An Archaeological Desk-Based Assessment: Walker Technology College, Middle Street, Walker, Newcastle-upon-Tyne, Tyne and Wear

Central National Grid Reference: NZ 2873 6478

Site Code: WTW 08

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## **CONTENTS**

## List of Figures and Plates

		page
1.	NON-TECHNICAL SUMMARY	1
2.	INTRODUCTION	2
3.	AIMS AND OBJECTIVES	8
4.	METHODS OF ASSESSMENT	9
5.	GEOLOGY AND TOPOGRAPHY	10
6.	ARCHAEOLOGICAL AND HISTORICAL BACKGROUND	12
7.	POTENTIAL IMPACTS	32
8.	CONCLUSIONS AND RECOMMENDATIONS	34
9.	ACKNOWLEDGEMENTS AND CREDITS	37
10.	BIBLIOGRAPHY AND SOURCES CONSULTED	38

Appendix A: HER Entries

Appendix B: Plates

## List of Figures and Plates

		page		
Figure 1	Site location	3		
Figure 2	Site location; detail	4		
Figure 3	Site topography	11		
Figure 4	HER entries	13		
Figure 5	Thompson, 1745	17		
Figure 6	Oliver, 1840	18		
Figure 7	Ordnance Survey 1st edition (6 inches to 1 mile)	22		
Figure 8	Ordnance Survey 1st edition (25 inches to 1 mile)	23		
Figure 9	Ordnance Survey 2nd edition (6 inches to 1 mile)	24		
Figure 10	Ordnance Survey 2nd edition (25 inches to 1 mile)	25		
Figure 11	Ordnance Survey, 1912	26		
Figure 12	Middle Street School, ground floor plan	30		
Figure 13	Figure 13 Ordnance Survey, 1941			
	Location and direction of plates	Appendix B		
Plate 1	Original school building. south elevation, looking north-east	Appendix B		
Plate 2	Original school building, south elevation, detail, looking north-west	Appendix B		
Plate 3	Dining Centre and Clinic, west elevation, looking south-east	Appendix B		
Plate 4	School House, north elevation, looking south-east	Appendix B		
Plate 5	School complex, looking south-east	Appendix B		
Plate 6	Sports pitches, looking north-east	Appendix E		

#### 1. NON-TECHNICAL SUMMARY

- 1.1 An archaeological desk-based assessment was commissioned by Sir Robert McAlpine Limited ahead of the proposed re-development of Walker Technology College, Middle Street, Walker, Newcastle-upon-Tyne, Tyne and Wear.
- 1.2 The desk-based assessment was researched and written September-November 2008 by Pre-Construct Archaeology Limited.
- 1.3 The site lies in the heart of the Walker suburb of Newcastle, east of the city centre. Rectangular in shape, and covering an area of approximately 3.25 hectares, the site is centred at National Grid Reference NZ 2873 6478. It is currently occupied by the buildings and associated grounds of Walker Technology College, at the core of which is a brick school building dating from the early 1930s, this fronting onto Middle Street to the south. The northern portion of the site comprises school playing fields. To the north, the site is bounded by housing fronting onto Ennerdale Road, while to the west it is bounded by Langley Road, and to the east it is bounded by housing fronting onto Elgin Gardens.
- 1.4 The site does not lie within a conservation area and there are no scheduled monuments or listed buildings within its boundaries. As a settlement area, Walker has a medieval origin, although it came to prominence in the post-medieval period through coal mining, then, in the early modern era, due to chemical production, ironworking and shipbuilding. Although the site lies only approximately 0.5km south of the line of Hadrian's Wall, the main archaeological interest stems primarily from 18th century cartographic evidence, which shows that the site was crossed by an overground waggonway, part of a network of such features associated with post-medieval and early modern mining in the area.
- In summary, the potential for archaeological remains of the prehistoric, Roman, Anglo-Saxon and medieval periods at the study site is low. There is low potential for non-industrial post-medieval archaeological remains, while for the post-medieval and early modern industrial eras there is moderate to high potential, particularly for the remains of an 18th century colliery transport system in the north-eastern portion of the site. Any such remains are likely to be of local or regional importance. An important consideration regarding the survival of sub-surface archaeological remains at the site is the possible impact of previous and existing land-use, particularly the extent of disturbance due to construction groundworks in, and since, the 1930s, including any landscaping for the school playing fields.
- 1.6 The structural fabric of the original school building is considered to be of generally low architectural value, although it forms a good example in Newcastle of a 1930s secondary school with combined technical and commercial departments and was notable for certain design innovations of the time. Like any such educational establishment, the site has important historical and cultural associations for the local community.

#### 2. INTRODUCTION

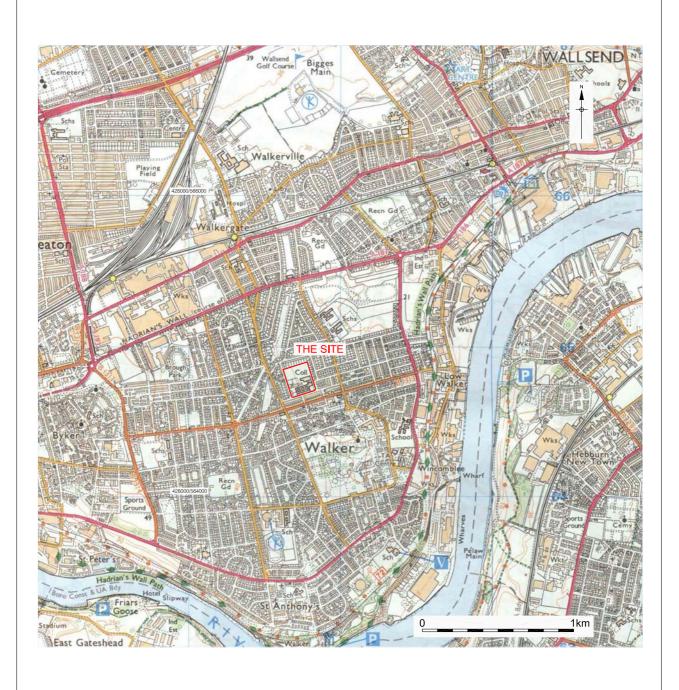
#### 2.1 General

- 2.1.1 This archaeological desk-based assessment (DBA) has been commissioned by Sir Robert McAlpine Limited, ahead of the proposed re-development of Walker Technology College, Middle Street, Newcastle, as part of the national Building Schools for the Future (BSF) programme. At the time of writing, it is intended that the existing school will be demolished and a new school built at a different location to the north-east, on open land off Waverdale Avenue.
- The existing school site covers an area of c. 3.25 hectares and lies within the Walker suburb of 2.1.2 Newcastle, east of the city centre. This area (red-lined on Figure 2) is hereafter referred to as 'the study site'.
- 2.1.3 The undertaking of the DBA was a requirement of the Tyne and Wear Specialist Conservation Team, which, in its capacity as cultural heritage advisor to Newcastle City Council, identified that the study site is of potential archaeological interest. The site has particular potential for post-medieval and early modern industrial activity, specifically, 18th century colliery waggonway remains. The DBA was compiled according to a Specification compiled by the Tyne and Wear Archaeology Officer. The DBA was researched and written September-November 2008 by Robin Taylor-Wilson of Pre-Construct Archaeology Limited (PCA).
- 2.1.4 The DBA was compiled following visits to the study site and an examination of readily available documentary and cartographic sources. A 'wider study area', with a radius of 1km from the centre of the study site, was examined to establish the potential for archaeological remains at the site itself. The purpose was to formulate an assessment of the impact of the proposed redevelopment upon the potential archaeological resource at the site, and there may be a requirement for a further stage of archaeological work in light of the findings of the DBA.
- 2.1.5 The Online AccesS to the Index of Archaeological InvestigationS (OASIS) reference number for the project is: preconst1-48977.

