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Project Report 1152.1(1)



by Steve Baker

Prepared for:
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Middleton Bottom wheel pit, Middleton-by-Wirksworth, Derbyshire

National Grid Reference: SK 28311 55174

Archaeological trial trenching

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Reporting

Steve Baker

Illustrations

Jo Mincher

Checked by:	Passed for submission to client:
Date: 14 th January 2008	Date: 14 th January 2008
Steve Baker <i>Project Archaeologist</i>	James Symonds <i>Director</i>

OASIS SUMMARY FORM

PROJECT DETAILS		
OASIS identifier	arcus2-36158	
Project title	Middleton Bottom wheel pit – archaeological trial trenching	
Short description of the project	ARCUS were commissioned by Derbyshire County Council to carry out a programme of archaeological trial trenching at Middleton Bottom wheel pit, Middleton-by-Wirksworth, Derbyshire, as part of a programme of refurbishment. Trenches were hand-excavated around the eastern and western ends of the wheel pit structure. The build of the wheel pit structure appeared to be late 19 th century in date, and the pit had been cut into the embankment deposits relating to construction of the Cromford and High Peak Railway. The build of the pit, and the associated material culture, suggests therefore that it was not contemporary with construction of the railway in the 1820s, and represents a later insertion or replacement of an original pit.	
Project dates	October 2007	
Previous/future work	Subsequent to a heritage audit of the Cromford and High Peak Railway carried out by ARCUS in 2003/4	
Monument type and period	Wheel pit (railway incline); post-medieval (1870-1900)	
Significant finds (artefact type and period)	Ceramic, clay pipe, CBM (late 19 th century)	
PROJECT LOCATION		
County/Parish	Derbyshire/Middleton-by-Wirksworth	
Site address	N/A	
Site co-ordinates	SK 28311 55174	
Site area	c. 11 metres by 6 metres	
Height OD	224m	
PROJECT CREATORS		
Organisation	ARCUS	
Project brief originator	Derbyshire County Council	
Project design originator	ARCUS	
Director/supervisor	Steve Baker	
Project manager	Steve Baker	
Sponsor or funding body	Derbyshire County Council	
PROJECT ARCHIVES		
Archive Type	Location/Accession no.	Content (e.g. pottery, metalwork, etc)
Physical	Buxton Museum DERSB:2007.91	Pottery, clay pipe, animal bone, glass, CBM
Paper	Buxton Museum DERSB:2007.91	Site records, photography, correspondence, report
Digital		
BIBLIOGRAPHY		
Title	Middleton Bottom wheel pit: archaeological trial trenching	
Report no	1152.1(1)	
Author	Steve Baker	
Date	January 2008	

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NON-TECHNICAL SUMMARY

ARCUS were commissioned by Derbyshire County Council to carry out a programme of archaeological trial trenching at Middleton Bottom wheel pit, Middleton-by-Wirksworth, Derbyshire, as part of a programme of refurbishment. Trenches were hand-excavated around the eastern and western ends of the wheel pit structure. The build of the wheel pit structure appeared to be late 19th century in date, and the pit had been cut into the embankment deposits relating to construction of the Cromford and High Peak Railway. The build of the pit, and the associated material culture, suggests therefore that it was not contemporary with construction of the railway in the 1820s, and represents a later insertion or replacement of an original pit.

1 INTRODUCTION

ARCUS were commissioned by Derbyshire County Council to carry out a programme of archaeological investigation at Middleton Bottom Wheel Pit, Middleton-by-Wirksworth, Derbyshire (SK 28311 55174). The wheel pit is part of the High Peak Trail, on the former course of the Cromford and High Peak Railway, and archaeological excavation was required as part of works to preserve the existing structure and to enhance its understanding.

The need for remediation works to the wheel pit structures followed the conclusions of a heritage audit carried out by ARCUS in 2004 on behalf of English Heritage, on the route of the former Cromford and High Peak Railway.

This document is a full report on the programme of investigation carried out by ARCUS during October 2007.

2 AIMS AND METHODOLOGY

2.1 Project aims and rationale

The general requirement for remediation works to the wheel pit structures arose from the conclusions of the heritage audit, and included digging away of the ground around the pit in order to facilitate remedial works to the wooden beams.

The ground level reduction at the eastern and western ends of the pit was carried out archaeologically, to enable full recording of the deposit sequence in these areas, relating to construction of the pit. The aims of this work were as follows:

- To record and characterise the construction sequence of the wheel pit, and the nature of the surrounding deposits;
- To facilitate remedial works to the ends of the two extending principal beams and to the underlying end support beams.

2.2 Methodology

A brief for the archaeological works was compiled by Anthony Short and Partners, architects (*Description of Requirements for Archaeological Investigation: Middleton Bottom Wheel Pit*), in consultation with the Principal Historic Buildings Officer at Derbyshire County Council, and the requirements of this brief were incorporated within ARCUS' project design (Baker 2007).

