
NORTH PENNINES ARCHAEOLOGY LTD

Project Designs and Client Reports No. CP/138/04

**ARCHAEOLOGICAL
BUILDING RECORDING
PROJECT AT THE
FORMER ENGINE SHED,
HALLBANKGATE,
BRAMPTON
CUMBRIA**

**FOR
EDWIN THOMPSON
CHARTERED SURVEYORS**

**NY 5806 5964
Planning Application
Reference: 1/04/0734**

C J Jones BA, MA, AIFA
North Pennines Archaeology Ltd
Nenthead Mines Heritage Centre
Nenthead
Alston
Cumbria CA9 3PD
Tel: (01434) 382045
Fax: (01434) 382294
Mobile: 07979 671882
Email: C.Jones@nparchaeology.co.uk

18th October 2004



CONTENTS

	<i>Page</i>
List of Illustrations.....	iii
List of Plates	iv
Executive Summary.....	v
Acknowledgements	vi
1 INTRODUCTION.....	7
2 AIMS AND METHODOLOGY	7
2.1 PROJECT DESIGN	7
2.2 DESK-BASED ASSESSMENT	7
2.3 BUILDING SURVEY	8
3 ARCHAEOLOGICAL BACKGROUND	8
4 HISTORICAL BACKGROUND.....	9
4.9 MAP REGRESSION	11
4.9.1 RAILWAY MAPS 1798-1863	11
4.10 ORDNANCE SURVEY 1 ST EDITION	11
4.11 ORDNANCE SURVEY 2 ND EDITION.....	11
4.12 20 TH CENTURY MAPS	11
5 THE BUILDING SURVEY	12
6 CONCLUSION	16
7 BIBLIOGRAPHY	16
7.1 PRIMARY SOURCES	16
7.2 SECONDARY SOURCES	16

LIST OF ILLUSTRATIONS

	<i>Page</i>
Figure 1 Ground Floor Plan.....	13
Figure 2 Site Location @ 1:50,000	16
Figure 3 Site Location @ 1:10,000	17
Figure 4 Railways and Collieries 1798-1958	18
Figure 5 James Thompson's map of 1828.....	19
Figure 6 Hallbankgate in 1950	20
Figure 7 Ordnance Survey 1 st Edition	21
Figure 8 Ordnance Survey 2 nd Edition	22
Figure 9 North External Elevation	25
Figure 10 West External Elevation	26
Figure 11 South External Elevation	27
Figure 12 East External Elevation.....	28

LIST OF PLATES

	<i>Page</i>
Plate 1 North External Elevation	12
Plate 2 West External Elevation	12
Plate 3 West Doorway.....	14
Plate 4 South External Elevation	14
Plate 5 East External Elevation.....	14
Plate 6 The Belted Will.....	23
Plate 7 The Rocket and Belted Will at Halton Lea Gate, c.1840.....	23
Plate 8 The Rocket in its original form.....	24
Plate 9 Hallbankgate Locomotive Shed in early 1952	24

EXECUTIVE SUMMARY

In July 2004 North Pennines Archaeology Ltd was commissioned by Chris Reeve of Edwin Thompson Chartered Surveyors to undertake an archaeological building recording project at the former Engine Shed, Hallbankgate, Cumbria. The work follows a planning application for the demolition of the shed prior to the development of the site.

The study involved the collection of all readily available information regarding the archaeological and historic significance of the site held in the County Sites and Monuments Record, Kendal and the County Record Office, Carlisle, including historic maps, documents and photographs.

The building forms part of Lord Carlisle's Railway system, an important early railway dating from 1798. The shed was first built c.1840 and is a unique two road locomotive shed, built at the same time as the locomotives Rocket and Belted Will were put to work on the railway. The Rocket was used along the Midgeholme section of the railway between 1837 and the early 1840s, when it was taken out of service and stored at Kirkhouse. The Rocket was sent to Stephenson's workshop in Newcastle prior to its display at the Great Exhibition of 1851.

The shed is a rare early survival of its type within Cumbria and is significant as an important piece of railway architecture in Cumbria.

ACKNOWLEDGEMENTS

Thanks are due to the following people and institutions who gave help and assistance during the compilation of this report: Jo Mackintosh of Cumbria County Council Historic Environment Record, Chris Reeve of Edwin Thompson and all the staff at the County Record Office, Carlisle.

The project was undertaken by Chris Jones BA, MA, AIFA. The report was edited by Juliet Reeves, BA. Overall responsibility for the project rested with Frank Giecco, BA, Dip Arch, AIFA, NPA Principal Archaeologist and Technical Director.

1 Introduction

- 1.1 In June 2004 North Pennines Archaeology Ltd was commissioned to undertake an Archaeological Building Recording Project at the Former Engine Shed, Hallbankgate, Cumbria. The work was requested by Cumbria County Council Archaeology Service following a planning application for its demolition (Parsons 2004). The work consisted of a Desk-Based Assessment of the existing resource in order to assess the historic significance of the shed and in particular its link with Stephenson's Rocket. This was followed by a measured survey of the building according to a Level 3 specification (RCHME 1996).
- 1.2 The Former Engine Shed is situated within the village of Hallbankgate, Brampton, Cumbria (NY 5806 5964), approximately 2.5 miles south-east of Brampton within the Parish of Farlam. It formed part of the extensive Lord Carlisle's Railway system, an important early railway which dates from 1798.
- 1.3 The shed is regarded as of being of archaeological significance as it is a rare early survival of such a railway structure in Cumbria. The shed was built in the 1840s as a two-road locomotive shed. This date, however, post-dates the working life of Stephenson's *Rocket* on Lord Carlisle's Railway, and was used by James Thompson's other early locomotives, the *Belted Will*, *Mosstrooper* and *Loch*.

2 Aims and Methodology

2.1 Project Design

- 2.1.1 A Project Design was prepared prior to the commencement of the project, which was submitted to and approved by Cumbria County Council Archaeology Service. This included a detailed specification of works to be carried out, which consisted of a desk-based assessment prior to fieldwork, a measured survey of the building and a programme of report preparation.

2.2 Desk-Based Assessment

- 2.2.1 The assessment involved the consultation of the Cumbria County Council Sites and Monuments Record, in the first instance. This was in order to obtain information on the location of all designated sites and areas of historic interest and any other, non-designated sites within the study area, which included monuments, findspots, Listed Buildings and Conservation Areas. This was followed by the consultation of the County Record Office, Carlisle, in order to assess all available maps, documents and photographs relevant to the site.
- 2.2.2 The archive of North Pennines Heritage Trust was also consulted regarding the Lord Carlisle's Railway project archive. This contained valuable information regarding the origins and development of LCR and the relationship between The Rocket and the Engine Shed.

- 2.2.3 An electronic enquiry was also made of English Heritage's National Monuments Record and the website of the Archaeology Data Service. This was in order to enhance and augment the data obtained from a search of the appropriate repositories.
- 2.2.4 Use of the internet was made including a search of the National Railway Museum's Library, the Science Museum and the Cumbria Industrial History Society.
- 2.2.5 The desk study was undertaken in accordance with the Institute of Field Archaeologists *Standards and Guidance for Archaeological Desk-Based Assessments* (IFA 1994).

