ historical site
23	Site of house, Portion 99.	Archaeological/ historical site
24	Site of gunyah/ hut, Portion 49.	Archaeological/ historical site
25	Road reserve and telegraph line.	Other work
26	Site of hut, Portion 124.	Archaeological/ historical site
27	Site of yards, Portion 97.	Archaeological/ historical site
28	Site of house and gardens, Portion 127.	Archaeological/ historical site
29	Site of well, Portion 127.	
30	Site of hut, Portion 76.	Archaeological/ historical site
31	Mine workings, Portion 149.	Archaeological/ historical site

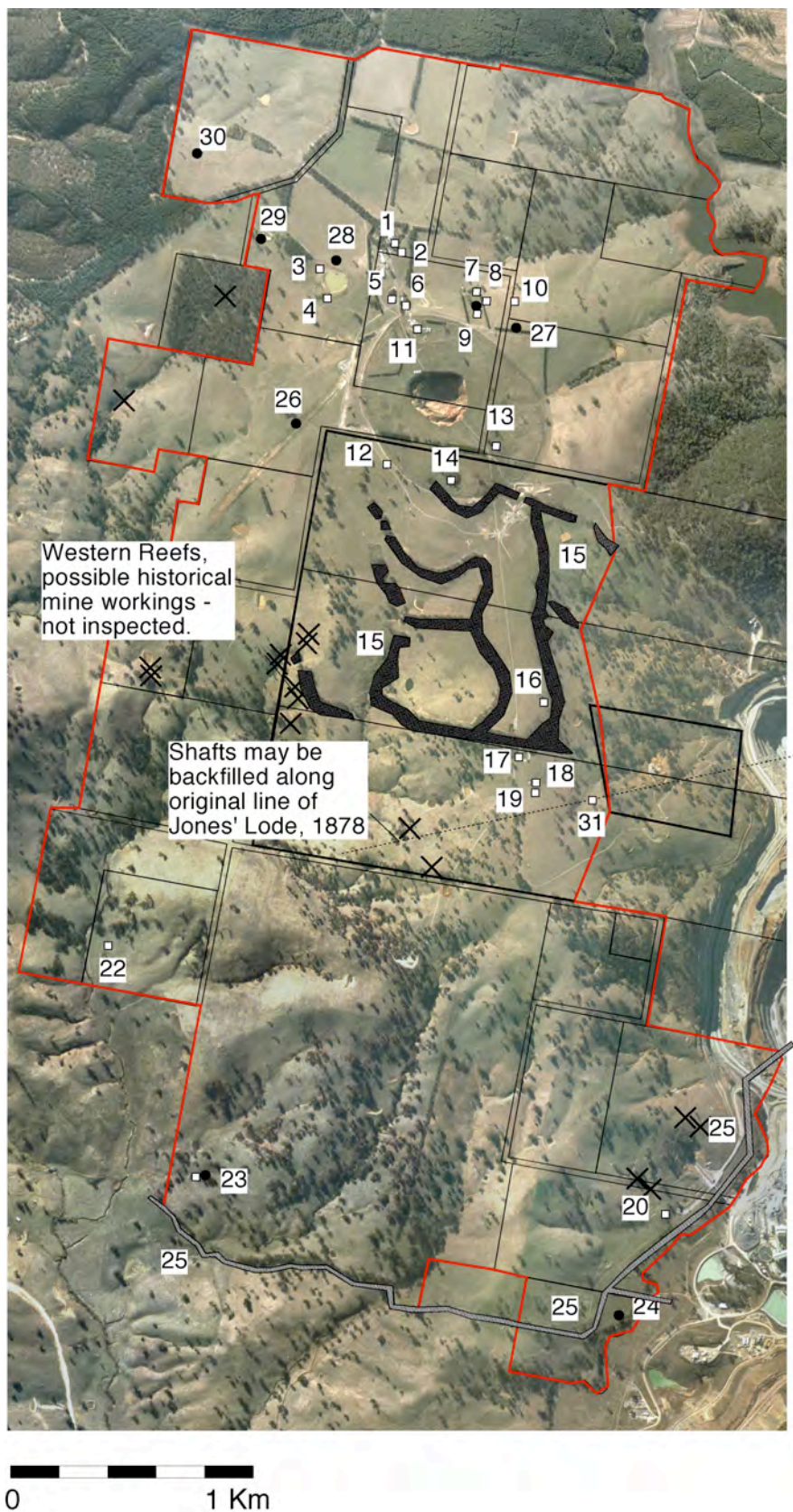


Figure 10.1. Map of heritage items in Zone 1. Ridgeway. Key –

Red outline = Zone 1. Ridgeway study area.	X = mine shafts, etc.	White dots = items located during site survey.	Black dots =- items located by historical research.
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11 ZONE 2. CADIA.