All excavation and recording work were carried out in accordance with this project design (Baker 2007) and with current industry best practice (IFA 1999). To summarise:

Two trenches were hand excavated, at the eastern and western ends of the wheel pit.

- **Trench 1** (western end) measured approximately 5 metres by 1.2 metres, immediately outside the western retaining wall of the wheel pit. Hand excavation in this area proceeded to the level of the foundation courses of the pit side (approximately 1.80m).

- **Trench 2** (eastern end) measured approximately 6 metres by 1 metre, immediately outside the eastern retaining wall of the wheel pit. Hand excavation in this area proceeded to the level of the pit base (1.50m – 1.80m).

2.3 Fieldwork programme

The project was managed for ARCUS by Steve Baker. Fieldwork was carried out by Steve Baker and Katherine Baker during October 2007. Survey was carried out by Tom Sparrow.

2.4 Site location

The site is located at SK 28311 55174, immediately to the south of the High Peak Trail at Middleton-by-Wirksworth, Derbyshire. The wheel pit itself is a timber and brick structure set into the ground to a depth of approximately 1.5 metres, and the areas for archaeological investigation east and west of the pit were covered by rough vegetation. The site geology is Carboniferous Limestone of the Matlock Group.

3 ARCHAEOLOGICAL BACKGROUND

During 2004, ARCUS carried out a heritage audit of the former Peak Forest Tramway and Cromford and High Peak Railway, on behalf of English Heritage (Jessop 2004). The wheel pit at Middleton Bottom was identified as feature 96 in this audit (Derbyshire County Council SMR No. 28308), and was considered to be in 'poor' condition (**Plate 1**).

The Cromford and High Peak Railway (CHPR) is located in central Derbyshire, within the White Peak. It begins at Cromford in the Derwent Valley, traverses the county for a distance of 33 miles on an approximate southeast-northwest alignment to Whaley bridge in the north west. After leaving Cromford the CHPR climbs onto the carboniferous limestone plateau of the White Peak, a largely agricultural landscape dotted with limestone quarries. In the northwest it leaves the limestone plateau and descends into the area of gritstone moorlands and steep valleys which fringe the north western edge of the White Peak.

Opening in 1830, it was one of the earliest railways in Britain and a major feat of nineteenth-century engineering. It crossed the White Peak of Derbyshire, rising at its highest point to over 1200ft, by means of a series of nine inclined planes with fixed steam engines to pull the trains. It was envisaged that a range of commodities would be transported including coal, grain, gritstone and limestone, although lime and limestone soon came to dominate the railway.

A number of quarries developed along the route of the railway and connecting links were built to them. The main of these was the London and North Western Railway (LNWR) opened in the 1890s, to serve the quarries developed around Hartington. Changes were made to the route for various reasons during the life of the line, for example, the route was changed to go through Buxton rather than over Shallcross because of the cost of operating the inclined planes.

The railway remained in use until the final closure of the line in 1963, when Derbyshire County Council and the Peak District National Park Authority took over much of the route to turn it into a long distance footpath, the High Peak Trail.

The wheel pit at Middleton Bottom was located at the base of the Middleton Incline, a rope-worked incline operated from the engine house at Middleton Top, which

together with its ancillary structures forms a Scheduled Ancient Monument. The Middleton Bottom wheel pit was identified during the heritage audit as 'fragile and in active decay', and was included in a group of sites deemed to be in a poor state of preservation where further archaeological survey was recommended (Jessop 2004, 55).

4 RESULTS

4.1 Trench 1

Trench 1 was hand excavated along the western end of the wheel pit (**Illustration 2**), and extended to a depth of around 1.80m. This was some distance below the depth of the internal floor of the pit, and corresponded with the upper surface of the foundation courses of the pit side [101]. Excavation was halted at this point due to safety concerns about the height of standing sections.

4.1.1 *Wheel pit structures*

The western end wall [101] of the wheel pit formed the eastern baulk of Trench 1, along with two brick-lined channels [104]/[106] and [108]/[110], running west from the end of the pit across the trench (**Illustrations 2,3; Plates 2,3,4**). These were interpreted as the rope or cable channels running from the wheel pit towards the base of the Middleton Incline.

The end wall [101] of the wheel pit was built from machine made pinkish-red 3" bricks, with 8 rough circular holes, 9mm diameter, through the face, in a mid-grey cementitious mortar. Fifteen courses (1.50m) of brick were exposed above the limit of excavation, in alternating header and stretcher courses. Foundation courses, flared beyond the wall face, were visible below the limit of excavation, and the courses at each corner also flared out to the north and south towards the bottom. The uppermost brick course was slightly inset behind the face, and was constructed of bricks laid on edge with the headers facing. Above the brick courses was a 0.09m fillet of concrete, with pitch-pine cross-timbers [113] above (0.50m thick) and the two longitudinal bracing timbers [114] and [115] above these.