2.3 Building Survey

- 2.3.1 The work consisted of a measured survey of the building, corresponding to a RCHME Level 3 (RCHME 1996). The principal aim of the survey was to provide a detailed drawn and photographic record of the structure prior to demolition.
- 2.3.2 The work involved the following:
- the precise location of the building, providing an address and NGR;
 - a date when the project was undertaken and by whom;
 - a description of the buildings plan, form, function, age, development sequence and construction materials. This includes the buildings architects, builders, patrons and owners where known;
 - a description of the buildings landscape and historic context;
 - a plan of the building showing the location of architectural features of interest;
 - elevation drawings, where appropriate, to show vertical relationships;
 - a full photographic record.

3 Archaeological Background

- 3.1 In 1999 Mick Krupa, NPHT Archaeologist, undertook an assessment of Lord Carlisle's Railway between Hallbankgate and Lambley. The assessment was undertaken in advance of a proposal by Sustrans, the sustainable transport charity, to create a cycleway along the above section of disused railway line. The work identified a number of important surviving remains associated from the railway including the locomotive shed at Hallbankgate (Krupa, M. 1999).

4 Historical Background

- 4.1 Lord Carlisle's Railway has its origins in the development of the east Cumberland coalfields on the Naworth estates belonging to George Howard, 9th Earl of Carlisle. During the 16th and 17th centuries limited extraction of the coal reserves had been undertaken from shallow drifts cut into the hillsides of the surrounding fells wherever they outcropped. The coal thus obtained would be used locally or transported with difficulty to wider markets in limited quantities. The cost of this transport was a significant barrier to the development of the coalfields (Krupa 1999).
- 4.2 Development of this transport infrastructure began in the late 18th century on Tindale Fell with the use of wooden waggonways, at first underground and later as part of the above ground infrastructure. By 1799 a wooden waggonway had been laid from Lord Carlisle's mines on Tindale Fell to the coal and lime depot or Staith at Brampton. Rapid development of this form of transport ensured that the wooden rails were replaced by 3ft lengths of cast iron rail laid on stone blocks which by 1808 were replaced by wrought (or malleable) iron (Ibid.).
- 4.3 James Thompson (1794 - 1851), Lord Carlisle's colliery agent from 1819 and lessee of the Naworth Collieries from 1838, was an important figure in the development of Lord Carlisle's Railway and collieries. A close friend of George Stephenson's, he advocated and enabled the early adoption of steam locomotion on the line commencing in 1836 at the opening of the "new railway" to Brampton, replacing the older wooden waggonway, under steam traction with borrowed locomotives. This continued in 1837 with the purchase of the famous locomotive *Rocket* built by Robert Stephenson for the Rainhill Trials eight years previously. He was also instrumental in ensuring the adoption of a universal railway gauge of 4ft 8 1/2", insisting that the Newcastle and Carlisle Railway, the first railway to cross England, should follow this advice to ensure that railway stock from the numerous railway companies developing at that time could be used on all the lines (Ibid.) By 1836 the *Rocket* was considered as too light and of low power for the traffic on the Liverpool & Manchester Railways and was sold for the sum of £300 to Lord Carlisle's Railway (Webb and Gordon 1978, 100). The locomotive was put to work on the Midgeholme Railway until 1840, and was based near Tindale Village at Mack Doles Hole during its working life, and laid aside at Kirkhouse from 1840 (Ibid.).
- 4.4 Between 1839 and 1848 three new locomotives were built by Thompson's of Kirkhouse, the *Belted Will*, *Mosstrooper* and *Loch*. *Loch* was based at the Hallbankgate locomotive shed, built during the 1840s and post-dating the *Rocket* (Ibid.). During the later part of the 19th century locomotive accommodation included the sheds at Kirkhouse and Hallbankgate, but after 1870 a larger building with repair facilities was in use on a site opposite the coke ovens at Kirkhouse (Ibid.).

- 4.5 Development of the Kirkhouse workshops was one of James Thompson's stated aims on acquiring the lease of the Naworth Collieries. By 1850 the workshops had become in essence a small industrial hamlet with workshops, smith's shops, joiner's shops, coke ovens, a gas works and was producing its own locomotives. As lessee he also took on responsibility for over 1,000 acres of land, no fewer than 182 cottages and several limestone quarries.
- 4.6 In 1845 a zinc spelter works was built at Tindale Fell on land leased from Lord Carlisle by J H Attwood. Over a fifty year period the works produced metallic zinc from ores mined in the Alston district and imported from Europe. The village of Tindale or Doles Hole as it is sometimes called developed from the zinc industry into a self-contained community with a Co-operative store served by the railway, a school, Wesleyan Church and reading room. Living conditions for the spelter workers was roundly condemned by Lord Carlisle and his wife Rosalind, social reformers of their time, and was one of the reasons along with the polluting nature of the industry, given for not renewing the lease in 1895. Two attempts were undertaken to revive the industry in the 1930's that came to nothing leaving vast deposits of zinc residues, some of which were removed in the 1950's to the Government's Spadeadam rocket-testing area, 15km to the north.
- 4.7 Development of the railway, coalfields and quarries continued under the Thompson family control until 1908 and the Roachburn Pit disaster in which three people lost their lives. Following the death of Rosalind, Dowager Countess of Carlisle, the estates passed to members of the countess's family who administered them through a company called M R H. Minerals Ltd. Strenuous efforts were made to revive the flagging industrial operations and increased activity was apparent during the 1920s at Mint Hill drifts, Gairs and Venture drifts, the new very productive East, West, North and Banner drifts at Midgeholme and the Whinstone quarry at Midgeholme. However a gradual decline set in and by the early 1940s the outlook was not good.
- 4.8 Not even the formation of the National Coal Board in 1945 and its subsequent acquisition of the leases for the Naworth coal field could save the industry. Fresh investment and modernisation in the former very productive King Pit produced initially encouraging results that where however, short lived. In 1953 the NCB gave up their leases and dismantling of the railway was undertaken thus ending a 155 year history of one of the oldest railways in the country.

4.9 Map Regression

4.9.1 Railway Maps 1798-1863

4.9.1.1 A series of schematic maps were produced to illustrate the development of Lord Carlisle's Railway. These maps are limited in detail to a plan of the route of the railway and its relationship to the collieries and associated infrastructure. The maps include James Thompson's map of 1831 and 1833 and plans of the collieries on Lord Carlisle's Estate at Tarnhouse at Midgeholme in 1835 and 1838 respectively. These maps, however, pre-date the construction of the engine shed at Hallbankgate which was constructed in the 1840s.

4.10 Ordnance Survey 1st Edition (Figure 7)

4.10.1 This map is the first cartographic evidence of the existence of a shed on the site at Hallbankgate, and is almost certainly that of the 1840s shed which survives to the present day, although it is not described on the map.

4.11 Ordnance Survey 2nd Edition (Figure 8)

4.11.1 This map clearly illustrates the engine shed which is marked as such. The relationship of the shed to the Planehead section of Lord Carlisle's Railway is also explicit here.

