

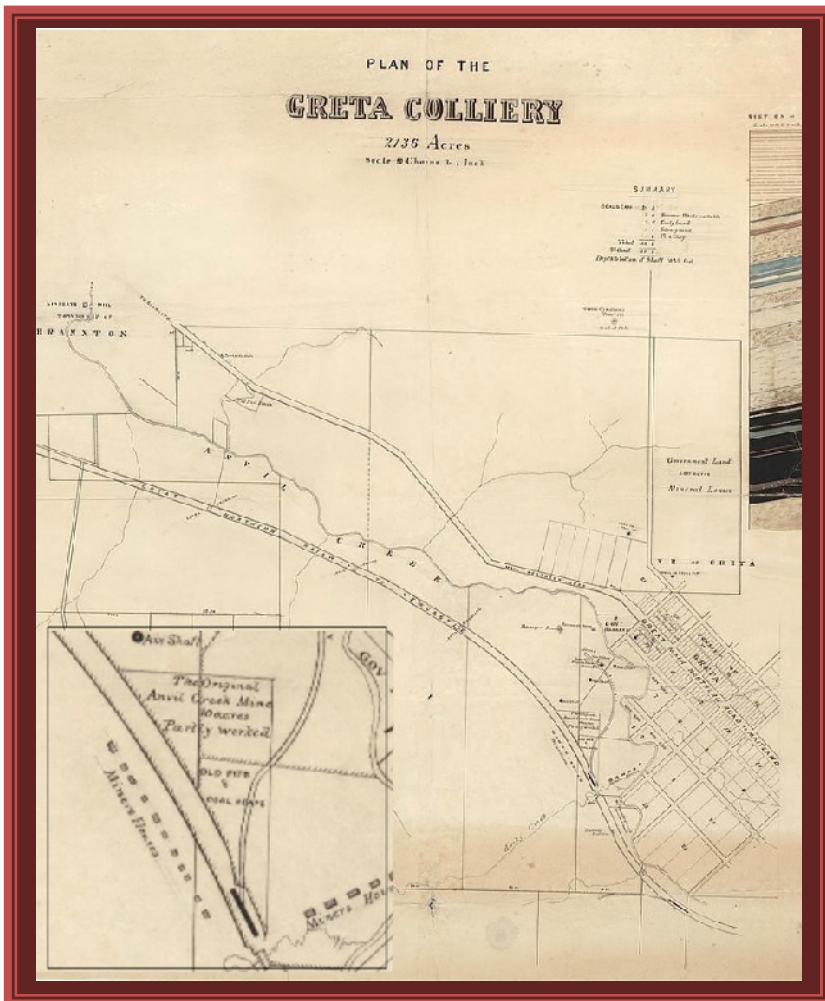
Archaeology & Heritage



Pty Ltd

July 2010

Preliminary Report:
Sub-surface Testing
of the Archaeology
of Part Lot 1,
DP1129191, at
Greta, NSW, for
Pacific National



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Preliminary Report: Sub-surface Testing of the Archaeology of Part
Lot 1, DP1129191, at Greta, NSW, for Pacific National:
Greta Train Servicing Facility Site

Prepared for:

Monteath & Powys, for Pacific National

by MAXIM Archaeology & Heritage Pty Ltd

Project No 100602

Report written by:

A handwritten signature in black ink, appearing to read "Paul Rheinberger".

Paul Rheinberger
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Date 28 July 2010

Reviewed by:

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Ross Gam
Archaeologist
Date 28 July 2010

Cover Illustrations:

Details from the Plan of the Greta Colliery by
Surveyor Maitland, 1873

Source:
National Library of Australia,
Ref: F80A & F80B

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APPENDICES

- 1 Copy of Phase 4: Archaeological Testing Methodology, Greta Train Support facility, Greta NSW (Version 3) by Sinclair Knight Merz
- 2 Copies of fieldwork records

1.0 INTRODUCTION

This document reports the further field study of the study area, which is described as a parcel of land running along the western side of the main northern railway line in a north westerly direction from Greta railway station and bounded to the west by the proposed route of the F3 Freeway to Branxton. The study was commissioned from Maxim Archaeology & Heritage Pty Ltd (Maxim) by Monteath and Powys Pty Ltd on behalf of Pacific National (the Principal).