Description and Assessment.

See Section 4 for the sources for the description and assessment of all sites in Zone 2. Cadia. A complete list of references to reports may be found in Appendix 1.

Excavation Permit status.

See Section 8.

Conservation Recommendations.

See Section 9.

Additional archaeological investigation.

Apart from detailed survey plans and archival recording, some sites may require:

1. Site survey to precisely locate archaeological remains.
2. Archaeological excavation, or
3. The collection of moveable items of heritage significance.

An excavation permit will be required for any site, which requires archaeological excavation. The procedures to be followed are the same as those for major projects (see Section 9.4).

Area 1. East Cadia Mine (late 1850s to 1860s).

One of the earliest copper mines at Cadia, being worked prior to 1861. The full significance of this mine was not realised in the 1994 Conservation Management Plan.

The site will require archaeological excavation prior to disturbance.

Area 2. South Section or Cadia Engine House Mine (1860s).

Most of the archaeological remains of the South Section or Engine House Mine are within the State Heritage Register area. See Section 12 for the Cadia Engine House (State Heritage Register) Listing.

Area 3. North Section Mine (1860s).

The North Section Mine is contemporary with the South Section or Engine House Mine.

The site will require archaeological excavation prior to disturbance.

Area 4. Cadia Village (1860s to 1940s).

Disturbance of the Cadia Village Site will require archaeological excavation.

Area 5. Cadia School House (1860s onwards).

Disturbance of the School House Site will require archaeological excavation.

Area 8. Water race for gold stamper battery (from 1870s).

The precise route of the water race should be mapped (site survey) and the site protected with a 10 metre curtilage on either side (20 m wide corridor).

Area 10. Water race for gold workings (from 1870s) (the precise route needs to be mapped).

The precise route of the water race should be mapped (site survey) and the site protected with a 10 metre curtilage on either side (20 m wide corridor).

Area 12. Stamper battery for gold processing (1930s to 1943).

The site will require archaeological excavation and the collection of moveable items of heritage significance. See Collection Policy in Section 9.5.

Area 13. West Cadia Copper Mine (1904-1917, 1921).

Some elements of the mining works will require archaeological excavation.

It should be noted that the mine workings of the West Cadia Mine extended under the Iron Duke.

Area 14. East Cadia Tramway (1905).

The site should be protected with a 10 metre curtilage on either side (20 m wide corridor).

Area 15. Copper Smelter No. 2 (1905-1909).

Disturbance of the Copper Smelter No. 2 will require archaeological excavation.

Area 16. Copper Smelter No. 3 (now dated 1912-1919 and hence No. 4, since No. 3 is at Little Cadia, dated to 1908).

Disturbance of the Copper Smelter No. 3 (now No. 4) will require archaeological excavation.

Area 17. Mine Manager's Residence (by 1914).

The 1995 Conservation Plan recorded this building as a farmhouse of 20th century date. However additional historical research has indicated it was formerly the Mine Manager's House, shown on the PO plan of 1914. It is therefore the only surviving building belonging to the copper and gold mining phase of working at Cadia (Scottish Australian Mining Company).

The mine associated usage of this building increases its significance.

Heritage and archaeological assessment reports have been completed for this building. Recommendations for the management of heritage items are included in these reports. See Appendix 1 for list of reports – Big Cadia.

Area 19. Iron Duke, iron quarry (1918-1927, 1941-1945).

The site may require archaeological excavation prior to disturbance. Moveable relics of heritage significance may need to be collected. See Collection Policy in Section 9.5.

Area 20. Iron Duke mine infrastructure precinct (1918-1927, 1941-1945).

The site may require archaeological excavation prior to disturbance. Moveable relics of heritage significance may need to be collected. See Collection Policy in Section 9.5. Heritage assessment of standing buildings or ruins may be required.