#### 2.2 **Site Location and Description**

- 2.2.1 Walker is an eastern suburb of Newcastle, c. 4km from the city centre, occupying an elevated plateau overlooking a sharp bend in the Tyne (Figure 1). With the exception of early coal mining activity, the area was largely agricultural until the mid 19th century, when the riverside area developed rapidly at the heart of the Tyneside shipbuilding industry. From the 18th century onwards, the area of the core workings of Walker Colliery, which lay c. 350m southeast of the study site, was very much the focus of the industrial township.
- 2.2.2 Since the 1930s, Walker has become subsumed into the urban sprawl of Newcastle, and now forms a core element of the densely populated East End of the city. Within the suburb lies the study site, rectangular in shape and c. 3.25 hectares in size, centred at NZ 2873 6478 (Figures 1 and 2). It is occupied by the buildings and associated grounds of Walker Technology College, bounded by Middle Street to the south, housing fronting onto Ennerdale Road to the north, Langley Road to the west, and housing fronting onto Elgin Gardens to the east.

<sup>&</sup>lt;sup>1</sup> Tyne and Wear Specialist Conservation Team 2007.



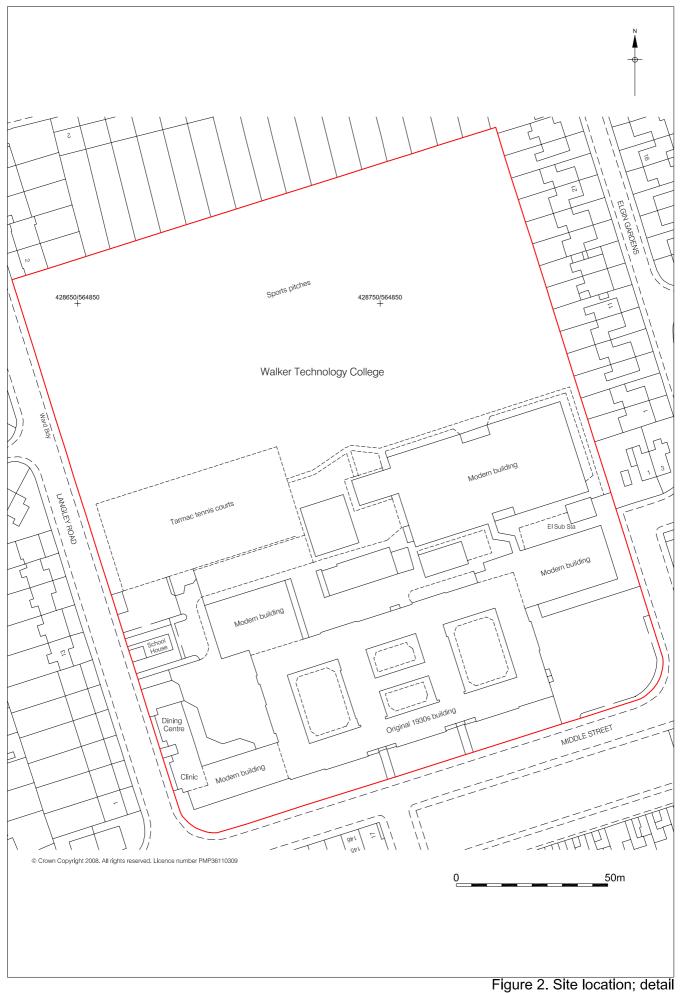


Figure 2. Site location; detail Scale 1:1,250

2.2.3 The entire study site is surrounded by a high steel security fence (Plates 1-6). The complex of school buildings occupies the southern half of the site (Figure 2 and Plates 1-5), with the oldest element being a brick block of early 1930s date fronting onto Middle Street (Figure 2 and Plates 1 and 2). Various blocks have been added since then, either as additions to the original building or on land immediately to the north of it (Figure 2 and Plate 5). There are various areas of hardstanding, mostly surfaced with concrete and tarmac, in use as car parks, yards and tennis courts, in the developed area. To the north, the remainder of the site comprises sports pitches (Figure 2 and Plate 6).

### 2.3 Planning Background

- 2.3.1 The proposed re-development of Walker Technology College forms part of the government's Building Schools for the Future (BSF) initiative. In Newcastle, this is being delivered and partly funded by Newcastle City Council's private sector partner Aura, which is also designing, building and maintaining the schools. Sir Robert McAlpine Limited is one of the Aura partners. At the time of writing, it is proposed to demolish the existing school and construct a new Walker Technology College on land off Waverdale Avenue to the north-east.
- 2.3.2 The Tyne and Wear Specialist Conservation Team, attached to the Historic Environment Section of Newcastle City Council, provides archaeological development control in Newcastle. DBAs of the archaeological potential of both the existing site of Walker Technology College and the proposed new site were required, with the work being commissioned by Sir Robert McAlpine Limited, as part of the planning process of the Local Planning Authority, the City Council. This DBA deals only with the existing site of Walker Technology College.
- 2.3.3 Statutory protection for archaeological remains is principally enshrined in the Ancient Monuments and Archaeological Areas Act 1979, as amended by the National Heritage Act 1983 and subsequent. Nationally important sites are listed in a schedule of monuments and are accorded statutory protection. Details of scheduling are held on the list maintained by the Department for Culture, Media and Sport (DCMS). For other components of the historic environment, the Planning (Listed Buildings and Conservation Areas) Act 1990 amends the Town and Country Planning Act 1971 and provides statutory protection to listed buildings and a control to preserve the character and appearance of conservation areas.
- 2.3.4 The study site does not lie within one of the six conservation areas in Newcastle and there are no scheduled monuments, listed buildings or historic parks and gardens within its boundaries or within its immediate vicinity. Planning policy and legislation that may be of relevance to heritage issues for the proposed re-development site is summarised below.

### National Planning Policy Guidance and Legislation

2.3.5 Planning Policy Guidance Note 16: 'Archaeology and Planning' (PPG16)<sup>2</sup> provides advice concerning the safeguarding of archaeological remains within the planning process. PPG16 is informed by the principle that archaeology represents a finite and non-renewable resource and that its conservation, either by preservation in situ or preservation by record (through archaeological excavation), should be the primary goal of archaeological resource management.

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<sup>&</sup>lt;sup>2</sup> Department of the Environment 1990.

- 2.3.6 Implicit in PPG16 is the process for determining archaeological risk on a development site through assessment. DBAs usually form a baseline consideration of the archaeological potential of a proposed development site.
- 2.3.7 The following legislation and national planning policy are also taken into account:
  - Planning Policy Statement 1: Delivering Sustainable Development 2005 (PPS1).<sup>3</sup> This
    states that development plans should take into account the enhancement of built and
    archaeological heritage;
  - Town and Country Planning (Environmental Impact Assessment) (England and Wales)
     Regulations 1999.

#### Regional Planning Guidance

2.3.8 Advice on a strategic level is provided by *RSS1: Regional Spatial Strategy for the North East*, which was published in July 2008 and which covers the whole North East region. It specifically recognises the importance of the historic environment and *Policy 32 'Historic Environment'* seeks to conserve and enhance the historic environment of the region, by various means, including by seeking to preserve archaeological remains *in situ* where they are scheduled and similarly where they are of local and regional importance, if appropriate.

#### Local Planning Guidance

2.3.9 At a local level, the Development Plan framework is provided by the *Newcastle City Unitary Development Plan* (UDP), adopted in 1998.<sup>5</sup> The UDP contains the following policies:

# POLICY C04. DEVELOPMENT THAT WOULD HARM SITES OR AREAS OF ARCHAEOLOGICAL INTEREST AND THEIR SETTINGS WILL NOT BE ALLOWED.

This policy underlines that archaeological remains are a finite asset and care must be taken to ensure that archaeological sites and monuments and areas of potential archaeological importance are not needlessly destroyed. This applies to all periods including the industrial, which is significant in the Newcastle and Tyneside context. It sets out the three categories of archaeological sites and areas of interest in the City:

- scheduled ancient monuments these being worthy of preservation because of their national significance;
- other important sites, monuments and areas including sites known only from aerial
  photographs, Roman, post medieval and industrial features, some of which may also be
  listed buildings. This category includes sites and areas where there is considerable
  potential archaeological interest including areas which have consistently yielded dense
  scatters of artefacts, prehistoric flints, early urban and village cores and areas of early
  industrial development;
- substantially undeveloped and undisturbed areas where archaeological interest or potential
  has not, as yet, been established.