The surface survey was reported in a document prepared by Sinclair Knight Merz Pty Ltd (SKM)¹. In subsequent discussions between representatives of the Principal, SKM and the NSW Heritage Branch of the Department of Planning, a methodology was agreed for the further investigation of the study area.

The further investigation of the study area in terms of the agreed methodology for further investigation was completed over the period 5-22 July 2010 inclusive. These elements of research and investigation are collectively referred to herein as 'the study'.

1.1 OBJECTIVES OF THE STUDY

This section abstracts the expression of objectives set out in the research design prepared in support of draft methodology entitled Phase 4: Archaeological Testing Methodology, Greta Train Support Facility, Greta NSW (version 3) dated 18 January 2010.

Further investigation of the study area was projected to:

- Is there any material evidence for domestic occupation in the eastern part of the project area?
- If so, are we able to determine the type of nature of construction? Are there any structural remains?
- Is there any evidence of other domestic features such as gardens, privies, outbuildings, fencing or pathways?
- Who lived here? Is there any evidence to support hypothesis that occupation was by miners? Or even German miners?
- When was this area occupied?
- Can we distinguish any phases of use?
- What activities were conducted on the site? Was the occupation purely domestic or is there a variety of uses?
- What is the extent and integrity of archaeological deposits across the site?
- What is the geographical extent of activities?
- When was this area abandoned?

1.2 LOCATION AND FEATURES OF THE STUDY AREA

The study area is located in the environs of Greta, approximately 1 kilometre west of the township of Greta, New South Wales. The study area lay on the western side of the main northern railway line and was accessible from Mansfield Street, Greta and thence by internal property tracks and across Sawyers Creek. Access was found to be restricted during wet weather.

¹ SKM, 2010.

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

Table 1.1 - Location Data

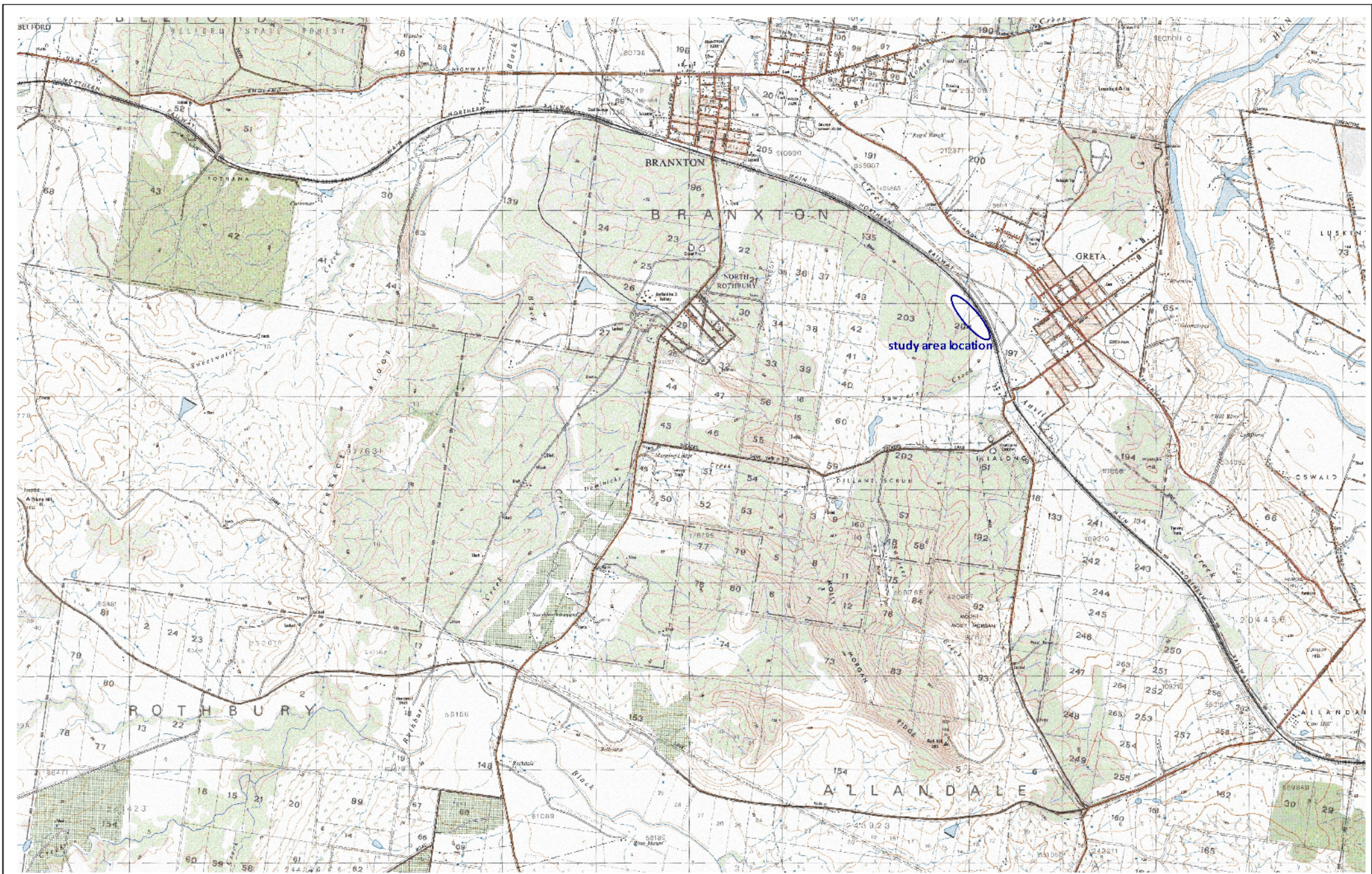
Topographic Map Sheet	91321S - Greta
Grid reference/range	348015.6382885 to 347750.6383115
Portions	203/204 (Lot 1 in DP 1129191)
Parish	Branxton
County	Northumberland
Local Government Area	Cessnock