The end wall [101] was interrupted by two rope channels running west toward the base of the Middleton Incline, across the width of Trench 1. The side walls of each channel were constructed from 2 skins of brick, in a build identical to (through in some places rougher than) the wheel pit structure itself, and were roughly keyed into [101] at their eastern end. The bases of these walls did not however reach the base (footings) of [101], but terminated at a level roughly corresponding with the internal floor of the wheel pit. The northern channel (walls [104]/[106]) measured 0.40m wide internally, narrower than the southern channel ([108]/[110]) at 0.48m, and its southern wall [106] had a marked curve north of an east-west line. The southern walls of each channel ([106] and [110]) had concrete adhesions to the outside face, possibly indicating repair or consolidation. [110], in particular was of very rough build, being assembled almost drystone from re-used bricks with traces of their original mortar. This also suggests that the channel wall was rebuilt following a slump or collapse.

The brick and mortar used in construction of the end wall of the pit and the associated rope channel suggests a late 19th century (or even early 20th century) date for these structures. This suggests that the extant wheel pit structure does not date from the original construction of the railway in the late 1820s, but is a later addition.

4.1.2 *Stratigraphic sequence*

The wheel pit was situated just to the south of the (no longer extant) CHPR track, which appeared to be slightly embanked above the surrounding ground levels to the north. South of the wheel pit was a substantial retaining wall, representing a drop of about two metres. It appeared likely, therefore, that a substantial depth of made ground would be present in the vicinity of the wheel pit, associated with embankment and with backfilling behind the retaining wall. This proved to be the case, and despite the depth of excavation, natural deposits were not encountered in either trench.

Embankment and retaining wall backfill – early 19th century

The stratigraphically earliest deposits encountered in Trench 1 related to the CHPR embankment and to the backfill deposits behind the retaining wall. All of the wheel pit structures described above were visibly cut into this material, which appears therefore to represent a phase of made ground associated with the original construction of the railway during the 1820s.

The embankment material (107) at the northern end of the trench was a compact layer of limestone rubble in a pale yellow-brown clay matrix, with the largest rubble towards the base of the trench (angular pieces with maximum dimensions up to 0.50m). The surface of (107) was encountered at 224.32m AOD.

Towards the southern end of the trench (107) was replaced by a clinker-rich material (122), probably corresponding to the original backfill layer behind the retaining wall. Both (107) and (122) continued below the limit of excavation at 223.01 AOD.

Wheel pit structures – cut and backfill – late 19th century

The wheel pit structures described above were cut (**Illustration 3, Plate 4**) into the underlying embankment deposits – cut numbers [102], [118]-[120], [123]. Backfill material (103)/(117), a silty clinker-rich material, was then introduced to backfill around the structures. Pottery from (117) was consistently mid to late 19th century in date, consistent with the late 19th century date suggested for the insertion of the wheel pit. The clay pipe bowl from (117) dated 1870-1900 also supports this conclusion.

Decommissioning – backfill of rope channels – 1960s

Both of the rope channels running westward across the trench had been infilled to the tops of their side walls with limestone rubble (105), in the northern channel, and (109), in the southern channel. This material was small (<0.15m) and sub-angular, in a dark gritty matrix with smaller lime flecks and fragments. This episode would appear to represent the decommissioning of the rope channels, and is therefore probably associated with disuse of the incline following closure of the railway during the 1960s.

A loose clinker-rich topsoil layer (116) was present above the structures and the various backfill deposits, to a depth of 0.10m. The ground profile at this end of the trench was observed to dip considerably into the centre of each rope channel, and these dips were visible running beyond the trench to the west, towards the base of the incline.

4.2 **Trench 2**

Trench 2 was hand excavated along the eastern end of the wheel pit, and extended to the level of the internal floor of the pit, about 1.50m below the top of its end wall [201]. Excavation was suspended at this depth because of concerns over the safety of its

eastern section, then standing 1.80m high.

4.2.1 Wheel pit structures

The eastern end wall [201] of the wheel pit (**Plates 5,6**) formed the western baulk of Trench 2, and was similar in construction to [101], with the lower section in brick, and the cross-timbers resting above.

[201] used the same bricks and mortar as [101], suggesting a consistent late 19th century build. Ten courses of brick were exposed above the limit of excavation, the lowest three visible courses stepped out beyond the wall face by 0.22m. In contrast to the western end of the pit, header and stretcher course were mixed irregularly. At the pit corners the lower courses flared out to the sides as at the western end. Cracking and subsidence had occurred in the vicinity of the south-east corner of the pit, probably resulting from its construction in relatively loose backfill material behind the retaining wall. The structural cross-timbers [202] sat above the brick courses, 0.50m thick, with the longitudinal bracing timbers [203] and [204] above.