POLICY C04.2. WHERE A PROPOSAL MAY AFFECT A SITE OR AREA OF ARCHAEOLOGICAL INTEREST, THE DEVELOPER WILL BE REQUIRED TO SUBMIT AN APPROPRIATE ASSESSMENT OF ITS POTENTIAL IMPACT UPON THE ARCHAEOLOGICAL REMAINS AND WHERE NECESSARY UNDERTAKE AN ARCHAEOLOGICAL EVALUATION.

This policy highlights the need to take archaeological considerations into account at the preplanning stage before the development control process and stresses that potential conflict between the needs of archaeology and development can be reduced if developers discuss their preliminary plans with the City Council and County Archaeologist in advance. It emphasises that an archaeological assessment will be needed to support a planning application should it require the loss of remains or the removal of artefacts from a site and underlies that it should clearly state the means of preservation or recording if that is the agreed intention.

<sup>&</sup>lt;sup>3</sup> Office of the Deputy Prime Minister 2005.

<sup>&</sup>lt;sup>4</sup> Available at the *North East Assembly* website.

<sup>&</sup>lt;sup>5</sup> Available at the *Planning Portal* website.

POLICY C04.3. WHERE ASSESSMENT AND EVALUATION HAVE ESTABLISHED THAT PROPOSED DEVELOPMENT WILL ADVERSELY AFFECT A SITE OR AREA OF ARCHAEOLOGICAL INTEREST, DEVELOPERS WILL BE REQUIRED TO PRESERVE ARCHAEOLOGICAL REMAINS IN SITU UNLESS THIS IS CLEARLY INAPPROPRIATE OR THE DESTRUCTION OF THE REMAINS IS DEMONSTRABLY UNAVOIDABLE, IN WHICH CASE A PROGRAMME OF ARCHAEOLOGICAL WORKS SHALL BE SUBMITTED TO AND AGREED WITH THE COUNCIL BEFORE THE START OF DEVELOPMENT.

This policy deals with the category of site which includes the numerous known sites of archaeological interest and sensitivity which do not have the status of scheduled monuments but which may still be worthy of preservation because of their national or local significance. These may be known only from aerial photographs, or comprise sites of industrial or post-medieval archaeology, such as collieries, railways or farm buildings (including listed buildings).

The policy notes that when an application is made to develop such a site, the Council, in consultation with English Heritage and the County Archaeologist, will weigh up its relative importance (national/ local) against other material considerations including the actual need for the proposed development in that particular location. Should permission be granted and it is not possible to preserve the remains *in situ*, then the developer should make appropriate and satisfactory provision for their excavation and recording. Planning permission may be granted subject to conditions which provide for excavation and recording before development takes place, again in consultation with the County Archaeologist.

POLICY C04.4. WHERE PROPOSED DEVELOPMENT WOULD INVOLVE LARGE SCALE GROUND DISTURBANCE IN CURRENTLY UNDEVELOPED AREAS DEVELOPERS WILL BE REQUIRED TO SUBMIT A PRELIMINARY ARCHAEOLOGICAL ASSESSMENT TO IDENTIFY ANY SITES OR POTENTIAL AREAS OF ARCHAEOLOGICAL INTEREST.

This policy highlights that large-scale works, which cause extensive disturbance of ground such as open casting, the construction of major highways and substantial areas of new development may affect areas with as yet unidentified archaeological interest. The City Council will be guided by the advice of the County Archaeologist in this matter.

2.3.10 As previously mentioned, a Specification for this desk-based assessment was prepared by the Tyne and Wear Archaeology Officer. In this instance, the study site is of particular archaeological interest as mid 18th century mapping shows two colliery waggonways converging at the northern boundary of the site, and continuing as a single route running south-eastwards, through the north-eastern portion of the site, towards the Tyne. By the time the Ordnance Survey 1st edition was surveyed in the 1850s, the route was evidently out of use.

#### 3. AIMS AND OBJECTIVES

- 3.1 The key objectives of the DBA are:
  - to assess the impact of the proposed re-development upon the historic environment;
  - to identify parts of the study site for which further archaeological work may be appropriate;
  - to assist in the formulation of recommendations for any further archaeological work considered necessary to inform the planning decision.
- 3.2 In order to address the first objective, the DBA must first analyse the character and extent of known or potential archaeological sites that may be affected by the proposal and provide an evaluation of their importance. It should then be possible to assess the likely scale of impacts, both construction-related and operational, arising from the proposal. From this position, it should then be possible to outline appropriate mitigation measures to avoid, reduce or remedy adverse impacts on the historic environment, thereby addressing the second and third key objectives.
- 3.3 In addition, the Specification for this assessment stresses the need to undertake the project with reference to the *North East Regional Research Framework for the Historical Environment* (NERRF),<sup>6</sup> a document that highlights the importance of research as a vital element of development-led archaeological work. In setting out key research priorities for all periods of the past, NERRF allows archaeological projects to be related to wider regional and national priorities for the study of archaeology and the historic environment. The relevant key research themes for this assessment are:

#### PM1. Early coal industry and coal use:

To ensure improved targeting of archaeological evaluation there should be a survey of documentary evidence and cartographical evidence for early mining in order to identify precise locations.

Development controlled commissioned fieldwork should also be aware of the potential for the buried remains of colliery buildings on later sites.

Sub-surface mine workings may survive. These may be revealed by modern deep ground disturbances in advance of other surface developments. It is essential that appropriate archaeological monitoring processes be put in place to record such remains.

#### PM2. Early railways:

Ongoing research needs to recognise the role of the North East in the development of the early railways, with several key areas of investigation having been identified.

Investigations should focus on the early waggonways and pre-locomotive hauled lines, whilst also recognising the potential archaeological importance of terminals, and specifically the development of coal staithes. Existing landscape features along the course of known early waggonways require survey, which if possible, should include railway formations, track beds and gradients.

The routes of early railways should be plotted on the HERs of the region, through archival research on early documentary and cartographic sources.

3.4 The results of the DBA will be used to make an informed decision on the necessity, or otherwise, for an archaeological mitigation strategy in relation to the proposed re-development.

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<sup>&</sup>lt;sup>6</sup> Petts and Gerrard 2006.

#### 4. METHODS OF ASSESSMENT

#### 4.1 Research and Data Collection

- 4.1.1 Various sources of data relating to the study site and wider study area were consulted during the research phase of the DBA, including a map regression exercise and consultation of the Tyne and Wear Historic Environment Record (HER).
- 4.1.2 Listed below are the main sources consulted during the compilation of the DBA:
  - The Tyne and Wear HER, maintained by the Tyne and Wear Specialist Conservation
    Team, at West Chapel, Jesmond Old Cemetery, Jesmond Road, Newcastle-uponTyne, was visited (by appointment) in August 2008.
  - Tyne and Wear Archives, Blandford House, Blandford Square, Newcastle-upon-Tyne, was visited in September 2008.
- 4.1.3 Full details of all the material examined for the DBA are set out in Section 10.

#### 4.2 Site Visit

- 4.2.1 In addition to the research described above, a site visit was undertaken, in October 2008, in order to carry out a thorough visual inspection of the study site, and its wider historic environment.
- 4.2.2 During the site visit, a basic photographic record of the study site was compiled in digital format and a representative selection of the photographs is included herein (Plates 1-6, forming Appendix B).