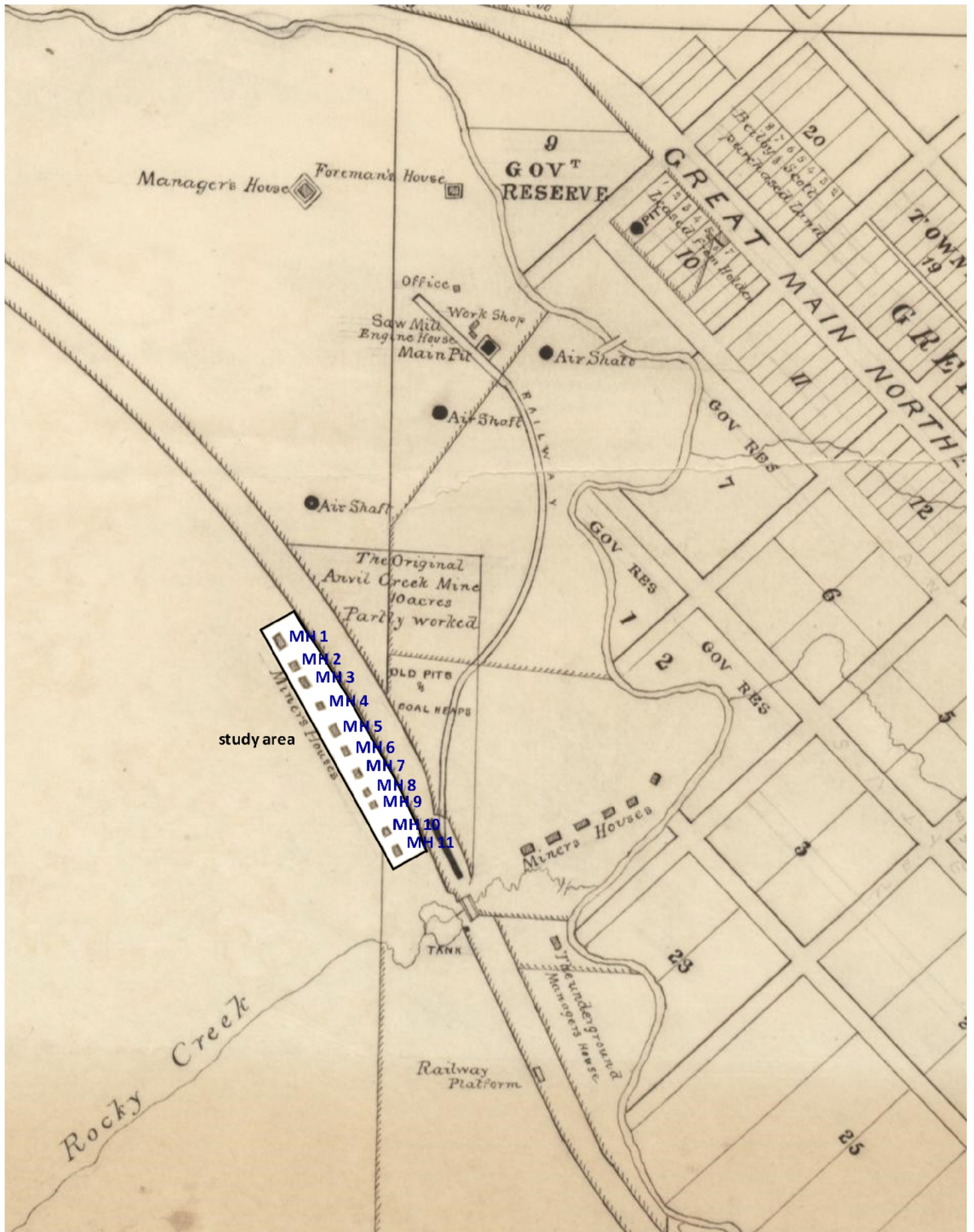
The regional location of the study area is shown on Figure 1.1 and the study area is defined in Figure 1.2.