4.2.2 Stratigraphic sequence

Embankment and retaining wall backfill – early 19th century

As in Trench 1, the wheel pit structures were observed to be cut into the underlying made ground deposits relating to construction of the railway embankment and backfill behind its retaining wall. Natural deposits were not encountered within the trench. At the northern end of the trench a layer (209) of yellowish clay made ground with 80% small to medium limestone rubble was interpreted as the original embankment material associated with construction of the railway, analogous with (107) in Trench 1. At the southern end of the trench this was replaced by (205), a loose blackish material composed of 95% clinker, representing backfill behind the retaining wall of the embankment.

Wheel pit structures – cut and backfill – late 19th century

The wheel pit structures described above were cut into the underlying embankment deposits – cut number [212]. A sequence of backfill materials (**Illustration 4, Plate 8**) were then introduced around the structure – contexts (211), (210), (208) and (207), with varying quantities of clinker, silts, clay and limestone rubble.

Modern topsoil formation

Above the clinker-rich backfill (207) a topsoil layer had formed, 0.30m thick and composed of a dark black-brown loam with 20% clinker and frequent roots.

5 ARTEFACTS

5.1 The ceramics by Dr CG Cumberpatch

The pottery assemblage consisted of eight sherds of pottery weighing ninety-one grams representing a maximum of eight vessels. The data are summarised in **Table 1**, below.

The pottery assemblage was split between sherds of tableware (Whiteware and Bone China) and utilitarian stonewares. The majority of the latter appeared to be from bottles or flagons and one sherd included part of a plaque with stamped writing,

presumably the name and address of the retailer although too much of the plaque was missing for this to be confirmed.

The tablewares included fragments of two plates and the rim of a hollow ware vessel, probably a small bowl (the folded rim being unsuitable for a cup).

The assemblage is too small for any significant conclusions to be drawn from it, beyond indicating in general terms, the date range of the two contexts represented.

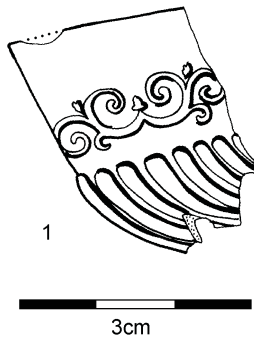
Context	Type	No.	Wt.	ENV	Part	Form	Decoration	Date range	Notes
107	Stoneware	1	12	1	Base	Hollow ware	Cream stoneware	C19th	
107	Stoneware	1	12	1	BS	Flagon	Green stoneware	M - LC19th	Part of stamped plaque; 'W... / W...'
117	Bone China	1	2	1	BS	Flatware	U/Dec	C19th	
117	Bone China	1	2	1	BS	Flatware	U/Dec	M - LC19th	Crazed and discoloured
117	Brown Salt Glazed Stoneware	1	2	1	BS	Hollow ware	U/Dec	M - LC19th	
117	Stoneware	1	36	1	Base	Hollow ware	Green stoneware	M - LC19th	
117	Stoneware	1	23	1	BS	Flagon	Green stoneware	M - LC19th	Part of handle stump
117	Whiteware	1	2	1	Rim	Hollow ware	U/Dec	M - LC19th	Folded rim with lateral cavity
	Total	8	91	8					

Table 1: Pottery from Middleton Bottom Wheel Pit, Middleton-by-Wirksworth, Derbyshire.

5.2 The clay tobacco pipes by Dr DA Higgins

The site produced a total of just 2 pieces of clay tobacco pipe, both of which are bowl fragments. These were both recovered from context (117) and fit together (freshly broken) to make up about a half of a decorated pipe bowl (below). This has a cut rim and fluted decoration on the lower part of the bowl, above which is a scrolling tendril motif. Both sides of the bowl would have had the same decoration on. The lower part of the bowl is missing and so it is uncertain whether this particular pipe would have had a heel or not. The particular arrangement of decorative motifs seen on this bowl was introduced around the middle of the nineteenth century and remained popular until the early twentieth century, with the majority of the examples probably being produced around 1870-1900. The bowl fragment recovered is most likely to date from c1870-1900 and probably came from a short-stemmed or 'cutty' style of pipe. The decoration is competently and neatly executed in the mould and of a popular style for the period. Pipes of this type would have been made by many of the manufacturers supplying this region and it is impossible to source this piece more accurately without either a maker's mark or a mould match with a previously identified pipe. The recovery of this example, however, adds to our somewhat meagre knowledge of pipes from Derbyshire as a whole and provides a useful reference point for future research.