#### 5. GEOLOGY AND TOPOGRAPHY

### 5.1 Geology

- 5.1.1 The underlying geology of the wider study area comprises Coal Measures rocks of Upper Carboniferous Age. These essentially comprise a succession of shales and sandstones with numerous coal seams. In the vicinity of the wider study area, the underlying rocks are overlain by a mantle of glacial debris, mainly boulder clay or till, deposited by the ice sheets that covered the area during the last glacial period.
- 5.1.2 No borehole data is available for the study site to verify the depth or nature of underlying geological strata.

#### 5.2 Topography

- 5.2.1 The study site lies at *c*. 30m AOD, with some localised variation on the site itself, as described below. Ground levels fall away to the south and east towards the main geographical feature in the wider area, the River Tyne. The varying course of the river means that it bounds the suburb of Walker to the south and east, flowing in a roughly north-south direction *c*. 1.0km to the east of the study site before turning eastwards at Wallsend.
- 5.2.2 Ground level varies across the study site, with a general fall away to the south-east (Figure 3). The highest point on the site is its north-western corner, on the playing fields, where ground level is *c*. 30.80m AOD. From there, the ground falls away almost imperceptibly to the south and, more noticeably, to the east. For example, at the north-eastern corner of the complex of school buildings, ground level is *c*. 28.85m AOD this being the lowest part of the site while within the south-western and south-eastern corners of the site it is *c*. 30.20m AOD and *c*. 29.10m AOD, respectively.

<sup>&</sup>lt;sup>7</sup> Mills and Holliday 1998.

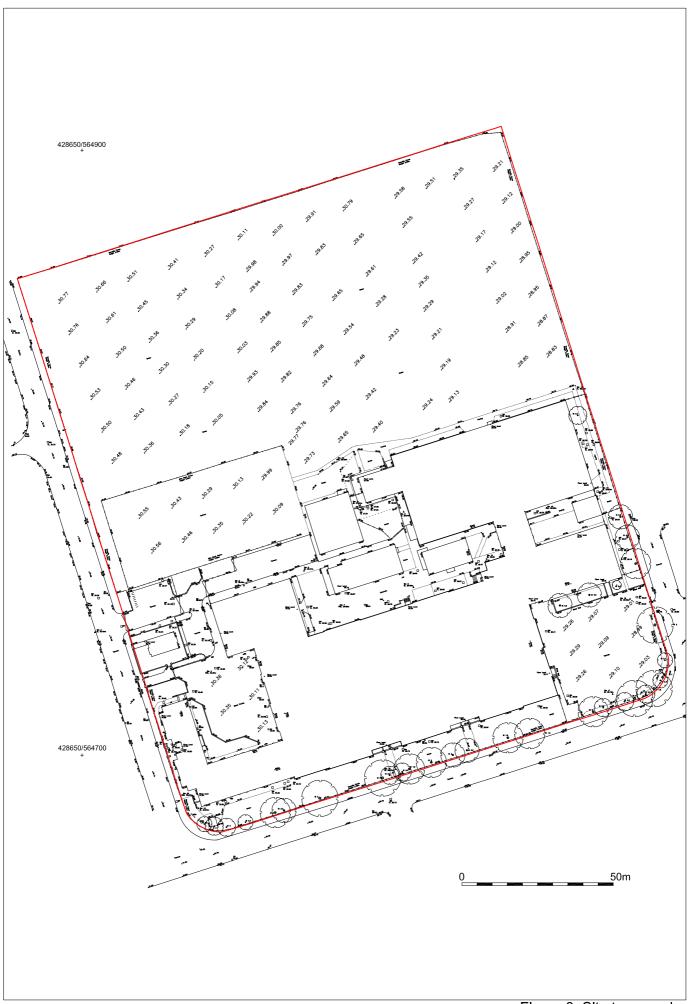


Figure 3. Site topography Scale 1:1,250

#### 6. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

#### 6.1 Introduction

- In order to assess the archaeological potential of the study site, a programme of documentary and cartographic research was undertaken. The starting point for this research was the Historic Environment Record (HER) maintained by the Tyne and Wear Specialist Conservation Team. A 'wider search area' of radius 1km from the study site was established. All HER entries within this area were examined and those of relevance were mapped (Figure 4; this illustration uses a numerical sequence of reference numbers for clarity, cross-referenced to the following text, with HER numbers listed below the illustration). The HER entries are discussed in summary below, in the period/era sub-sections, with further details appearing in the catalogue of HER entries forming Appendix A. HER information has been supplemented by data gathered from a variety of other sources, archaeological, documentary and cartographic, in order to compile this section.
- 6.1.2 The purpose of this study is not to set out a comprehensive history of land use in the area. The broad intention is only to predict and extrapolate likely archaeological conditions within the study site from finds and research in the vicinity. However, analysis of archaeological discoveries made nearby are important, as is an examination of existing historical and archaeological records relating to the site, since it is recognised that finds and sites entered onto the HER are at best a small and unrepresentative sample of the total buried heritage.
- 6.1.3 Time scales used in this section:

#### Prehistoric

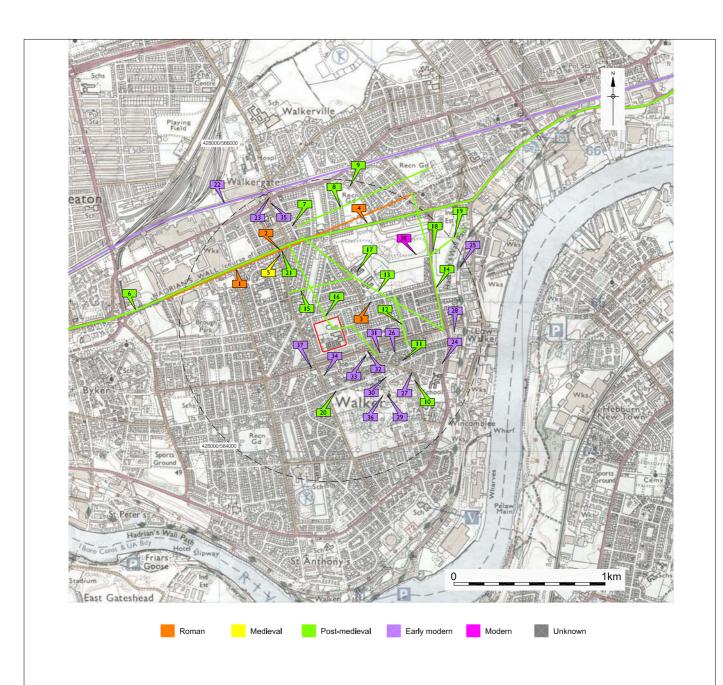
Palaeolithic	450,000-12,000 BC			
Mesolithic	12,000-4,000 BC			
Neolithic	4,000-2,300 BC			
Bronze Age	2,300-700 BC			
Iron Age	700 BC-AD 43			

#### Historic

Roman AD 43–410
Anglo-Saxon AD 410–1066
Medieval AD 1066–1485
Post-medieval AD 1486–AD 1830
Early Modern/Industrial AD 1830-AD 1939
Modern AD 1940-present