1.3 METHODOLOGY AND REPORTING

This study and analysis was undertaken within the framework of the agreed methodology copied in Appendix 1. The sequential steps of the study have been as follows:

- The physical context of the study area was archivally recorded in the course of fieldwork. The agreed methodology called for staged excavation of the study area, which was undertaken with monitoring by study personnel and archival recording of all examples of material evidence. As will be seen more items of material evidence were salvaged, together with exemplary material, as relevant, from structural residues. Sequentially, the further study involved a detailed field survey of exposures within the study area by walking transects; two 50 metre square areas were then defined and mechanically stripped of vegetation; stripped areas were then examined by walking transects, trenches 8m x 2m, were opened in each 50 metre square area about the locations anticipated by extrapolation of early plans by survey; the locations of areas of potential interest were identified and additional overburden was removed in 8x2 and 8x1 metre trenches; the sites of two specific features was undertaken by manual investigation; no privy, or suspected privy was encountered so that no soil samples were collected; and, having regard to projected future earthworks in the study area, excavation sites were not backfilled at this stage.
- The observations made during field survey were recorded by field notes and photography. The field methodology and results of the study are described in more detail in Section 2;
- Interpretation of the raw results of fieldwork is contained in Section 3, in terms of:
 - the studies and observations made before and during the course of fieldwork,
 - our fieldwork notes;
 - the fieldwork plans and elevations recorded during the course of the study and to be refined in due course
 - the photographic record constructed during the course of fieldwork, and
- References and bibliography are provided in Section 4.





MN 1
 MN 2
 MN 3
 MN 4
 MN 5
 MN 6
 MN 7
 MN 8
 MN 9
 MN 10
 MN 11

study area

1.4 STUDY PERSONNEL

Paul Rheinberger, Principal Archaeologist, Maxim Archaeology and Heritage Pty Ltd (Maxim), conducted the research of the archaeological and physical contexts and the review and research of the historical context for this assessment.

1.5 ACKNOWLEDGEMENTS

In the conduct of archaeological study, Paul Rheinberger was assisted in the field by Archaeologist Ross Gam, whose input into the successful conclusion of field studies has been significant. Ross also reviewed the text of this report. The conduct of the study was also materially assisted by the help and participation of Steve Fray of Theiss, who was on site during the whole of the study and who provided considerable logistic and practical assistance in trying circumstances caused by the onset of extremely wet weather.

2.0 METHODOLOGY AND RESULTS

2.1 APPLICATION OF METHODOLOGY

The project followed the format of the agreed methodology mentioned above and copied in Appendix 1, sequentially requiring:

- [i.] A local survey datum related to the AHD was established by Monteath & Powys, Surveyors.
- [ii.] Two 50 metre square areas were defined on the ground encompassing the projected sites of MH10 and MH11 on the one hand and MH5 and MH6 on the other hand. In establishing these areas, reliance was placed on the extrapolation by surveyors from the 1873 plan of the Greta Colliery. The extent of these areas was recorded.
- [iii.] A detailed survey of the areas was undertaken by walking transects and a very thin scatter of non-diagnostic broken glass and ceramic was observed across the landscape.
- [iv.] Vegetation within the two 50 metre square areas was stripped by grader.
- [v.] The areas stripped by grader were examined by walked transects and, in addition to the surveyed projected locations of MH5 & 6 and MH10 & 11, a number of areas of additional interest were determined. Four of these areas were roughly square depressed areas that appeared possibly to have been the residue of structural development. Two other areas of interest were defined by exposures of minimal evidence of brickwork and another by a more concentrated scatter of artefacts.
- [vi.] At this stage the sequential process outlined in the excavation methodology was varied in that the location of four 8x2 metres trenches was marked, as originally proposed, about the locations of MH10 and MH11 and thereafter MH5 and MH6, as projected by survey. As mentioned earlier MH5 and MH6 were selected for further investigation rather than MH2 and MH3 because clearing of 50 metres square in relation to the latter would have impacted severely upon existing vegetation. Thereafter, two further 8x1 metre trenches were excavated about MH11 to attempt to extend and explain a light scatter of artefacts in the first trench and trenches were opened in the four depressed areas referred to above. The location of artefacts in trenches at MH11 was excavated by manual techniques using spade scrape and trowel. The locations of artefacts and features were appropriately recorded.
- [vii.] The brick features referred to above were exposed and excavated by manual techniques using spade scrape, trowel and brushes. The features were recorded in detail.
- [viii.] Trenches and manual excavations were undertaken to a maximum depth of 300mm or to the level of clay, whichever was less.
- [ix.] Manual investigation was, of course, undertaken using appropriate tools and was appropriately documented.
- [x.] No privy site, or projected privy site, was identified and no soil samples were collected.
- [xi.] As observed previously, having regard to the future earthworks to be undertaken on this site, backfilling was not undertaken.

In the course of the field study, a series of written records forms were completed or drafted in standard formats. These forms, and the times of their preparation, are detailed in Table 2.1.

Table 2.1: Text-Recording Forms

No	Title	Description and Purpose	Compiled
1	Site Description Sheets	... detail of location, title, ownership, occupation, use, condition, integrity and risks/threats	Before/during fieldwork
3	Site Recording Sheet – Sources	... the sources from which information about the study area have been drawn	Before/during fieldwork
4	Site Feature Recording Sheet	... macro-elements of the study area, description of the feature, its historical and structural context	Progressive, during fieldwork
6	Site Survey Index Site Type	... the site types identified on the study area, indexing them by context, date, description, ECR Sheet and excavator	Progressive, during fieldwork
7	Excavation/Survey Context Index	... allocation of context identifiers to distinguishable components exposed by excavation	Progressive, during fieldwork
8	Excavation/Survey Context Records	... description and detail of the exposure and investigation of individual contexts	Progressive, during fieldwork
9	Artefact-Origin Index	... the description and provenance of artefacts recovered in the course of fieldwork	Progressive, during fieldwork
10	Structural Element Data	... the description and function of structural elements peripheral to the major element(s) of the site feature(s)	Progressive, during fieldwork
11	Structure Recording Index	... and index SED Sheets by number, site, location and provenance	Progressive, during fieldwork
15	Photographic Catalogue	... the sequence, content and orientation of individual plate of the photographic record and relates each plate to its position in a plan	Progressive, during fieldwork
16	Photographic Plan	... the location and direction of each plate of the photographic record	Progressive, during fieldwork
20	Field Sketches, Plans, Elevations	... graphic observations made in the field of material evidence, site features and attributes and artefacts	Progressive, during fieldwork

Relevant field recording forms are copied in Appendix 2.

2.2 RESULTS

The results of the study of the archaeology of the study area in the following section in terms of the above phases of methodology.

2.2.1 Marking of two large areas to be excavated

Preliminary surveillance indicated that while the area around MH10 and MH11 was clear of middle and upper storey vegetation, that around MH2 and MH3 was not. In the interest of causing minimal interference with existing vegetation at this stage, an election was made to define two 50x50 metre squares around MH5 and MH6 and MH10 and MH11 essentially providing an equal straddle of the nominal line between the two pairs of surveyed projected sites. The surveyed positions were found to be approximately 30 metres apart so that, in a north south direction, the square projected 10 metres north of, respectively MH5 and MH10 and 10 metres south of respectively MH6 and MH11 whilst extending 25 metres on either side of the line between each of the pairs of sites, a distance of 25 metres. The surveyed positions were determined to be on a bearing of 345 degrees magnetic. The squares were then each pegged at each corner and intermediately along the length of each side.