The author is grateful to Dr S. D. White, who prepared the illustration below



Bowl fragment from context (117)

5.3 The brick sample by J Tibbles

A single complete brick weighing 3490 grams was submitted for assessment. It should be noted that the diversity of size and colour within brick caused during the manufacturing process, must be taken into consideration when comparing examples within collected assemblages and local typologies. The varying sizes and colours can be attributed to the variation in the clays used, shrinkage during drying, firing within the kiln or clamp and the location of the brick within the kiln. The dating of ceramic building material can be highly contentious due to its re-usable nature, therefore the date range given is that of the known dates where such bricks have been recorded.

The brick sample came from context [101] (the western end of the wheel pit structure) and comprised a single complete brick with dimensions of 230mm x 110mm x 75mm (9" x 4 1/4" x 3"), in a red (10R/5/6) homogenous oxidised fabric with sharp arrisses and a skintling (kiln stacking) mark across one stretcher surface. Two parallel rows of 8 punched circular perforations 42mm in diameter were present, and machine extrusion impressions were noted on two stretcher surfaces.

The brick is of a 'Beart Type' manufactured in Bedfordshire during the mid-late 19th century. The perforations served several functions, which included the saving of raw material, produced lighter and more evenly fired bricks and gave a key to mortar. Beart perforated bricks produced in 1852 had twenty-four perforations although by 1870 his bricks at Arlesey only had twenty-one (Cox 1979, 44-45).

5.4 Animal bone by Linzi Harvey

Two fragments of animal bone from a single stratified context were recovered (**Table 2**).

Context	No. frags	Date	Description and measurements
205	2	-	2 large mammal (pBos) rib fragments, both butchered. One shows chop mark across shaft and possible gnawing at one end. One shows saw marks at both ends.
TOTAL	2		

Table 2: Summary of the animal bone

The bone fragments derive from context (205), representing the original embankment construction of the CHPR during the early 19th century, and presumably relate to the disposal of food waste. No further work is recommended.

5.5 The glass by Linzi Harvey

A single fragment of glass was recovered (**Table 3**) from context (205), representing the original embankment construction of the CHPR during the early 19th century. This fragment of glass tube perhaps relates to scientific or medical equipment, and its presence within a mixed infill deposit presumably results from the collection, curation and sorting of mixed household and industrial waste to be re-used as builder's hardcore.

Context	No. frags	Date	Description and measurements
205	1	19 th century	1 fragment of clear/aqua coloured cylindrical glass tube, inner diameter 10mm, outer diameter 14mm. May be scientific or industrial equipment fragment.
TOTAL	1		

Table 3: Summary of the glass

Beyond these general observations, the glass assemblage is of little further archaeological or contextual value, and no further work is recommended.

6 DISCUSSION

Evidence from both trenches suggested the following chronological sequence:

1. Construction of the Cromford and High Peak Railway (late 1820s). The embankment for the railway, and the associated retaining wall to the south, were constructed from layers of made ground deriving in part from natural material (limestone rubble and clay) and in part from industrial debris (fuel ash and clinker). This accumulation represented a significant depth of material above the underlying natural slope, and natural deposits were not encountered within 1.80m of the present ground surface.
2. Construction of the wheel pit (late 19th century, probably within the period 1870-1900). The wheel pit itself, and the rope channels running west towards the base of the Middleton Incline, were cut into the earlier embankment and infill deposits associated with the original railway construction, with layers of backfill being introduced around the structures. The backfill material was rich in industrial clinker/fuel ash waste, but also contained lenses of limestone rubble and clay material presumably derived from natural deposits. The brick used in the wheel pit and channels is of a mid to late 19th century type, and the ceramic and clay pipe evidence within the surrounding backfill deposits support this chronology, with a date somewhere between 1870 and 1900 most likely. This indicates that the surviving wheel pit structure is not an original feature contemporary with construction of the railway, but represents a later addition during the later 19th century. It is not however, known whether the wheel pit replaced an earlier structure: no structural or stratigraphic evidence for such a structure was identified.
3. Subsidence and consolidation (20th century). Subsidence of the south-eastern corner of the wheel pit had occurred during its lifetime, due to the southern edge of the pit being constructed within the relatively loose clinker-rich material

backfilling behind the embankment retaining wall. Along the western edge of the pit there was evidence for consolidation of the rope channel walls using concrete, and possibly for unmortared rebuilding of one of the channel walls using the original bricks.

4. Decommissioning and disuse (1960s on). The rope channels at the western end of the pit were backfilled with a limestone rubble deposit, and this probably represents the closure of the railway during the 1960s. Topsoil formation above this level, and at the eastern end, has occurred in the intervening period.