4.12 20th Century Maps

4.12.1 The engine shed is clearly marked on all 20th century maps, which illustrate the decline in the fortunes of the railway. The structure owes its survival to its later use as an agricultural store.

5 The Building Survey



Plate 1: North External Elevation

- 5.1 This building measures approximately 12.50m by 7m and is constructed from a mixture of quarried and rubble masonry, a mixture of red and yellow sandstone. It is a single storey construction and appears to be of one build. The roof consists of corrugated iron sheets on iron girder supports. There is no evidence of any render upon any of the external or internal elevations, which may be accounted for by the functional nature of the building as a workshop and not a residential structure. The west wall is in a poor condition with a significant ‘bow’ effect, and the roof is missing in several places. The builders have used good quality worked stone for the ‘quoins’ or cornerstones, at the corners of each elevation, each stone of which exhibits tooling marks.
- 5.2 The north external elevation (Figure 9, Plate 1) shows the entrance for two locomotives through two large apertures, the doors of which are missing but iron hinge fittings are evident, with iron girders forming part of the frame for the doorways.
- 5.3 The west external elevation (Figure 10, Plate 2) has three apertures consisting of a door and two windows. The door has been part blocked by corrugated iron sheeting at its top and base, while the second window has been blocked in by crude 20th century brickwork. The door has a series of crosses scratched into the lintel and an iron fixture above (Plate 3). Only the window to the left of the door remains unblocked.



Plate 2: West External Elevation

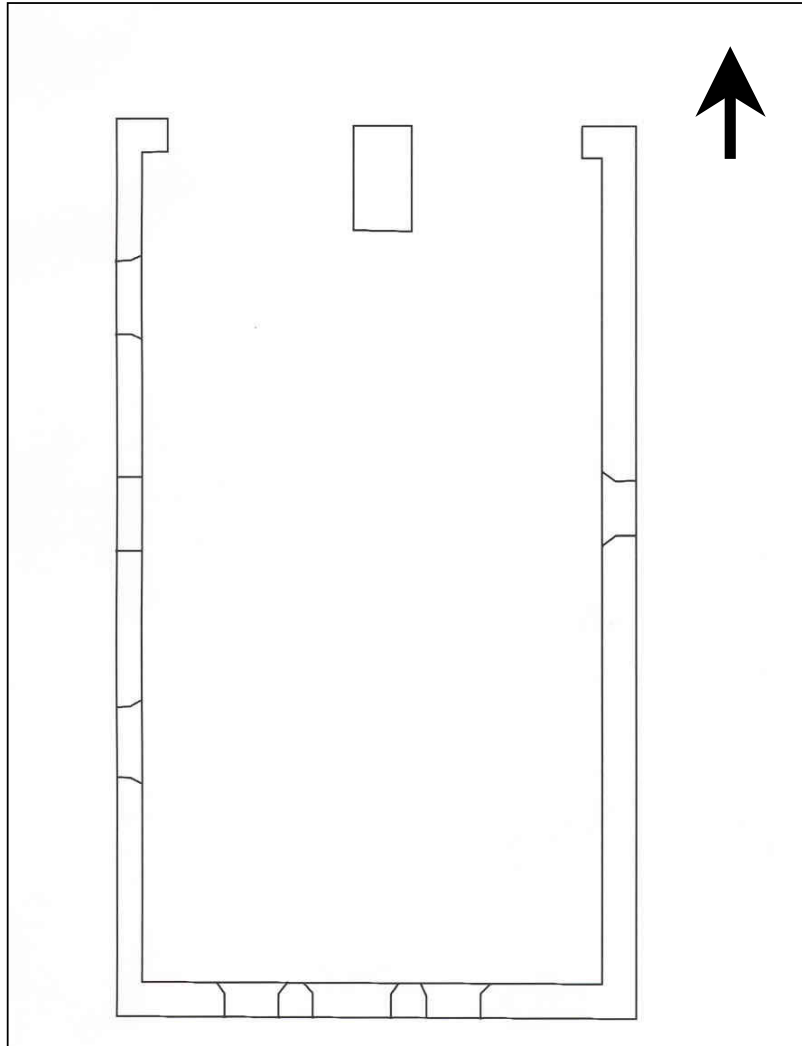


Figure 1: Floor Plan. Scale: 1:100



Plate 3: West Doorway

- 5.4 The south external elevation (Figure 11) has three windows, the central of the three has been blocked in by crude 20th century brickwork, although the two flanking windows appear to have their original wooden shuttering. Each of the windows has been bricked in from the interior of the building (Plate 4).



Plate 4: South External Elevation: Windows.

- 5.5 The east external elevation (Figure 12) has 1 window, which has been blocked by crude 20th century brickwork. No other architectural features were observed.



Plate 5: East External Elevation: Window.

6 Conclusion

- 6.1 The building, although clearly not of national importance, is a good example of a mid-19th century industrial building. The structure was entirely functional, with no aesthetic features of architectural interest, and no evidence of any render on its external elevations. No evidence of the use of the building, including inspection pits for locomotive maintenance, could be observed within its interior owing to the present-day use of the building as a silage store.
- 6.2 As the fortunes of Lord Carlisle's Railway declined, so did the fortunes of the engine shed. With the closure of the railway the building no longer had an industrial function, and was converted to agricultural use.
- 6.3 The engine shed at Hallbankgate is an important survival of an early two-road locomotive shed, one of an ever decreasing number of structures from Lord Carlisle's Railway and a rare survival within Cumbria. Although the shed post-dates the use of the Rocket on the railway, this should not detract from its archaeological significance, as the shed is more important as a part of Lord Carlisle's Railway and any association with the early locomotive winner of the Rainhill Trials (1829) is incidental.
- 6.4 The overall condition of the shed is very poor and a hazard to those working within its immediate vicinity.