Area 22. Little Cadia.

One of the earliest copper mines at Cadia, being worked prior to 1861.

Archaeological excavations and archival recording of this mine site have been completed prior to proposed development. The excavation report is in progress. An interpretation framework is in progress.

Collection of moveable items of heritage significance.

Several sites possess moveable items of heritage significance. Moveable items may also be identified during archival recording and can be included in the collection policy. See Collection Policy in Section 9.5.

Heritage Investigations – current status.

A number of archaeological excavations have been undertaken prior to mining, including:

1. Cadia Cemetery.
2. Copper Smelter No. 1.
3. South-Western part of Cadia Village.

The investigation of Little Cadia is in progress. The on site component of the excavation has been completed. The excavation report is being prepared. An Interpretation framework is also required by the Heritage Office and conservation of some items may be required.

While the excavation reports for Copper Smelter No. 1 and the South-Western part of Cadia Village have been completed, the excavation permit condition for an Interpretation Plan is in progress. The draft Interpretation Plan, prepared by Kylie Winkworth is being reviewed by the Heritage Office.

Assessment and archival reports, together with a permit application, have been prepared for the Big Cadia Project, which includes items or areas 1, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19 and 21.

See Bibliography in Appendix 1.

Principal heritage areas.

Some of the names of historical items or places differ from the names in current use. For example, the historical East Cadia is not located at Cadia East. Historical names and places can be located in 2 ways:

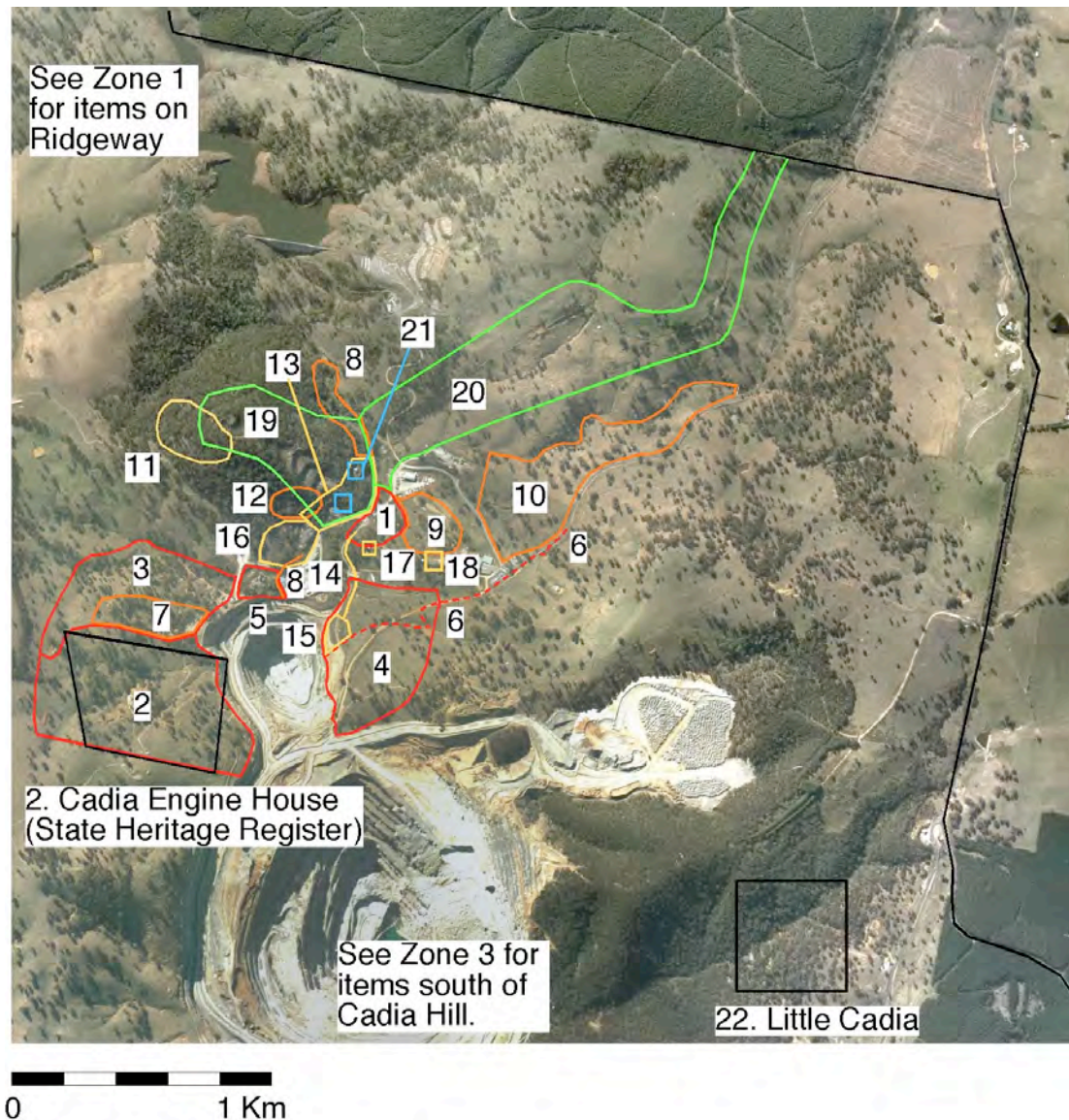
1. See Figure 11.1.
2. See Figure 3.1 in Section 3 for names in *italics*.