Of particular interest is the construction date of the surviving wheel pit structure, fixed by analysis of brick samples and the pottery and clay pipe from backfill deposits somewhere in the period 1870-1900. This clearly does not correspond to the original construction period of the CHPR during the late 1820s, and the wheel pit may therefore date to the sequence of improvements brought about under LNWR ownership between the 1860s and 1890s (Jessop 2004, 7). Whether this late 19th century wheel pit replaced an earlier structure is not known; further documentary research would perhaps be needed to resolve this issue. No evidence was identified for an earlier structure on the same site

7 ARCHIVE

The site archive will be deposited with Buxton Museum and Art Gallery under accession number DERSB: 2007.91.

8 COPYRIGHT

ARCUS give permission for the deposited material to be used by the Museum, in perpetuity, although ARCUS retains the right to be identified as the author of all project documentation and reports as specified in the *Copyright, Designs and Patents Act 1988* (chapter IV, section 79). The permission will allow the Museum to reproduce material, including for use by third parties, with the copyright owner suitably acknowledged.

9 REFERENCES

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Project:

Middleton Bottom wheel pit

Title:

Site Location Map

Scale:

1:25000

NGR:

SK 28311 55174

Project No.:

1152

Date:

October 2007

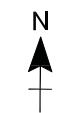
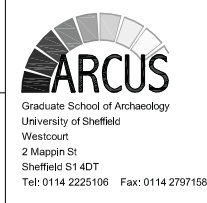
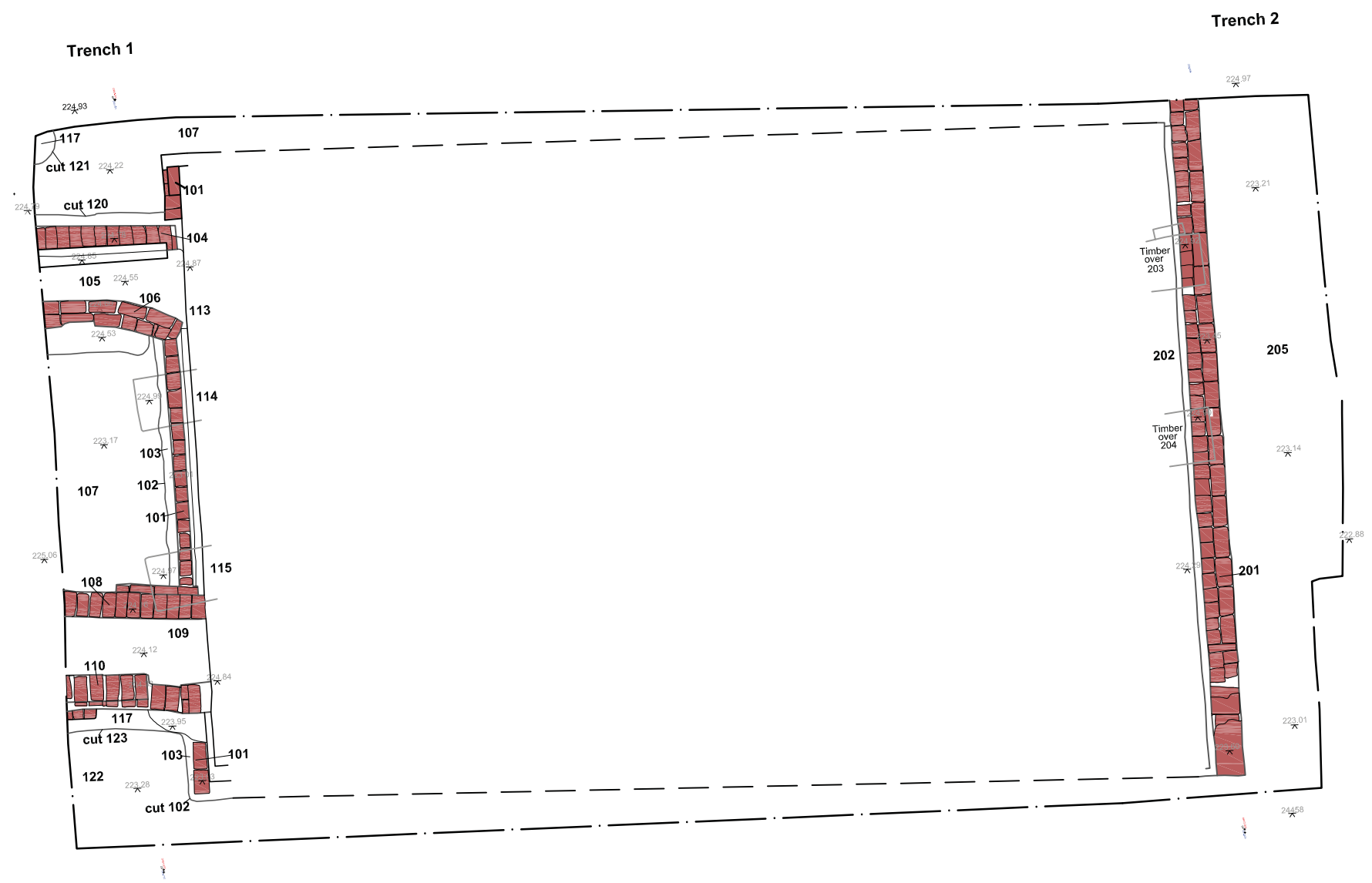
Drawn:

Steve Baker

Illustration No.:

1

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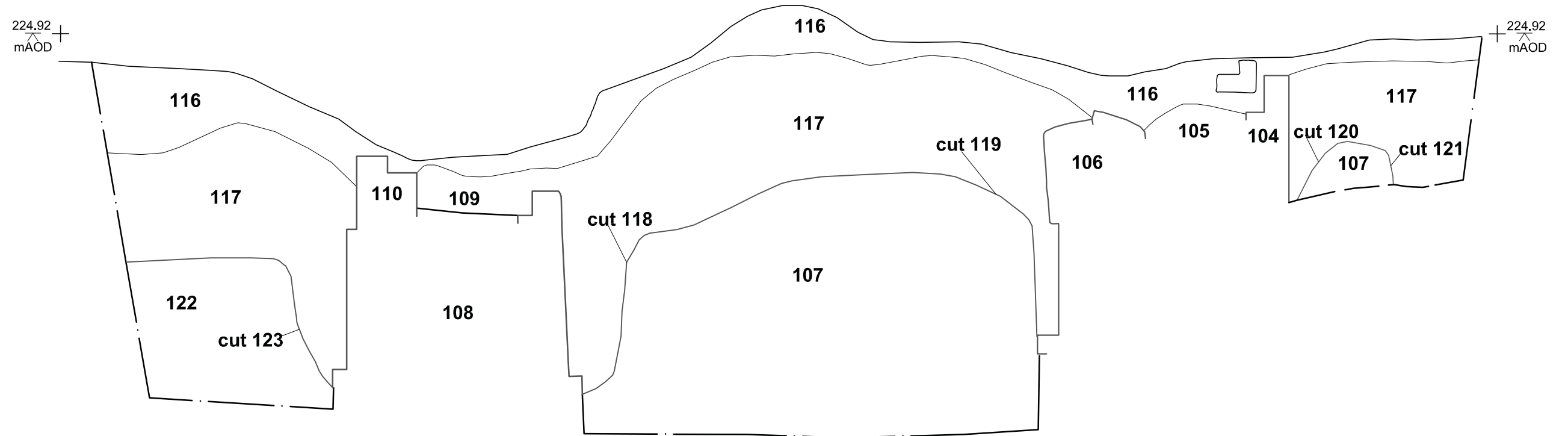


Project:	Middleton Bottom Wheel Pit		Scale	1:50	Date	December 2007
Title	Trench Location Plan		NGR	sk: 28311 55174	Drawn	J.Mincher
			Project No.	1152	Illustration No.	2

Trench 1

S

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Project:	Middleton Bottom Wheel Pit	Scale	1:20	Date	December 2007
Title	Trench 1, east - facing section	NGR	SK: 28311 55174	Drawn	J.Mincher
		Project No.	1152	Illustration No.	3