7 Bibliography

7.1 Primary Sources

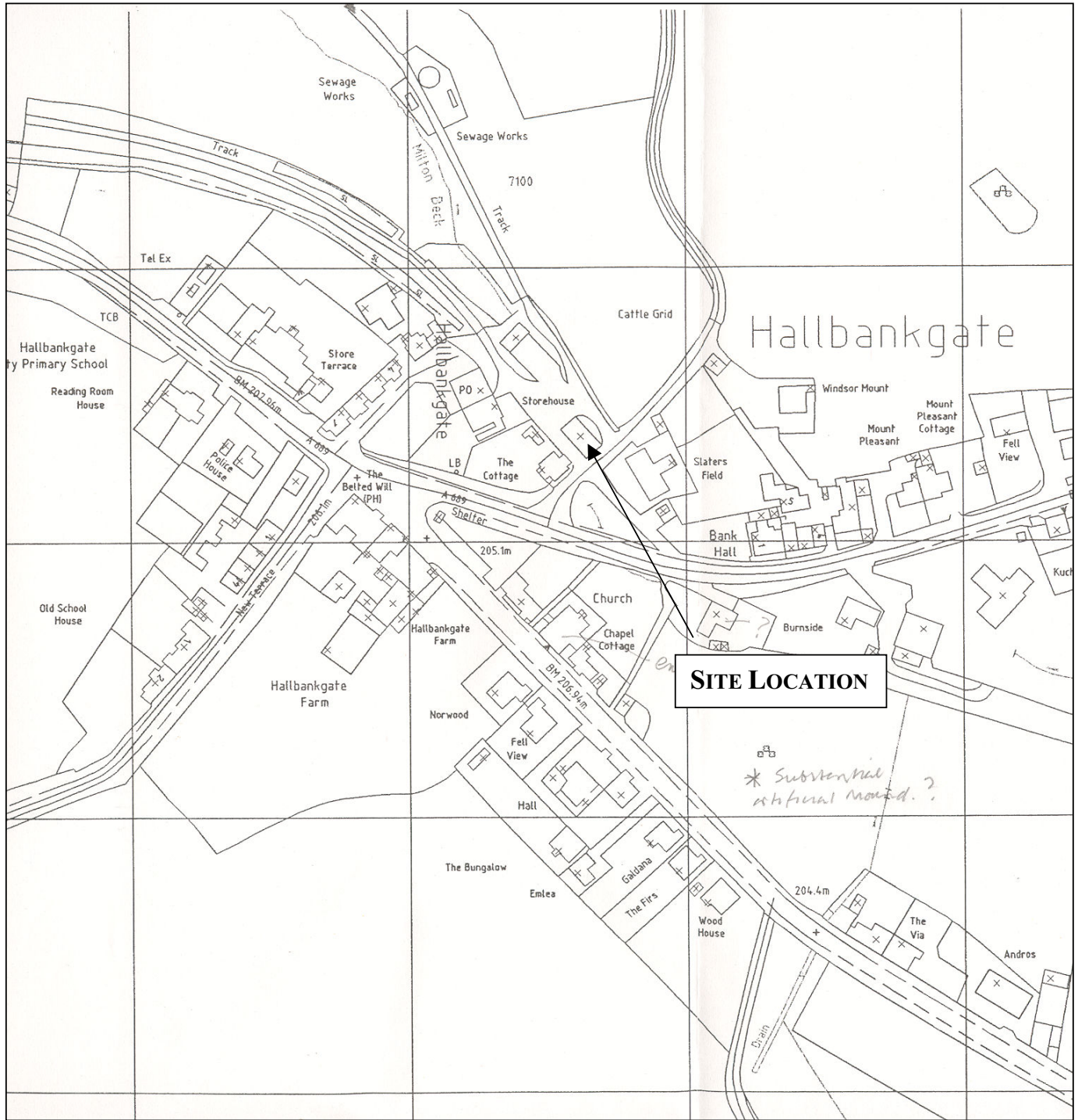
- Ordnance Survey 1st Edition 1856. HMSO © Crown Copyright
Ordnance Survey 2nd Edition 1912. HMSO © Crown Copyright

7.2 Secondary Sources

- English Heritage (1991) *Management of Archaeological Projects (MAP2)*. London: English Heritage.
- IFA (1994) *Standards and Guidance for Archaeological Desk-Based Assessments*. Reading: Institute of Field Archaeologists.
- Krupa, M. (1999) *Lord Carlisle's Railway, Survey and Assessment*. North Pennines Heritage Trust.
- Webb, B. and Gordon, D.A.(1978) *Lord Carlisle's Railways*. Leicester: Ratnett and Co.



North Pennines Archaeology Ltd Nenthead Mines Heritage Centre Nenthead Alston CUMBRIA CA9 3PD Tel: (01434) 382045 Fax: (01434) 382294 Email: info@nparchaeology.co.uk http://www.nparchaeology.co.uk	PROJECT:	THE ENGINE SHED, HALLBANKGATE, CUMBRIA	
	TITLE:	FIGURE 2: SITE LOCATION Reproduced from Landranger® 1:50,000 scale by permission of Ordnance Survey® on behalf of the controller of Her Majesty's Stationery Office © Crown Copyright (1997) All rights reserved. Licence Number WI 6488	
	SCALE:	1:50000	
	CLIENT:	EDWIN THOMPSON	

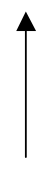


SITE LOCATION

* Substantial artificial mound.?

North Pennines Archaeology Ltd
 Nenthead Mines Heritage Centre
 Nenthead
 Alston
 CUMBRIA CA9 3PD
 Tel: (01434) 382045
 Fax: (01434) 382294
 Email: info@nparchaeology.co.uk
 http://www.nparchaeology.co.uk

PROJECT:	THE ENGINE SHED, HALLBANKGATE, CUMBRIA
TITLE:	FIGURE 3: SITE LOCATION NY 5806 5964
SCALE:	1:10000
CLIENT:	EDWIN THOMPSON



North Pennines Archaeology Ltd
Nenthead Mines Heritage Centre
Nenthead
Alston
Cumbria
CA9 3PD

Tel: (01434) 382045
Fax (01434) 382294
Email: info@nparchaeology.co.uk
http://www.nparchaeology.co.uk

PROJECT:

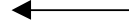
THE ENGINE SHED
HALLBANKGATE
ARCHAEOLOGICAL BUILDING
RECORDING PROJECT

TITLE:

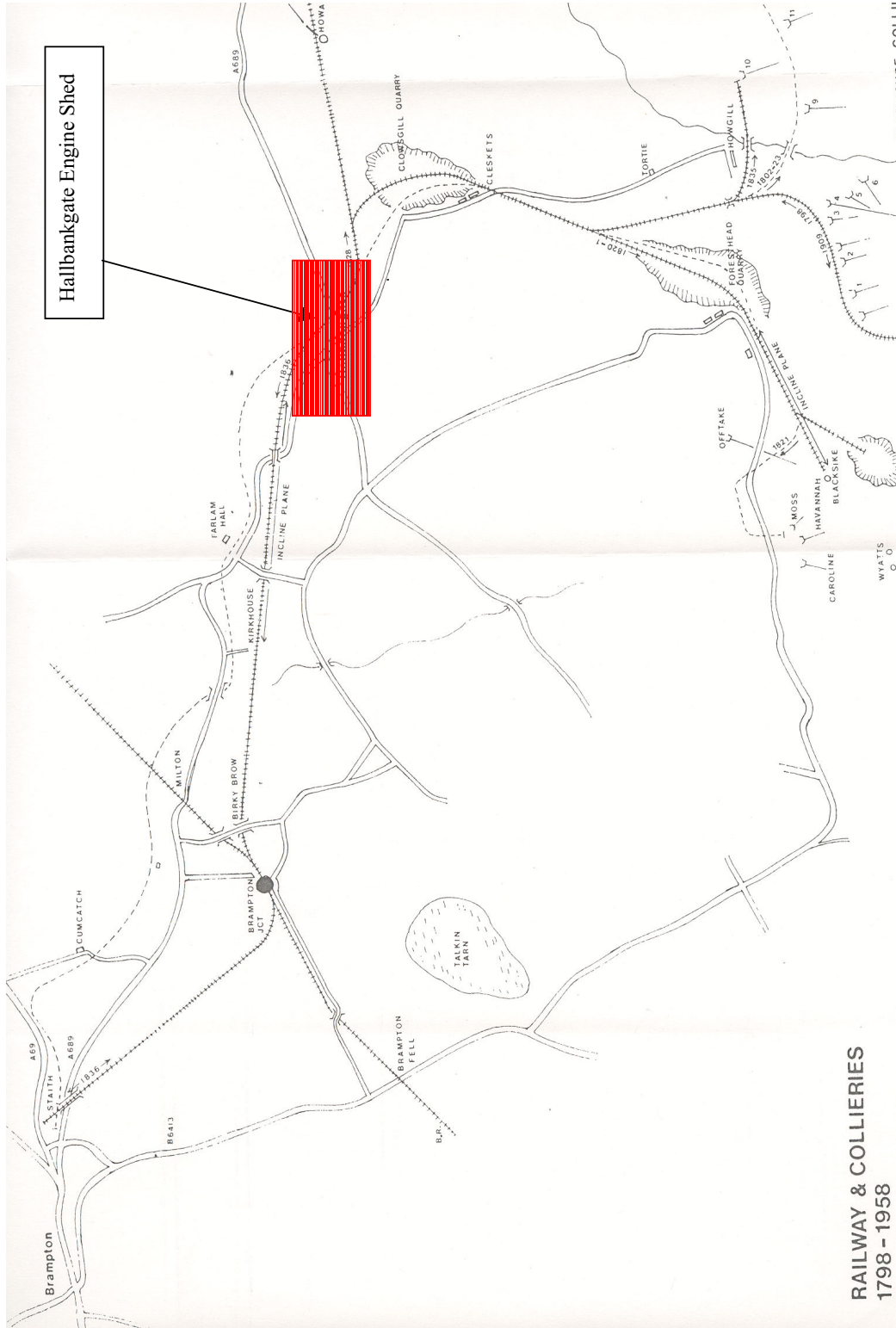
FIGURE 4
RAILWAYS AND COLLIERIES
1798-1958