#### 6.2 Prehistoric

6.2.1 There are no HER entries for the various prehistoric eras either on the study site or within the wider study area.



Ref. No.	HER No.	Grid Ref.	Description	Period	Ref. No.	HER No.	Grid Ref.	Description	Period
ı	200	427640/565000-	Frontier Defence	Roman	17	4214	428910/565190	Colliery (Walker, Delight Pit)	Post-medieval (industrial)
		429275/565700			18	4215	429410/565320	Colliery (Walker, East Pit)	Post-medieval (industrial)
2	1392	428400/565330	Find (coins, etc.)	Roman	19	4265	429620/565470-	Waggonway (East Pit-Walker)	Post-medieval (industrial)
3	1400	429000/565000	Find (building stone)	Roman			429390/565290	, ,	,
4	6853	428975/5655 IO	Find (stone head)	Roman	20	6224	428770/564400	House	Post-medieval
5	1411	428400/565300	Village (Walker)	Medieval	21	7884	428410/565330	Farmstead	Post-medieval
6	1191	436480/569030-	Toll Road	Post-medieval	22	2146	433500/567260-	Railway	Early modern (industrial)
		425530/564110					426390/564850	•	, , , ,
7	4184	428480/565490	Colliery (Walker, Gosforth Pit)	Post-medieval (industrial)	23	4128	428330/565680	Toll House	Early modern (industrial)
8	4185	429380/565870-	Waggonway (Gosforth Pit-Fair Pit)	Post-medieval (industrial)	24	4205	429470/564580	Brick Works	Early modern (industrial)
		428520/565490	, ,		25	4216	429590/565220	Brickfield	Early modern
9	4186	428860/565750	Windmill	Post-medieval (industrial)	26	4264	429160/564650	School	Early modern (industrial)
10	4206	429290/564470	Colliery (Walker, B Pit)	Post-medieval (industrial)	27	4286	429270/564520	Blacksmiths	Early modern
11	4207	429210/564600	Colliery (Walker, Ann Pit)	Post-medieval (industrial)	28	6213	429550/564790	School	Early modern
12	4209	429160/565030-	Waggonway (Delight Pit-Low Walker)	Post-medieval (industrial)	29	6218	429110/564370	Church (Christ)	Early modern
		429240/564700	, , , , ,	,	30	6219	429100/564490	Chapel (Methodist)	Early modern
13	4210	429480/564800-	Waggonway (Gosforth & Delight Pits-	Post-medieval (industrial)	31	6220	429060/564650	Chapel (Wesleyan)	Early modern
		428540/565420	Low Walker)		32	6221	428980/564660	Chaple (RC)	Early modern
14	4211	429270/565710-	Waggonway (East Pit-Low Walker)	Post-medieval (industrial)	33	6222	428970/564640	School	Early modern
		429480/564800			34	6223	428690/564500	Inn	Early modern
15	4212	428890/565150-	Waggonway (Delight Pit-Old Walker)	Post-medieval (industrial)	35	7885	428340/565640	Chapel (Methodist)	Early modern
		428460/565050			36	9907	429080/564370	Memorial	Early modern
16	4213	428460/565360-	Waggonway (Gosforth Pit-Low Walker	) Post-medieval (industrial)	37	9911	428610/564550	Library	Early modern
		429040/564630			38	5503	429300/565300	Anti-aircraft Battery	Modern
					39	11113	Not shown	Watercourse (Stott's Burn)	Unknown (see Appendix B)

- 6.2.2 There are, however, some indications of potential prehistoric activity in the wider vicinity. For example, south of Stott's House Farm, on the extreme north-eastern margin of the wider study area, stood likely prehistoric earthwork features, known as 'Stott's House mounds' (HER 1393), published in 1732 by the renowned antiquarian John Horsley as burial mounds or 'tumuli'. Two such features appear on the Ordnance Survey 2nd edition from the 1890s and one of these was excavated by George Jobey prior to its destruction in 1964. Although Jobey recorded no evidence for function, probable prehistoric ploughmarks (HER 1417) were recorded on the former ground surface beneath the mound; similar marks have also reportedly been found underlying Segedunum Roman fort at Wallsend. The broad suggestion of these findings is that cultivation was taking place in the general area during the prehistoric period.
- 6.2.3 Pre-Roman settlement remains were located in 2001 on the north-western margin of the wider study area during construction of a new public square on the south side of Shields Road, Byker. Here Hadrian's Wall overlay the site of a native settlement, evidenced by a series of drainage ditches and stakeholes.<sup>8</sup>
- 6.2.4 In summary, the potential for prehistoric remains at the study site is considered **low**.

#### 6.3 Roman

- 6.3.1 There are no HER entries of the Roman period on the study site but four within the wider study area (Figure 4 and Appendix A). By far the most notable is Hadrian's Wall (Figure 4, Ref. 1) running SW-NE across the northern portion of the wider study area and c. 0.5km to the north of the study site.
- 6.3.2 The Wall, constructed on the orders of the Roman Emperor Hadrian from AD 122, marked the northern frontier of the Roman Empire. As originally planned, it ran from *Pons Aelius* in Newcastle, but at some stage it was decided to build an extension from the original terminus at the Tyne Bridge a further 3½ miles (5.6km) further east to a new fort, *Segedunum*, lying beyond the wider study area, to the north-east. A broad earthwork known as the Vallum, comprising a wide ditch with two flanking banks, was constructed to the south of the Wall. This earthwork was not constructed along the stretch of Wall from *Pons Aelius* to *Segedunum*, presumably as the River Tyne was considered to serve the purpose of the Vallum in this area. The Wall and its associated features represent the best-preserved frontier of the Roman world and consequently the Hadrian's Wall corridor has been designated a UNESCO World Heritage Site.
- 6.3.3 HER 200 covers a section of the Wall corridor between St. Francis Presbytery, off Stott's Road, to the north-east of the study site, and Tunstall Avenue, west of Brough Park Stadium, to the north-west. Overall, this section lies within designated Wall Mile 1, which runs from Segedunum fort in Wallsend, past the study area, to the aforementioned Tunstall Avenue. St. Francis Presbytery is thought to be the site of Milecastle 1 on the Wall. Within the section of the Wall corridor covered by this HER entry are three scheduled areas (see Appendix A).

<sup>&</sup>lt;sup>8</sup> Information from HER 201.

<sup>&</sup>lt;sup>9</sup> Breeze and Dobson 2000, 60.

- 6.3.4 Of the other three HER entries for the Roman period in the wider study area, two relate to chance finds of artefactual material. The first (Figure 4, Ref. 2) was the discovery in the mid 19th century of a group of objects comprising a fibula, four coins and a mount this depicting two griffin's heads and a crouching feline found in debris of the Wall in Walker. The second (Figure 4, Ref. 4) was a stone head found in the 1930s, one of group of a type known as 'Celtic Heads' found in proximity to the Wall in its eastern sector.
- 6.3.5 The remaining HER entry relates to an inscribed stone (Figure 4, Ref. 3) reported on in 1732 by the aforementioned antiquarian John Horsley, this probably found to the west of the fort in Wallsend, although this is by no means certain.
- 6.3.6 In summary, despite its relatively proximity to the Hadrian's Wall frontier, the potential for Roman remains at the study site is considered **low**.

### 6.4 Anglo-Saxon

- 6.4.1 No entries relating to Anglo-Saxon activity are recorded in the HER for the study site or within the wider study area. Neither is there any documentary evidence to suggest settlement or exploitation of the land in the vicinity of the study site during this era.
- 6.4.2 In summary, the potential for remains from the Anglo-Saxon period at the study site is considered **low**.

#### 6.5 Medieval

- 6.5.1 There are no records in the HER for the medieval period at the study site and just one within the wider study area, this being the medieval village of Walker (Figure 4, Ref. 5), which lay *c*. 400m to the north-west of the study site. The location of the village is known from mid 18th century mapping (for example, Figure 5) which shows a settlement nucleus, 'Walker', adjacent to Hadrian's Wall, with a triangular 'Town Green' to the south. By the mid 19th century, maps depicted a hamlet, 'Old Walker' at this location (for example, Figure 7).
- 6.5.2 Part of the 12th century barony of Morpeth, the settlement was named *Waucre* in the mid 13th century and the name is thought to derive from 'Wall Carr' meaning the carr (marsh) by the Wall. The settlement had five taxpayers in 1296, seven in 1312 but only two in 1336. The township was subinfeudated at an early period to the family of Baret and eventually it passed to the Fenwick family and it remained in their possession until 1692.
- 6.5.3 Only slight traces of ridge and furrow ploughing, probably dating to the medieval period, have been noted in the Walker area in the past, while firm archaeological evidence of medieval settlement is largely absent. While the study site itself was almost certainly not settled during the medieval period, the land may have been utilised for agriculture and any remains from this era, if present, could include for example improved agricultural soils, field boundaries or the remains of ridge-and-furrow ploughing, all of moderate archaeological significance at best. In summary, the potential for archaeological remains of medieval date at the study site is considered low.