2.2.2 Surface Survey

A detailed pedestrian survey was undertaken of both 50 metre square areas by transects walked north south at a spacing of approximately 5 metres. Visibility was reduced to about 30% as the result of the coverage of vegetation. In the result, isolated examples of broken bottle glass and plain ceramic were identified. Examination of the few pieces of glass and ceramic that were found indicated that these were non-diagnostic.

2.2.3 Machine Stripping of Overburden

A grader was used to strip overburden from each of the marked 50x50 metres squares, the spoil from each grader transect being allowed to remain as a windrow on the delivery side. Each grader transect was inspected by the archaeologists for signs of any concentration of artefacts or material evidence that might have indicated the presence of a residential unit. In a result, three areas of particular interest were identified, the first approximately 25 metres east of the surveyed projected site of MH11, the second approximately 20 metres east of the surveyed projected site of MH10 and the third approximately 15 metres east of the survey of the projected site of MH5.

Also clarified at this time were four depressed areas on the eastern periphery of the southern square about MH10-MH11.

It was determined that in addition to the planned trenches about the surveyed projected sites at MH5, 6, 10 and 11, all areas of interest – that is to say, the three specific sites and the four depressions – should be further investigated.

2.2.4 Marking trench locations

Trenches measuring 8 x 2 metres were initially planned for opening adjacent to the surveyed projected site locations of MH5, 6, 10 and 11. In order to validate, or otherwise, the accuracy of surveyed projected sites, trenches were opened adjacent to the survey pegs, sequentially, of MH11, MH10, MH6 and MH5. The locations of the trenches were measured and marked by pegs and the opening of the trenches was undertaken with a light excavator using a 1-metre-wide mud bucket. In order to maximise the potential of trenching, the 1 metre wide trenches were separated by approximately a metre and were excavated east west. Each trench was then sectioned into 1.0 metre intervals and allocated letter running from A – H, west to east.

At survey mark MH11, the southernmost trench was aligned approximately 3.9 metres south of the survey peg. Within this trench, in square A an aggregation of 23 small fractured pieces of ceramic and four similarly small broken pieces of bottle glass were located. In square C a confined scatter of 13 fragments of ceramic, two small animal bones, five fragments of glass bottle and one amorphous piece of iron were found. In square D were located four small pieces of glass bottle and one of ceramic. None of these items were sufficiently large or carried any markings that could be considered diagnostic.

The second trench adjacent to survey peg MH11 was centred approximately 1.8 metres south of the survey peg. Square C yielded one small piece of window glass and 17 fragments of ceramic and on the intersection of squares C and D, a cup handle and six small pieces of small animal bone. Square D in turn contained what appeared to be the remains of a campfire in the centre of the trench and close to the intersection of that square with square E. Square E yielded seven small pieces of ceramic and

two of bottle glass and on the intersection of squares F and G there were three small pieces of ceramic and two of bone. Again, none of these items were of sufficient size or bore any markings that would assist in diagnosis. Because of the nature of these finds it was decided to open one further trench adjacent to MH11 and this was located approximately 1.85 metres north of the survey peg and was sterile.

Trenches were opened approximately 1 metre north and 1 metre south of the survey peg at MH10 and proved to be sterile. Similarly, trenches were opened approximately 1 metre on either side of the survey pegs at MH5 and MH6 and all four trenches proved to be sterile. The locations of these trenches in relation to the relevant survey pegs are shown in blue colour on Figure 2.1.

2.2.5 Additional Overburden Removal

Consequent upon the resolution to investigate the depressions on the eastern periphery of the MH10-MH11 50x50 metre square, trenches were opened adjacent to the south eastern corner. This excavation was initially launched as an 8 x 1 metre trench and again sectioned at 1.0 metre intervals and squares identified as A-H from west to east. In this trench squares A, B, C and D revealed evidence of deep burning while the remainder of the squares E, F, G and H revealed a lighter shallow burn decreasing from west to east. Scattered throughout squares A, B, C and D were 30 small pieces of ceramic, four of bottle glass, five of window glass, two amorphous pieces of iron, a ginger beer stopper and a small fragment of linoleum, all burnt. A small southerly extension of squares A, B, C and D indicated that the burn area extended beyond and it was provisionally suggested that this burnt area represented a rubbish disposal site. The northern component of the burnt area appeared to have been excavated and removed in the creation of the deflated area that was being investigated.