SCALE:

DRAWN BY:



FOR THE USE OF
EDWIN THOMPSON



RAILWAY & COLLIERIES
1798 - 1958

North Pennines Archaeology Ltd
Nenthead Mines Heritage Centre
Nenthead
Alston
Cumbria
CA9 3PD
Tel: (01434) 382045
Fax (01434) 382294
Email info@nparchaeology.co.uk

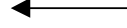
PROJECT:

THE ENGINE SHED
HALLBANKGATE
CUMBRIA
ARCHAEOLOGICAL
ASSESSMENT

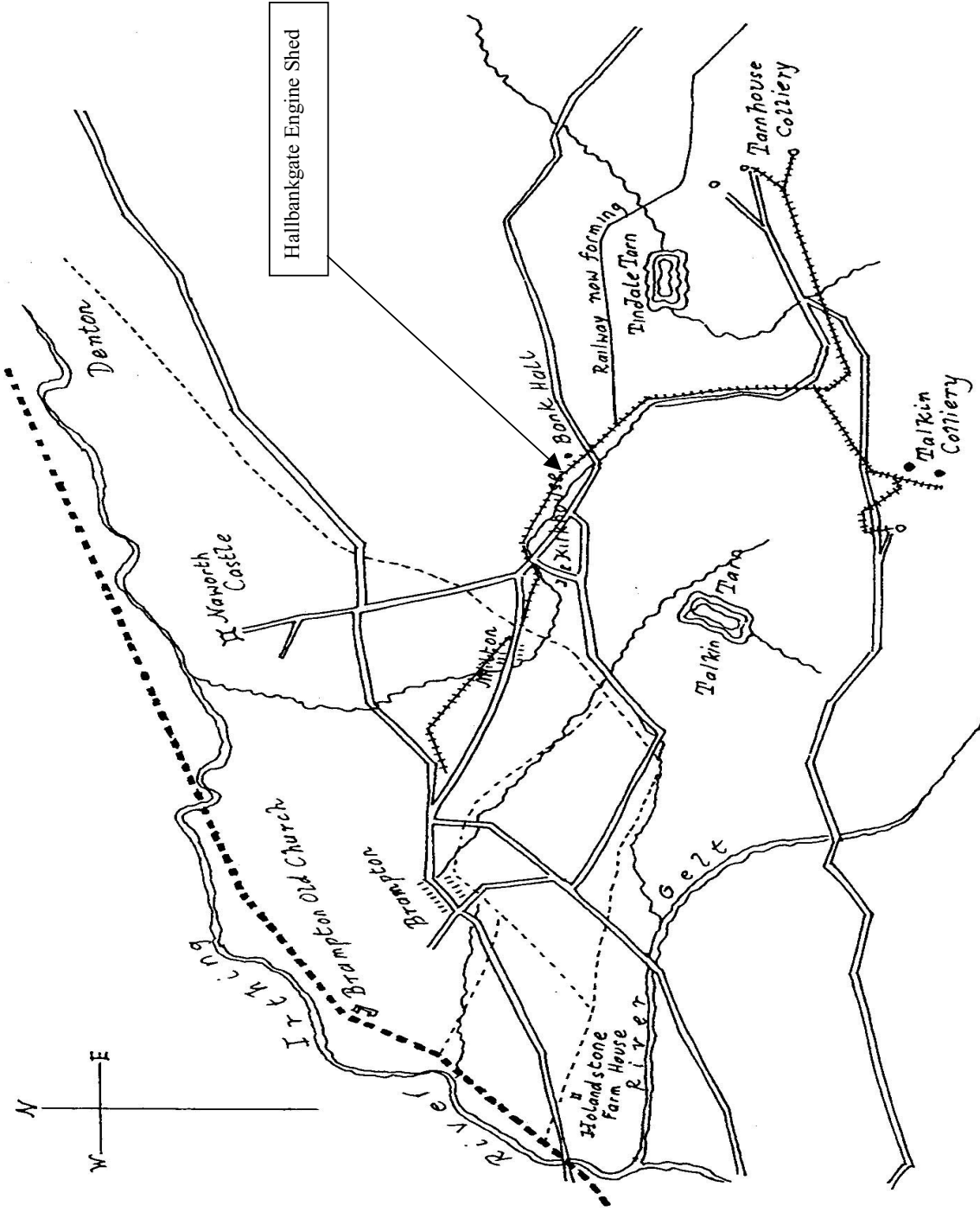
TITLE:

FIGURE 5
JAMES THOMPSON'S MAP

SCALE:



FOR THE USE OF
EDWIN THOMPSON



North Pennines Archaeology Ltd
Nenthead Mines Heritage Centre
Nenthead
Alston
Cumbria
CA9 3PD
Tel: (01434) 382045
Fax (01434) 382294
Email info@nparchaeology.co.uk

PROJECT:

THE ENGINE SHED
HALLBANKGATE
CUMBRIA

ARCHAEOLOGICAL BUILDING
RECORDING PROJECT

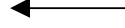
TITLE:

FIGURE 6
HALLBANKGATE IN 1950

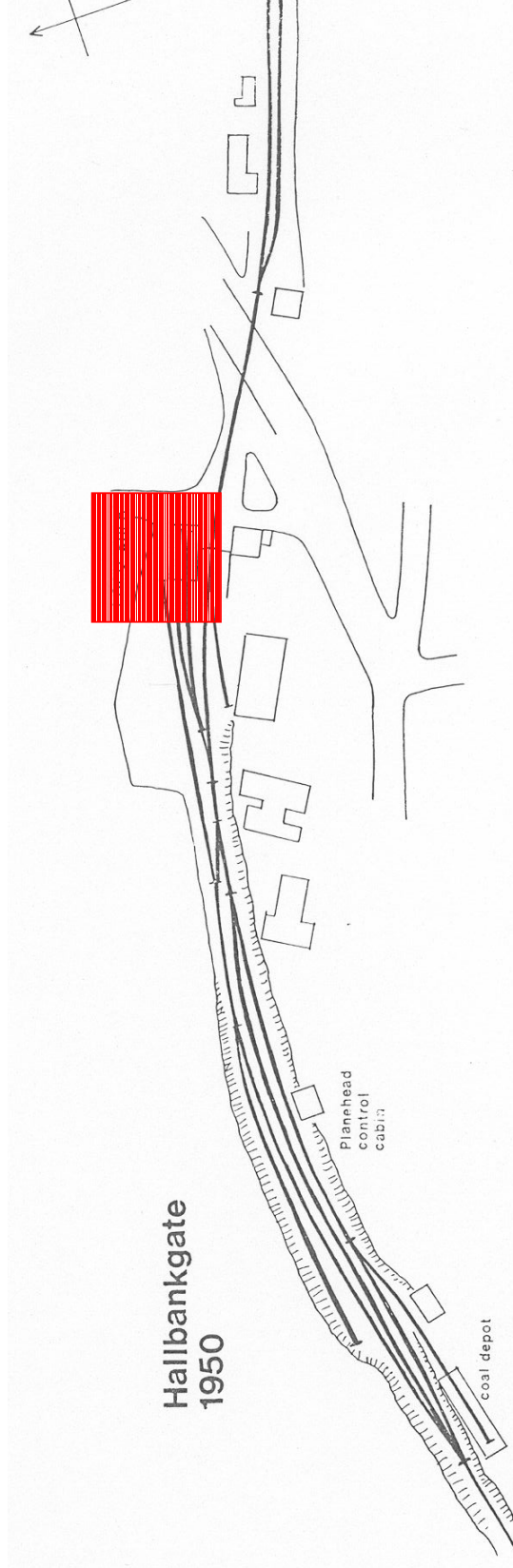
SCALE:

6 Inch

DRAWN BY:



FOR THE USE OF
EDWIN THOMPSON



Hallbankgate
1950

Fig. 93 Plan of the layout at Hallbankgate Planehead about 1950.
(Collection of B. Webb)

North Pennines Archaeology Ltd
Nenthead Mines Heritage Centre
Nenthead
Alston
Cumbria
CA9 3PD
Tel: (01434) 382045
Fax (01434) 382294
Email info@nparchaeology.co.uk

PROJECT:

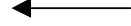
THE ENGINE SHED
HALLBANKGATE
CUMBRIA
ARCHAEOLOGICAL BUILDING
RECORDING PROJECT

TITLE:

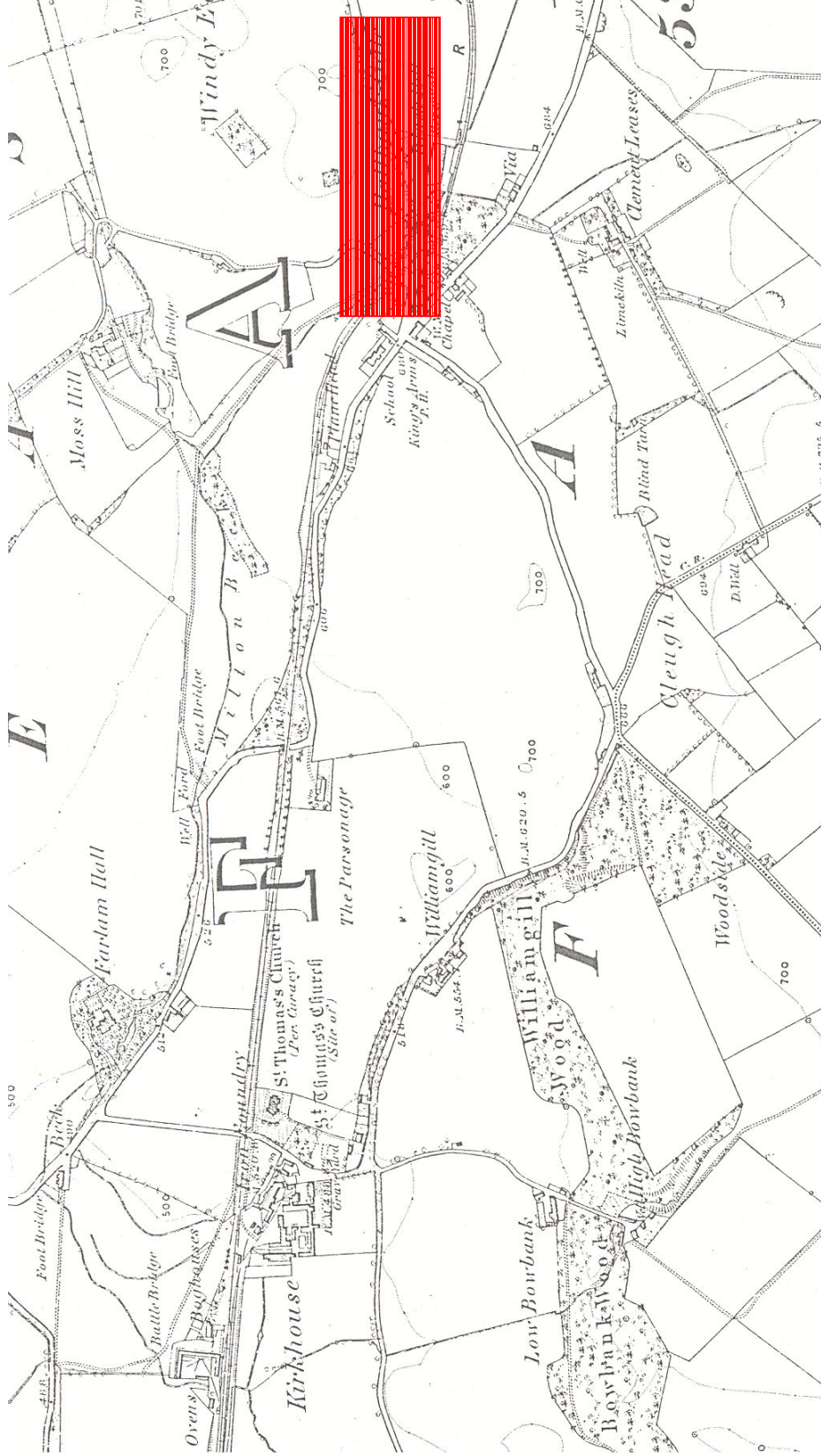
FIGURE 7
ORDNANCE SURVEY 1ST
EDITION (1863)

SCALE: 12 Inch

DRAWN BY:



FOR THE USE OF
EDWIN THOMPSON



North Pennines Archaeology Ltd
Nenthead Mines Heritage Centre
Nenthead
Alston
Cumbria
CA9 3PD
Tel: (01434) 382045
Fax (01434) 382294
Email info@nparchaeology.co.uk

PROJECT:

THE ENGINE SHED
HALLBANKGATE
CUMBRIA

ARCHAEOLOGICAL BUILDING
RECORDING PROJECT

TITLE:

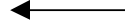
FIGURE 8

ORDNANCE SURVEY 2ND
EDITION (1900)

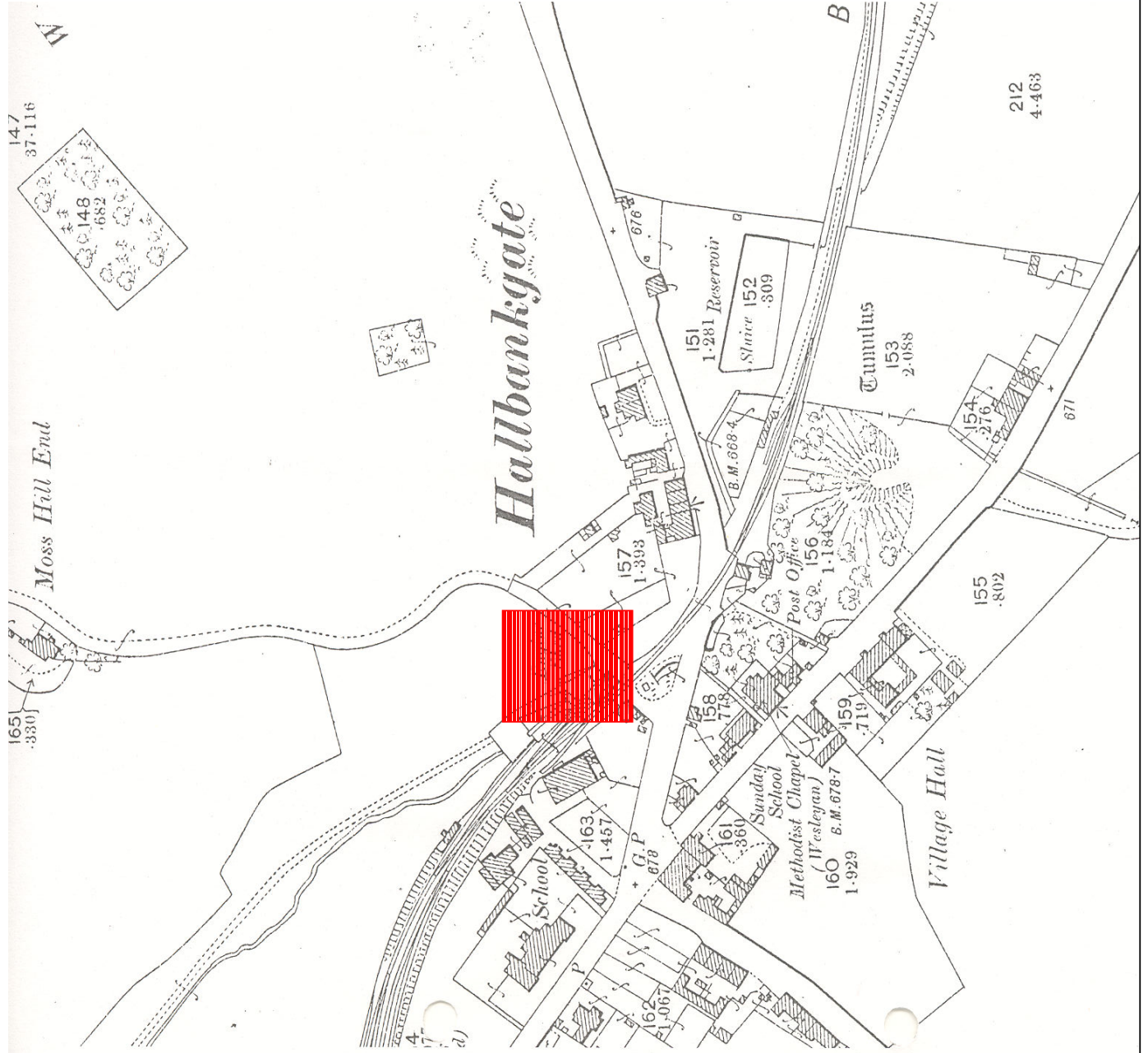
SCALE:

6 Inch

DRAWN BY:



FOR THE USE OF
EDWIN THOMPSON



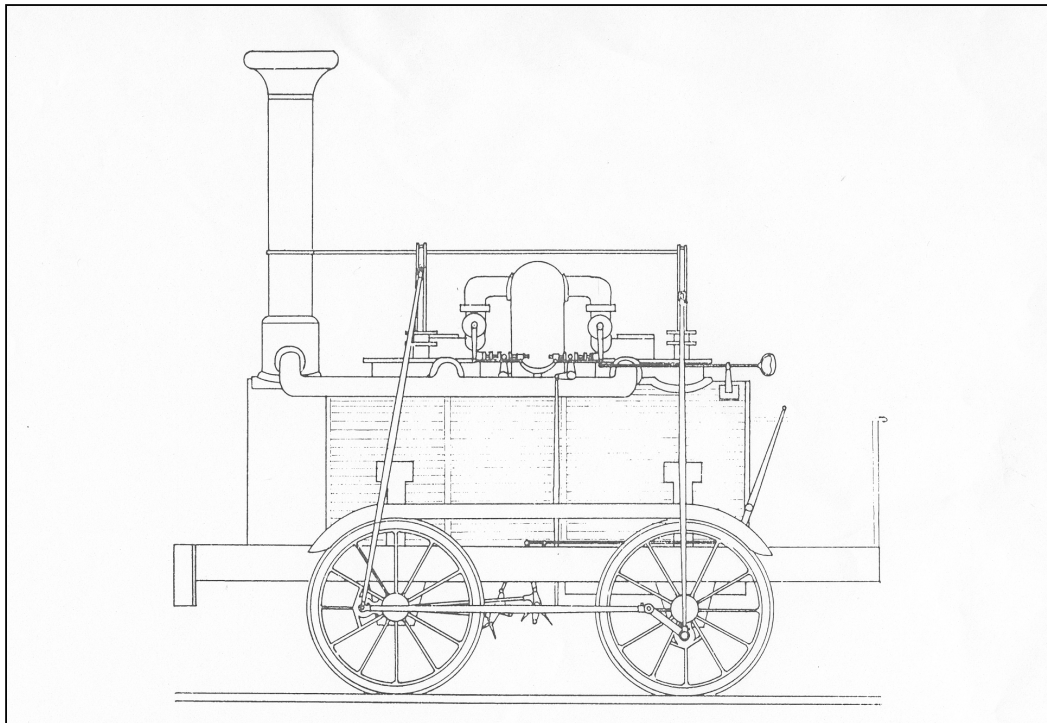


Plate 6: The *Belted Will*.