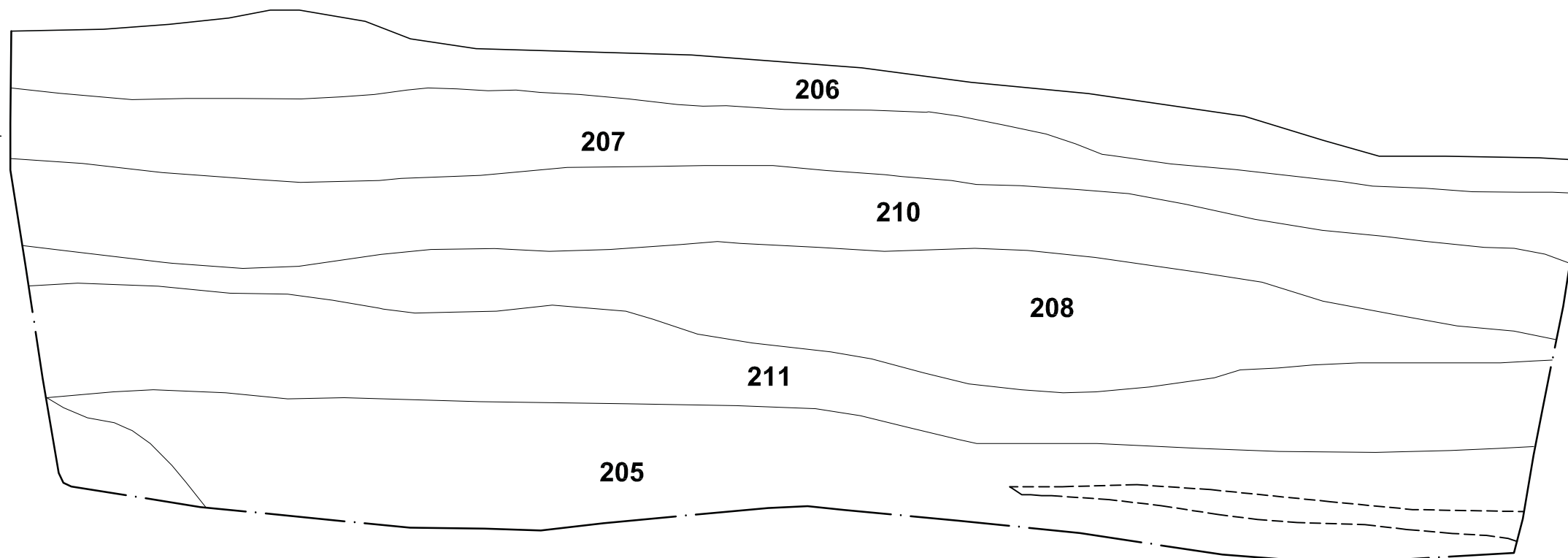
Trench 1

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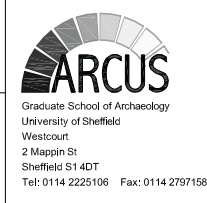
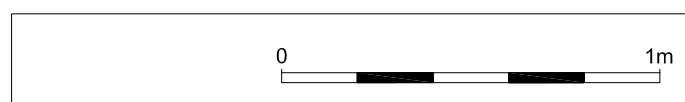
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Project:	Middleton Bottom Wheel Pit	Scale	1:20	Date	December 2007
Title	Trench 2, west-facing section	NGR	SK: 28311 55174	Drawn	J.Mincher
		Project No.	1152	Illustration No.	4



Plate 1: Wheel pit before remediation works, looking east



Plate 2: North-eastern end of pit showing northern rope channel, looking east



Plate 3: Western end of pit showing rope channels, looking north



Plate 4: Western wall of pit and southern rope channel, showing cuts into embankment material (107), looking south



Plate 5: Eastern end of pit, looking south-west. Note cracking and subsidence at south-east corner (left of photo).



Plate 6: North-east corner of pit, looking west



Plate 7: Wheel pit structure post-excavation, looking east



Plate 8: Section at eastern end of pit, showing the sequence of made ground and backfill deposits, looking south

APPENDIX 1: LIST OF CONTEXTS

Context Number	Context Type	Description
101	Structure	Outer wall of wheel pit (west end)
102	Cut	Wheel pit construction cut, into embankment material (107)
103	Deposit	Backfill of cut [103], probably same as clinker deposit (117)
104	Structure	North wall of northern rope channel from wheel pit
105	Deposit	Limestone rubble backfill of northern rope channel
106	Structure	South wall of northern rope channel from wheel pit
107	Deposit	Embankment material – compacted limestone and clay
108	Structure	North wall of southern rope channel from wheel pit
109	Deposit	Limestone rubble backfill of southern rope channel
110	Structure	South wall of southern rope channel from wheel pit
111	Deposit	Same as (117)
112	Deposit	Same as (122)
113	Structure	Structural cross-timbers forming part of [101]
114	Structure	Longitudinal structural timber, part of [101]
115	Structure	Longitudinal structural timber, part of [101]
116	Deposit	Topsoil (western end)
117	Deposit	Infill/backfill deposit following wheel pit construction
118	Cut	Cut for rope channel wall [108] into embankment (107)
119	Cut	Cut for rope channel wall [106] into embankment (107)
120	Cut	Cut for rope channel wall [104] into embankment (107)
121	Cut	Unexcavated cut in extreme NW corner of Trench 1
122	Deposit	Clinker rich embankment material
123	Cut	Cut for rope channel wall [110] into embankment (122)
201	Structure	Outer wall of wheel pit (east end)
202	Structure	Structural cross-timbers forming part of [201]
203	Structure	Longitudinal structural timber, part of [201]
204	Structure	Longitudinal structural timber, part of [201]
205	Deposit	Clinker rich embankment material

Context Number	Context Type	Description
206	Deposit	Topsoil (eastern end)
207	Deposit	Black clinker infill material, immediately below topsoil
208	Deposit	Limestone rubble material packed around wheel pit structure
209	Deposit	Embankment material – compacted limestone and clay
210	Deposit	Clinker infill material with clay lenses
211	Deposit	Infill/backfill deposit following wheel pit construction