The heritage areas shown on plan are listed as follows:

1. *East Cadia Mine* (late 1850s to 1860s).
2. *South Section or Cadia Engine House Mine* (1860s).
3. *North Section Mine* (1860s).
4. *Cadia Village* (1860s to 1940s).
5. *Cadia School House* (1860s onwards).
6. *Old Cadia Road* and former deviations (dashed line).
7. Alluvial gold workings (from 1870s).
8. Water race for gold stamper battery (from 1870s) (the precise route needs to be mapped).
9. Alluvial gold workings, adjacent to *East Cadia* (from 1870s).
10. Water race for gold workings (from 1870s) (the precise route needs to be mapped).
11. Gold workings (from 1870s).
12. Stamper battery for gold processing (1930s to 1943).
13. *West Cadia Copper Mine* (1904-1917, 1921).
14. East Cadia Tramway (1905).
15. *Copper Smelter No. 2* (1905-1909).
16. *Copper Smelter No. 3* (now dated 1912-1919 and hence No. 4, since No. 3 is at Little Cadia, dated to 1908).
17. Mine Manager's Residence (by 1914).
18. *Chilcott's Shaft*.
19. *Iron Duke*, iron quarry (1918-1927, 1941-1945).
20. Iron Duke mine infrastructure precinct (1918-1927, 1941-1945).
21. Pacific Copper Complex and Headframe (1969-1972).
22. *Little Cadia Mine*.

The plan also shows:

1. The *Cadia Engine House* (State Heritage Register) Listing.



Key to colour coding of areas:

Period	Colour
1. Initial Phase of Copper Mining. 1858-1869	Red
2. The Scottish Australian Mining Company and its quest for payable gold. 1870-1891.	Gold - Orange
3. The Scottish Australian Mining Company and litigation in the 1890s.	-
4. The Scottish Australian Mining Company and its plans to exploit the Iron Duke. 1899-1928.	Copper – Yellow Iron – Light Green
5. The final years of mining. 1929-1945	Iron – Light Green
6. Post 1945	Light Blue

Figure 11.1. Map of heritage items in Zone 2. Cadia.

12 CADIA ENGINE HOUSE (STATE HERITAGE REGISTER) LISTING.

Description and Assessment.

See Section 4 for the sources for the description and assessment of the Cadia Engine House. A complete list of references to reports may be found in Appendix 1.

Excavation Permit status.

See Section 8.

The Cadia Engine House is listed on the State Heritage Register, formerly as Permanent Conservation Order (PCO) 779.

Conservation Recommendations.

Activities or projects within the area of the listing require approval under s.60 of the Heritage Act, 1977, as amended.

The archaeological components of any proposed activity or project in the SHR listed area should be treated in the same way as for major projects (see Section 9.4).

Heritage Investigations – current status.

There is a current s.60 approval for conservation works on the Cadia Engine House. The permit includes archival recording (current).