#### 6.6 Post-medieval and Early Modern (including map regression)

- 6.6.1 With regard to general settlement and agricultural activity, rather than industrial development, the HER contains just a handful of entries for the post-medieval period within the wider study area, these being: a section of the turnpike road (Figure 4, Ref. 6), running north-eastwards towards North Shields; a corn mill to the north of Hadrian's Wall (Figure 4, Ref. 9); Scrogg House (Figure 4, Ref. 20), which stood *c*. 400m to the south of the study site and which appears on Isaac Thompson's estate plan of Walker from 1745 (Figure 5); Walker East Farm (Figure 4, Ref. 21), which stood just south of Hadrian's Wall, possibly from as early as the late 17th century until its demolition just before World War Two.
- 6.6.2 The remaining HER entries designated as post-medieval in terms of the chronological timescales adopted for this assessment actually refer to early industrial sites, three of these almost certainly being amongst the earliest workings of Walker Colliery, namely Ann Pit (Figure 4, Ref. 11), B Pit (Figure 4, Ref. 10), these located *c.* 400m to the south-east of the study site, and Gosforth Pit (Figure 4, Ref. 7), this an outlying working, located just north of Hadrian's Wall but of considerable relevance to this assessment.
- 6.6.3 The dates at which Ann and B Pits were sunk are uncertain, although the online catalogue of the collections of the North of England Institute of Mining and Mechanical Engineers (NEIMME) lists a colliery report book with an 'Estimate of the cost of bringing a level from Stots Row to Walker Pit and completing the sinking of two pits, by Enoch Hudson, John Barnes, John Bullock, Mark Hobson and Richard Peck', dated April 1713, 10 and 'Valuations of stock at Walker Colliery', dated February-April 1737, 11 and a report and account book containing an 'Account of coal carried by waggon from pits on the Walker Estate to Walker Colliery Staith, 1766-1774'. 12
- 6.6.4 From this evidence, an 18th century origin is confirmed for at least the earliest workings of Walker Colliery. A 'Description of the sinking of Gosforth Pit [Walker], by Ralph Elliot, 14 April 1780-13 January 1782' in a colliery report and account book <sup>13</sup> establishes the date of this particular working rather more firmly. Several maps of the period, such as Gibson's colliery plan of 1788 and Lambert's similar plan of 1807, certainly depict Walker Colliery, although these are not at sufficient scale to be able to provide additional information of note, so have not been included herein.
- 6.6.5 One HER entry of post-medieval industrial origin lies within the study site, this being the route of a former colliery waggonway (Figure 4, Ref. 16) that ran south-eastwards from Gosforth Pit of Walker Colliery towards the core workings in 'Low Walker'; by the mid 19th century this term had come to mean the industrial settlement area developing to the south-east of the study site and extending eastwards to the Tyne.

<sup>&</sup>lt;sup>10</sup> NEIMME Reference NRO 3410/For/1/4/196 ('For' indicating part of the Forster collections). Colliery Report Book

<sup>&</sup>lt;sup>11</sup> NEIMME Reference NRO 3410/For/1/4/173. Colliery Report Book (1717-1779).

<sup>&</sup>lt;sup>12</sup> NEIMME Reference NRO 3410/For/1/19. Colliery Report and Account Book (1766-1835).

<sup>&</sup>lt;sup>13</sup> As above.

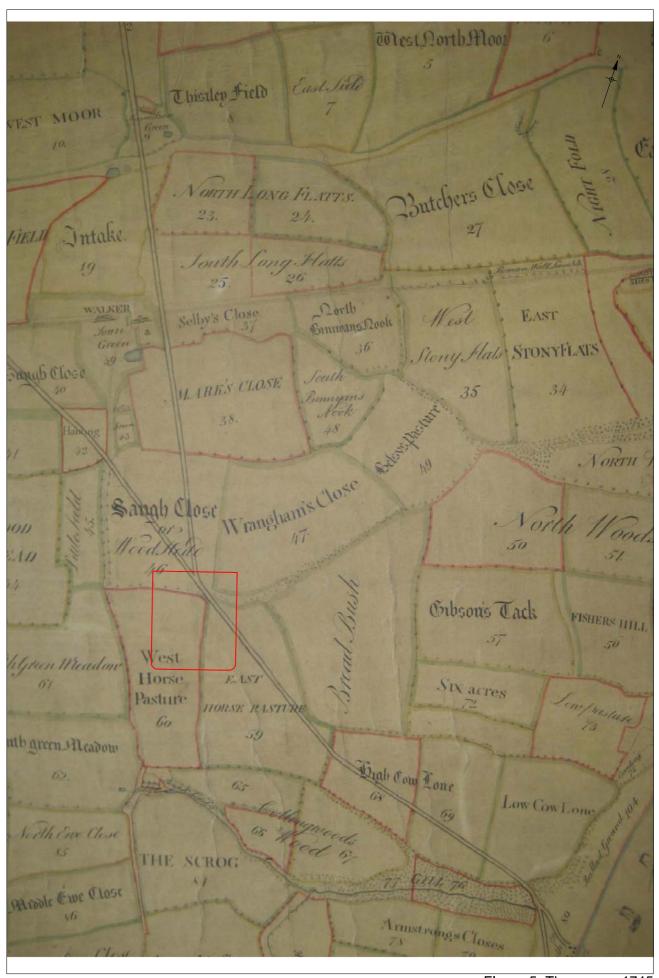


Figure 5. Thompson, 1745 Approximate scale 1:7,500

- The waggonway upon the study site probably pre-dates the sinking of Gosforth Pit, since
  Thompson's 1745 plan (Figure 5) depicts the feature running NNW in the direction of where
  that working would later lie, while the actual working served by the route at that time lies
  beyond the extent of the map. At the northern boundary of the study site, a branch of the
  waggonway runs to the north-west, this serving 'Banks Colliery' at the western extent of
  Thompson's map, at which point the route is annotated 'Waggon Way'. The exact location of
  Banks Colliery is uncertain but it must have lain to the north of Hadrian's Wall. After the
  convergence of the two waggonways, the route runs to the south-east to 'Winkham Lee Staith'
  (later Wincomblee) on the Tyne. On Thompson's plan, the study site takes in parts of four
  separate land parcels, 'West Horse Pasture', 'East Horse Pasture', 'Saugh Close' (or 'Wood
  Hide') and 'Wrangham's Close'.<sup>14</sup>
- 6.6.7 The majority of the HER entries in the wider study area are directly or closely related to post-medieval or early modern industrial development in Walker (Figure 4 and Appendix A). These include many elements of a network of colliery waggonways within the wider study area. Some or all of these may have been originally built in the 18th century, in similar fashion to the route described above, with the majority seemingly abandoned by the time the Ordnance Survey 1st edition was surveyed in the 1850s.
- 6.6.8 One waggonway (Figure 4, Ref. 8) ran between Gosforth Pit and Fair Pit of Walker Colliery, while Delight Pit (Figure 4, Ref. 17) and East Pit (Figure 4, Ref. 18) of Walker Colliery, both located to the north-east of the study site, were served by other waggonways. One route (Figure 4, Ref. 13) ran south-eastwards from Gosforth Pit, passing Delight Pit and continuing into Low Walker. A branch route (Figure 4, Ref. 12) probably ran SSE towards the earliest workings of Walker Colliery. Another route (Figure 4, Ref. 15) ran roughly westwards from Delight Pit, crossing the line of the aforementioned route that ran into the northern part of the study site. East Pit was served by a route (Fig 4, Ref. 14), which ran southwards into Low Walker, with a branch (Figure 4, Ref. 19) running north-eastwards.
- 6.6.9 Technologically, traditional wooden waggonways had their origin in the simple horse and cart, and, prior to the rapid increase in mechanisation in the early to mid 19th century, the vehicles and their routes formed an integral part of colliery infrastructure in the North-East; in fact they were very much the forerunner of the modern railway system. Although early wooden overground 'railways' probably originated in Nottinghamshire in the early 17th century, by 1608, three short routes of this kind were in place in south Northumberland, transporting coal to staithes.