The second depression was located, centred 18.0 metres north of the first depression, and was again investigated by an 8 x 1 metre trench which proved sterile. The third depression was located 9.0 metres north of the second and was similarly sterile whilst the fourth and last depression yielded a sparse scatter of ceramic and small pieces of bottle glass, all of which was non-diagnostic.

The locations of these supplementary trenches are shown in ochre colour on Figure 2.1.

2.2.6 Manual excavation of features

As mentioned above there were three further features of interest that initially were considered to warrant further detailed investigation.

The first of these was located on the eastern periphery of the MH10-MH11 50x50 metre square and was initially identified by the exposure of two bricks in close proximity having the appearance of having been placed, and reinforced by a significant scatter of bricks on the western side that appeared to be likely to be related. Preliminary manual clarification by spade scrape, trowel and brush indicated a line of the bricks bearing roughly east-west and showing the likelihood of returns at each end in a southerly direction. This situation having been established, a 4x4 metre square was gridded around the brickwork so that it extended southerly from the northern extent of brickwork. The location of this grid is shown in green on Figure 2.1 whilst the scheme of gridding and external features are shown on Figure 2.2. The grid was identified by letters along the southern boundary and numbers on the western boundary commencing from the south western corner. The brick assemblage was quickly identified as a fireplace footing with some elements of the first course of fireplace still adhering to the south western sector of footing. External dimensions of the feature showed an east-west dimension of 1520 and returns on either side of 850. The footing comprised two leaves of dry-laid bricks in stretcher form with additional closers for length while the fragment of

residual fireplace structure indicated that it had been laid in lime mortar, again in two leaves of stretcher bricks. The fireplace footing extended across square B4 and half way across C4.

The north-western peg of square B4 was located 50 north and 50 west of the north-west corner of the footing and was determined to be 23.72 metres, bearing 247 degrees magnetic from the MH11 survey peg. The excavation of the gridded area was undertaken by manual technique and yielded a range of artefact material:

- Square A4 revealed two pieces of glass bottle
- Square B3 exposed a close aggregation of iron nails, a fragment of ironstone ceramic and a tight aggregation comprising a plain egg cup base, four plain and three blue transfer-printed fragments of ceramic.
- Square C2 produced a short iron spike and a small scatter of window glass.
- Square C4 yielded a long iron spike, a substantial part of the broken head of a miner's pick and another fragment of ironstone ceramic.
- Square C4 yielded the base of an Eley 12 gauge shotgun cartridge.
- Square B2 contained an assemblage of window glass, a fragment of ironstone ceramic and several small pieces of ironstone.
- Square D4 provided a sample of thin metal sheet.