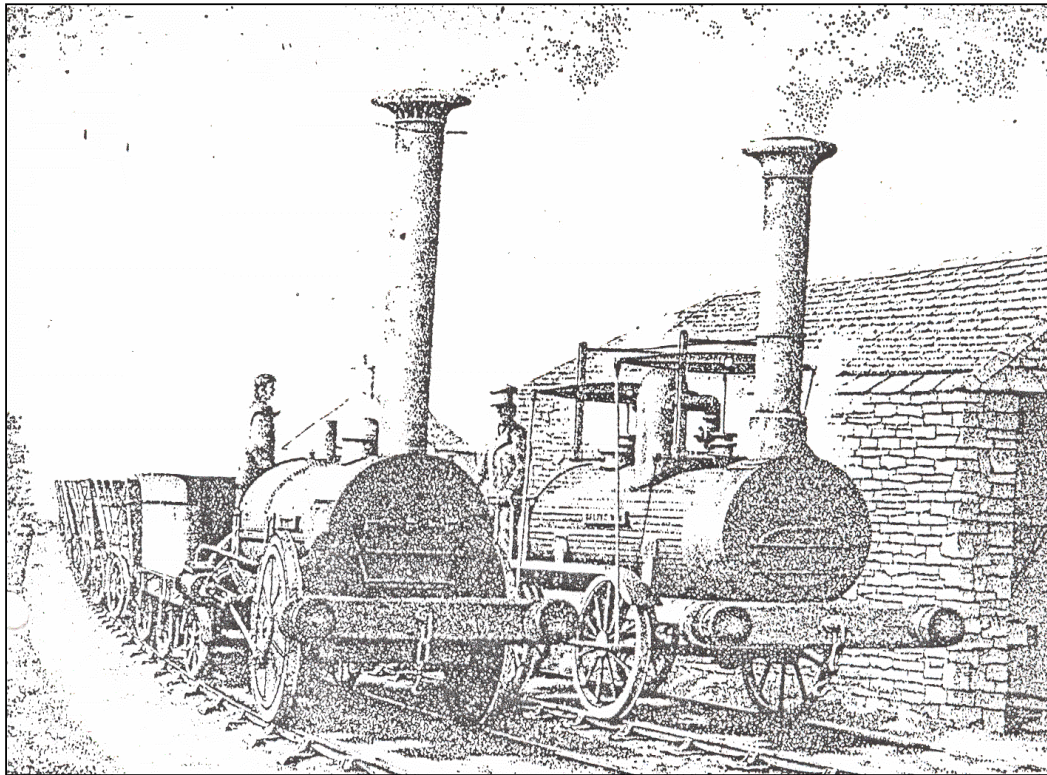


Plate 7: The *Rocket* and *Belted Will*.

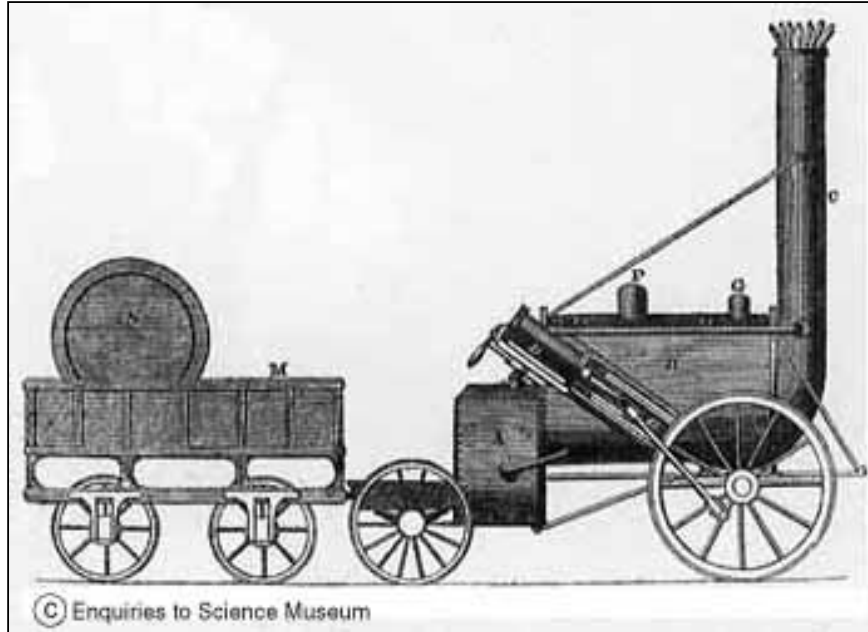


Plate 8: Illustration of Stephenson's *Rocket* in its original form, from the *Mechanics Magazine* 24th October 1929.

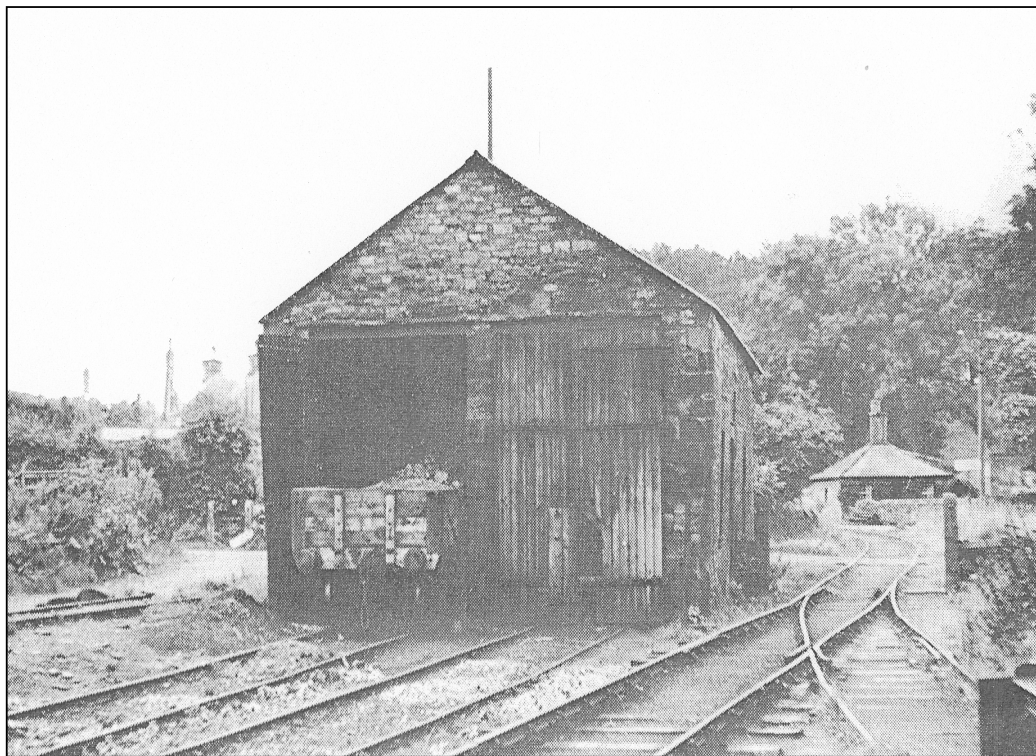


Plate 9: The Engine Shed in 1952. (Source: Webb and Gordon (1978))