<sup>15</sup> For the most part, the works of Lewis 1970 and Warn 1976 are used as a basis for this summary of waggonway development in the North-Fast

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<sup>&</sup>lt;sup>14</sup> NEIMME Reference NRO 3410/For/1/4/68. A Colliery Report Book (1717-1779) contains a report dated 1741-42 regarding the amount of coal from Sir Thomas Wrangham's Colliery at Byker.

development in the North-East.

16 The wharves at which coal was transferred from waggonways to water-going vessels were known locally throughout the North-East as 'staithes'. Atkinson 1968.

- As the coal trade expanded greatly in the North-East in the later part of the 17th century, there was a significant increase in the number of waggonways in south Northumberland, and on Tyneside and Wearside. By 1670, flanged wheels had been added to help guide the waggons, with the addition of protective metal strips to the rails by 1716. Across the North-East, the heyday of these forerunners of the railways proper was arguably between the mid 18th century and the first decade of the 19th century. Their widespread use throughout the coalfields of the North-East in the 18th century was linked directly to the need to move coal quickly and efficiently for export, especially to London.
- 6.6.11 Throughout the North-East, the vehicles themselves were initially known as 'wains', this word eventually being replaced by 'waggons'. A standard unit of weight, the 'Newcastle chaldron', was employed when colliers the sea-going vessels used for transporting coal were being loaded, and this was estimated in the early years using a combination of 'bolls', 'wains' and 'cartloads'. Into the 19th century, the Newcastle chaldron came to be estimated using waggons supposedly having a standardised capacity of 53 hundredweight.<sup>17</sup>
- 6.6.12 The early systems were usually designed so that full waggons would travel under their own weight, on a gradual downhill incline, with horses pulling the empty vehicles uphill to the coal workings for reloading. By 1797 the self-acting inclined plane was in operation at Benwell in Newcastle, this using the principle that the weight of a loaded waggon going downhill could be utilised to pull an empty waggon back uphill. Early rails were typically of oak, ash or birch, usually approximately 4 inches square, with sleepers between, with a variety of gauges in use. Early lines were single track, with a buffer zone to either side, known as a wayleave, where lines passed through private property.
- 6.6.13 Double-tracked lines were certainly in existence in the 18th century, although many remained single track, facilitating vehicular movement with a series of sidings and passing places. The waggons were also initially made entirely of wood, with a brake to regulate the downhill descent, while from the mid 18th century wooden axles were replaced by iron ones and castiron wheels were eventually introduced. Upgrade of the rails was inevitable, with 1794 often quoted as being the date of the first recorded use of two-foot long malleable iron rails, at Walbottle Colliery in Newcastle. A survey of 1810 noted that although 'traditional' wooden waggonways remained in extensive use in the Tyneside area, replacement of wooden rails with metal ones was taking place on most routes.<sup>18</sup>
- 6.6.14 To date there has been only a handful of examples of detailed archaeological investigation of former colliery waggonways, two of which in Tyne and Wear both of likely late 18th century date have led to published papers, underlining the significance of these structures in terms of post-medieval and early modern industrial archaeology. The first publication reported on an excavation at Lambton D Pit in 1995, which uncovered the substantial and well preserved remains of a timber waggonway, dating from *c*. 1780-90.<sup>19</sup> It comprised oak rails with a gauge of 4'2" and with a series of pegged 'points' and flanges to direct and keep waggons on the rails. Waggonways required constant maintenance due to their relatively simple construction and heavy usage, and the example at Lambton D Pit showed evidence of piecemeal repair and replacement of parts.

<sup>18</sup> Atkinson 1968.

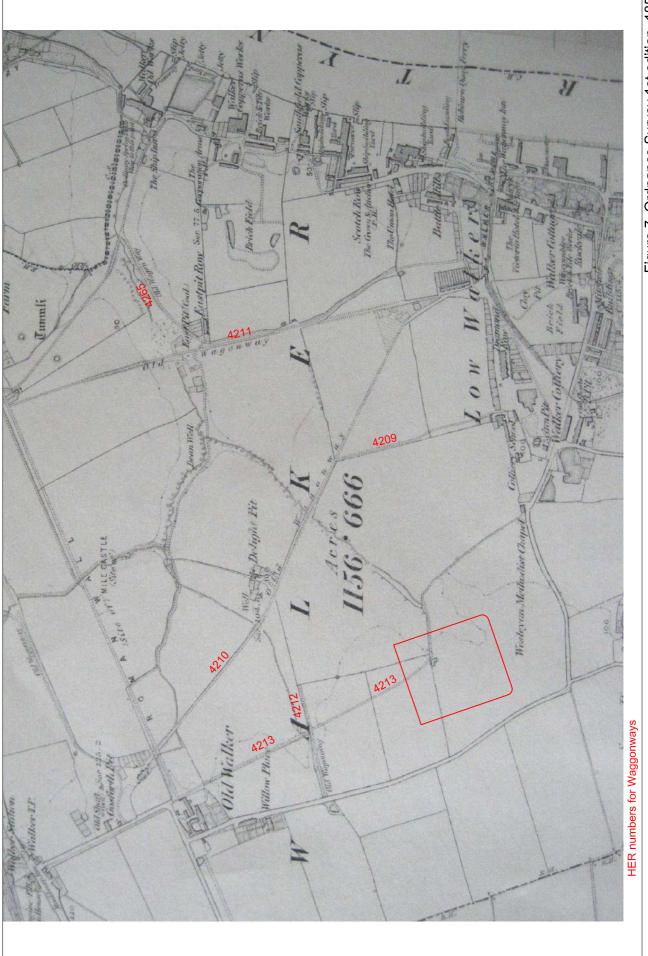
<sup>&</sup>lt;sup>17</sup> 1 hundredweight (cwt) = 112 lbs; 20 hundredweight = 1 ton.

- 6.6.15 The second publication reported the findings of an excavation in 2002 at Rainton Bridge, near Houghton le Spring, which revealed a waggonway that could predate the example at Lambton D Pit.<sup>20</sup> Although timber preservation was poor in this case, the excavation was able to determine the rail gauge, and identify a series of re-cut ditches and fencelines that would have demarcated the surrounding wayleave.
- 6.6.16 These previous pieces of archaeological work have largely confirmed theories regarding general construction of late 18th century waggonways, in that initial groundworks involved laying down linear banks of ballast, often small-coal and ash, upon which wooden sleepers were placed and to provide gradients as required. Wooden rails were then laid down and pegged into place, before a further layer of fine ballast was deposited on and around the sleepers as protection. Further ballast could be added to raise or effectively conceal the rails, with provision sometimes made for a path and, more usually, drainage gutters either side.
- 6.6.17 Thomas Oliver's estate plan of Walker from 1840 (Figure 6) indicates that, by this time, possibly only one waggonway ran into the study site from the north, this being the branch (Figure 4, Ref. 16) running from Gosforth Pit, Walker Colliery into the riverfront settlement area of Low Walker. Even then, as the route is not annotated as a waggonway, it is probably unlikely that that it was still serving such a purpose, potentially surviving only as a cart track or footpath by this time.
- 6.6.18 Oliver's plan shows that, at the meeting point of the four land parcels within the study site (all named as on the 1745 plan, with the exception of the field to the north-west, this being 'South Saugh Close'), the former waggonway route appears to turn eastwards to follow the boundary between East Horse Pasture and Wrangham's Close. East of the study site, the route crosses the course of a burn (Appendix A, Ref. 39), then turns sharply south-eastwards to follow the boundary between East Horse Pasture and an adjacent land parcel, 'Broad Bush', and runs into Low Walker. This route does not appear on Bell's plan of colliery activity on Tyneside from 1847, and although examined as part of the assessment, that particular illustration is at insufficient scale to warrant inclusion herein. Oliver's plan depicts the aforementioned burn apparently rising immediately to the west of the study site, closely following a section of its southern boundary, then turning to cross the south-western corner of the site on a SW-NE course; the HER (HER 11113) describes it as one of series of burns which converge towards Wallsend as 'Stott's Burn'.
- 6.6.19 By the time the Ordnance Survey 1st editions (Figures 7 and 8) were surveyed in 1858, Gosforth Pit of Walker Colliery annotated 'Old Shaft' is likely to have been out of use and all the waggonway routes between Hadrian's Wall and Low Walker, including the route that ran into the north-eastern portion of the study site, were probably no longer used for their original purpose. What may have been two small buildings although, as discussed below, this is not certain are depicted just within the northern boundary of 'Field 140' (an amalgamation of West Horse and East Horse Pastures), at the point at which the (probably abandoned) waggonway route turned to the east (Figure 8).