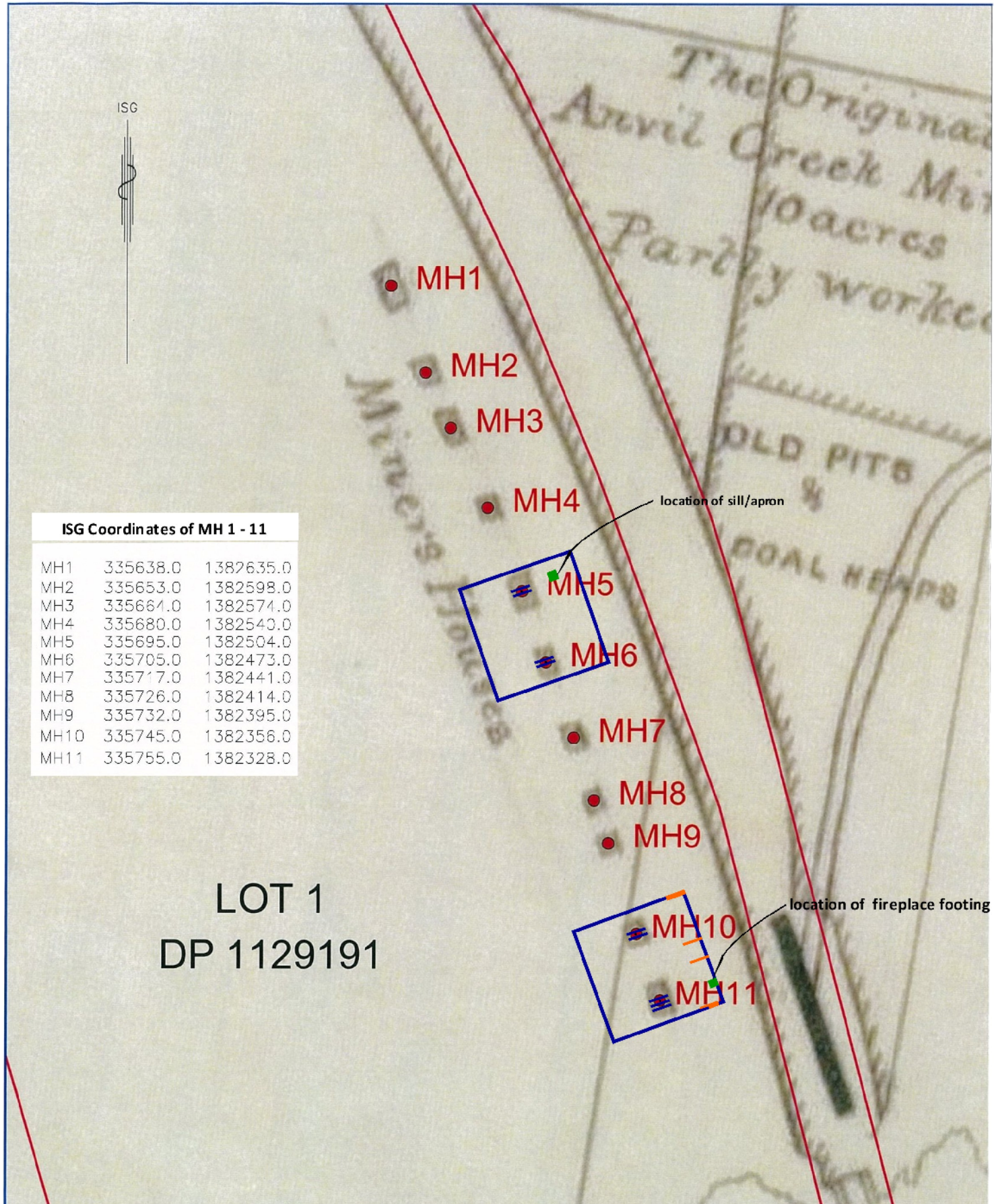
Immediately outside the marked grid, adjacent to the prolongation of the 2-3 grid line was another small piece of ironstone ceramic. The locations of the elements are all shown on the relevant ECIs and also upon Figure 2.2.

In addition to the plot of gridding, the fireplace footing and the relevant artefacts, the composition of brickwork was also accurately plotted. The bricks were uniformly, approximately 240 long, 120 wide and 70 deep. The footing was proved to be two courses deep and lay upon the clay substrate. The brickwork of the footing was simply laid without overlap.

In terms of depth, the upper surface of the fireplace footing and all the artefacts were identified at a level approximately 150mm below the ambient ground level. This site was accorded the identifier MH11-E and a selection of photographs is contained within Figure 2.3, 2.4, 2.5, 2.6, 2.7 and 2.8.

The second area of interest was selected because the grader scrape had exposed a number of small fragments of ceramic and bottle glass. Preliminary manual investigation by spade scrape and trowel indicated that there was no depth to the deposit and that it was simply a random scatter of which there were a number across the landscape, as has been previously observed. In the circumstances, this site was abandoned, despite being persuasively located approximately 20 metres east of the survey peg for MH10. This site was nonetheless given the identifier MH10-E.

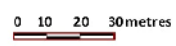
The third area determined to be of further interest was located east of MH5 and was given the identifier MH5-E. Initial attention was directed to the site by the exposure of brick batts in association with a length of sandstone in pieces, which appeared to be arranged. Preliminary manual investigation exposed a small pad of brick batts and full bricks adjoining the aforesaid sandstone slabs







ISG Coordinates of MH 1 - 11

MH1	335638.0	1382635.0
MH2	335653.0	1382598.0
MH3	335664.0	1382574.0
MH4	335680.0	1382540.0
MH5	335695.0	1382504.0
MH6	335705.0	1382473.0
MH7	335717.0	1382441.0
MH8	335726.0	1382414.0
MH9	335732.0	1382395.0
MH10	335745.0	1382356.0
MH11	335755.0	1382328.0

**LOT 1
DP 1129191**



 Location of 50x50m square.

-  Trench at surveyed position
-  Investigation trench
-  Location of grid