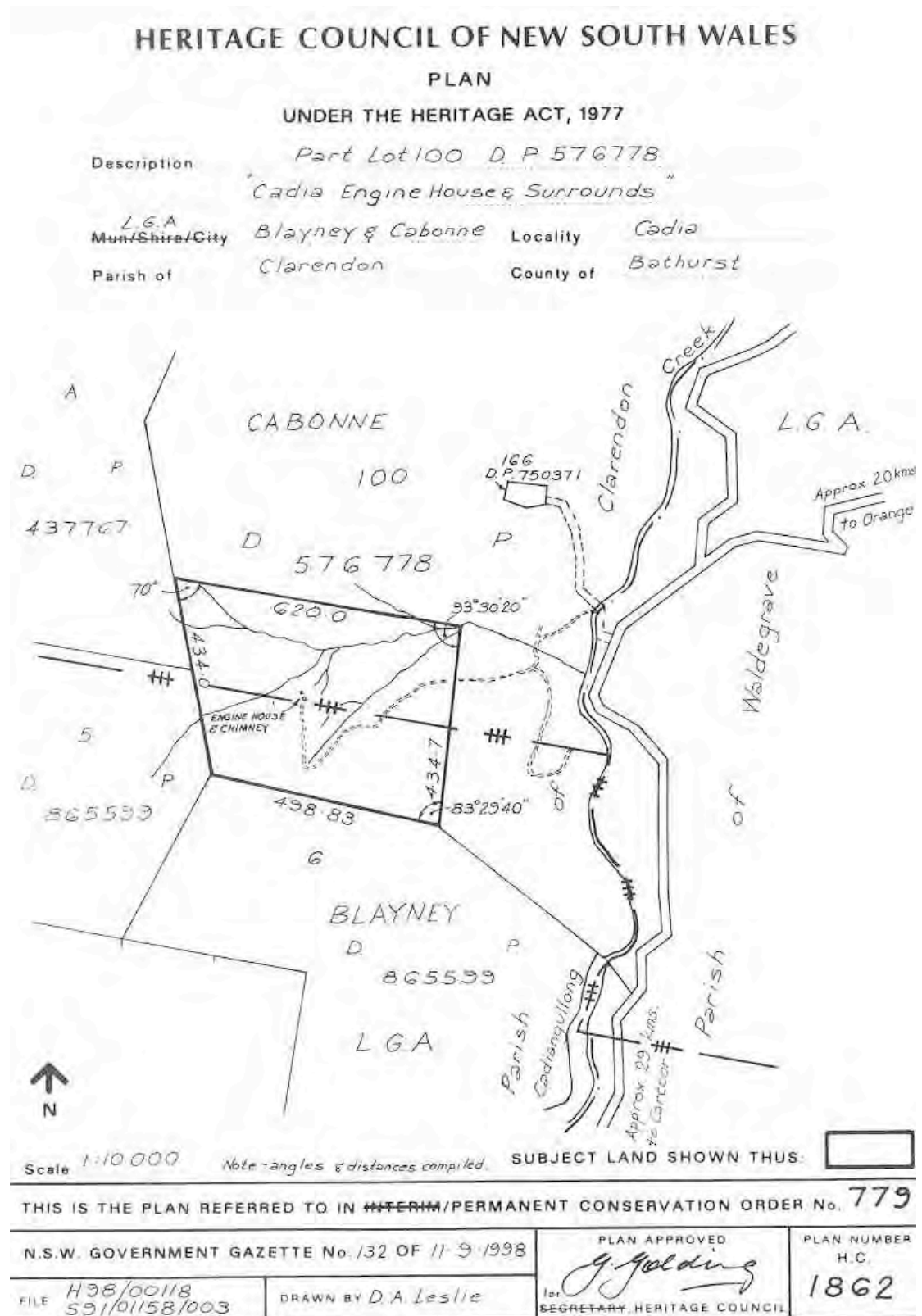


Figure 12.1. Plan showing the boundaries of the Cadia Engine House (State Heritage Register Listing).

13 ZONE 3. SOUTH CADIA.

Description and Assessment.

See Section 4 for the sources for the description and assessment of all sites in Zone 3. South Cadia. A complete list of references to reports may be found in Appendix 1.

Excavation Permit status.

See Section 8.

Conservation Recommendations.

See Section 9.

Archaeological investigation.

In addition to detailed survey planning, archival recording and monitoring, some items may require additional conservation and management procedures (see below).

An excavation permit will be required for any site, which requires archaeological excavation. The procedures to be followed are the same as those for major projects (see Section 9.4).

1. Wire Gully gold diggings and water race.

The gold diggings at Wire Gully have been recorded to archival standard. The recording excluded the water race from Flyers Creek, which should be recorded prior to any disturbance.

2. Te Anau.

Heritage and archaeological assessment reports have been completed for Te Anau Homestead. Recommendations for the management of heritage items are included in these reports. It is recommended that the former dairy should be relocated and conserved.

3. Land neighbouring Te Anau and Cadiangullong Creek.

The 1995 Conservation Plan does not appear to have undertaken any detailed historical research or site survey to the south of the historical Cadia mines. Only a few heritage sites, mainly standing farm buildings, were recorded in Zone 3. South Cadia. Te Anau was one of these farms.

Subsequent research for Ridgeway and also for Waringa has identified the sequence of farmsteads on parish portions as they were progressively amalgamated into larger

holdings in the 19th and 20th century. The excavation of Waringa and Tynan's Slaughterhouse has shown the contribution that these sites can make.

The land around Te Anau is the only remaining area in Zone 3. South Cadia, where sufficient land remains undisturbed to allow sites relating to historical farm development to survive (see Figure 13.1, item 3, outlined in red).

The reports on Te Anau have identified a number of sites on neighbouring portions, in addition to the items already identified in the 1995 Conservation Plan. These sites may require archaeological assessment and excavation if disturbed.

Heritage Investigations – current status.

A number of archaeological investigations have been completed in Zone 3. South Cadia.

The gold diggings at Wire Gully have been recorded to archival standard. The recording excluded the water race from Flyers Creek.

The archival recording of Spring Dell Homestead has been completed.

Archival recording and excavation of sites on Waringa have been completed.

An archival record has been prepared for Te Anau Homestead. Heritage and archaeological assessment reports have also been completed for work in progress.

See Bibliography in Appendix 1.



Figure 31.1. Map of heritage items in Zone 3. South Cadia.

APPENDIX. 1. LIST TO ARCHAEOLOGICAL AND OTHER HERITAGE REPORTS.

Conservation Management Documents.

Godden Mackay, Cadia Mining Project, Final Conservation Plan. Newcrest Mining Limited. 1995.

Heritage Management Consultants. *Appendix N. European Heritage Survey & Assessment*, in Resource Strategies. Ridgeway Project. Environmental Impact Statement. Cadia Holdings Pty Limited. 2000.

Progress Reports (see Condition 4 of the 1997 excavation permit).

Edward Higginbotham & Associates Pty Ltd. Progress Report on archaeological investigations, Cadia Hill Gold Mine and the Ridgeway Project, Cadia, NSW. 1996-2000. Cadia Holdings Pty Limited. 2001.

Edward Higginbotham & Associates Pty Ltd. Progress Report on archaeological investigations, Cadia Hill Gold Mine and the Ridgeway Project, Cadia, NSW. Progress report 2. 2001-2002. Cadia Holdings Pty Limited. 2002.

Interpretation Plan.

Kylie Winkworth. 2005. Cadia Interpretation Plan. Cadia Valley Operations.

Zone 1. Ridgeway.

Ridgeway – “Tunbridge Wells”.

Edward Higginbotham & Associates Pty Ltd. Historical and archaeological assessment of the Cadia Ridgeway Project on 'Tunbridge Wells', Four Mile Creek Road, Near Orange, N.S.W. Resource Strategies Pty Ltd. 1998.

Edward Higginbotham & Associates Pty Ltd. Historical and archaeological evidence for mining activity on the route of the proposed underground conveyor, Cadia Ridgeway Project (MLA 103), 'Tunbridge Wells', Four Mile Creek Road, near Orange, NSW. Ridgeway Project. 2001.

Edward Higginbotham & Associates Pty Ltd. Archival recording of sites in advance of the extension of mining works, Cadia Valley Operations, Cadia, NSW. Cadia Holdings Pty Limited. 2003.

Tynan’s Slaughterhouse.

Edward Higginbotham & Associates Pty Ltd. Report on the archaeological excavation of Tynan's Slaughterhouse, Old Cadia Road, Cadia, NSW. Cadia Holdings Pty Limited. 2001

Zone 2. Cadia.

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