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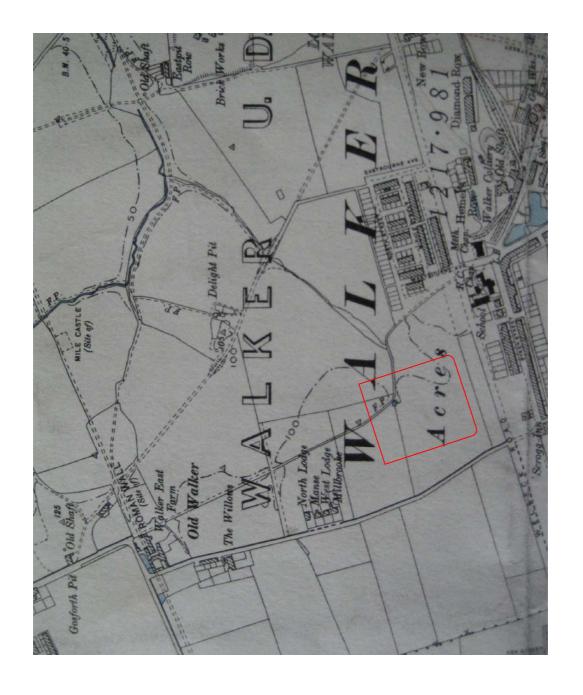
<sup>&</sup>lt;sup>19</sup> Ayris et al. 1998.

<sup>&</sup>lt;sup>20</sup> Glover 2005.

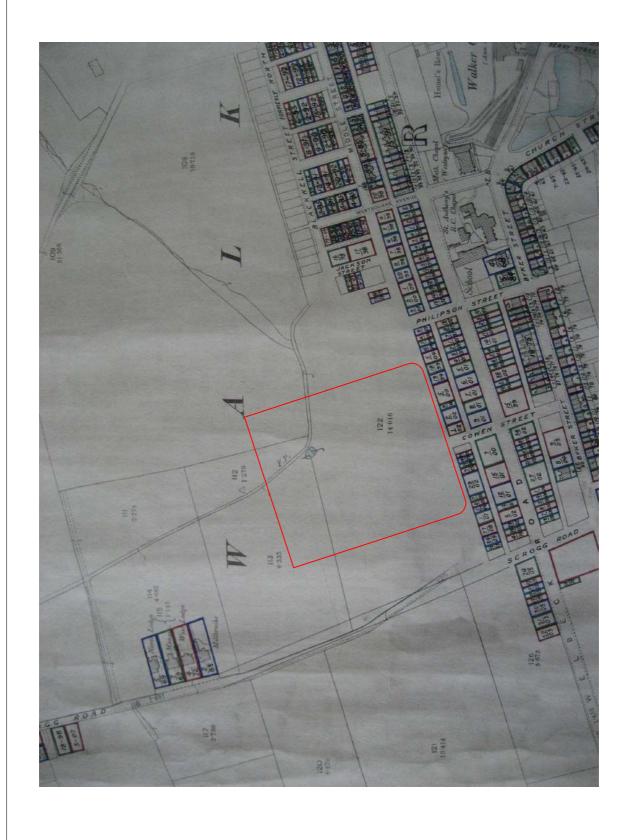




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- 6.6.20 The Ordnance Survey 1st edition, 6 inches to 1 mile scale (Figure 7), gives a clear idea of the landscape in which the study site was set by that date, an essentially rural location with elements of industrialisation being rapidly forced upon it. To the east, Low Walker was relatively well developed by this time, with shipyards on the riverfront and other early modern industrial activity prominent such as 'Wincomblee Brick and Tile Works' (Figure 4, Ref. 24) and a brickfield near East Pit (Figure 4, Ref. 25). Little is known of these works, although it would seem they were exploiting the need for raw manufacturing and building materials during a period of industrial proliferation. The introduction of industrial facilities in Low Walker inevitably required housing and associated amenities for the increased population, with Christ Church (Figure 4, Ref. 29), a Wesleyan Methodist Chapel (Figure 4, Ref. 31) and Walker Colliery School (Figure 4, Ref. 26) all appearing on the Ordnance Survey 1st edition. From being a focal point in the Tyneside coal mining industry in the 18th century, Walker was to become well known in the following century for chemical production (initially utilising brine springs in mines), ironworking, pottery and brick making, before shipbuilding came to dominate the riverside from the mid 19th century.
- 6.6.21 By the time of the Ordnance Survey 2nd editions of the 1890s (Figures 9 and 10), urbanisation in Walker had increased apace, with the study site by then lying on the very edge of a semi-rural northern margin of the developed area. To the east was terraced housing on North Street (later Blackwell Street) and Middle Street, these running parallel with a new street, Welbeck Road, aligned WSW-ENE, following re-design of the road network in the settlement area. To the west ran Scrogg Road, this running roughly north-south from the line of Hadrian's Wall to meet Welbeck Road, with a cluster of dwellings, 'North Lodge', 'Manse', 'West Lodge' and 'Millbrooke' on its eastern side. To the north-east of the site, Delight Pit of Walker Colliery remained operational, although Ann, Gosforth and East Pits were all abandoned by this time. The former waggonway route through the north-eastern portion of the study site was now part of a footpath (annotated 'F.P.') running from Old Walker down to Welbeck Road. At the point at which the route turned to the east was what may have been since it appears to be shaded blue a small pond, this being the feature depicted in more regular form potentially two small buildings on the 1st edition.
- 6.6.22 Having opened in 1879 to the north of Hadrian's Wall, the Riverside Branch of the Newcastle and Tynemouth Railway (Figure 4, Ref. 22), part of the North Eastern Railway, dates from the early modern period. Other HER entries (Figure 4 and Appendix A) of this era in the northern portion of the wider study area are a toll house at Walker Turnpike (Figure 4, Ref. 23) on the Newcastle to North Shields Road, and a Methodist chapel in Walkergate (Figure 4, Ref. 35). Entries in Low Walker from the early modern period are: a blacksmiths' premises (Figure 4, Ref. 27), another Methodist chapel (Figure 4, Ref. 30), a Roman Catholic chapel (Figure 4, Ref. 32), another school (Figure 4, Ref. 33), and a memorial to a local sporting hero (Figure 4, Ref. 36). Walker Library (Figure 4, Ref. 37), which opened in 1908 on Welbeck Road, this within *c*. 100m of the study site, appears on the 'Newcastle-upon-Tyne Local List'<sup>21</sup> of buildings of special local architectural or historic interest, while the Scrogg Inn (Figure 4, Ref. 34) stood just to the south-east of the library at this time.

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<sup>&</sup>lt;sup>21</sup> Available on the website of Newcastle City Council.

- 6.6.23 The Ordnance Survey 'Special Edition' of 1912 (Figure 11) shows little significant change within the study site from the previous edition. The former 'pond' at the angle of the footpath which marks the former waggonway route now appears to be a small sub-oval land parcel, itself sub-divided. Immediately to the south of the study site additional back-to-back terraced housing has been added between an extended Middle Street and Welbeck Road, with Cowen Street and Philipson Street being short link roads.
- 6.6.24 In summary, the potential for archaeological remains of the post-medieval period and early modern/industrial era is considered **moderate** to **high**, since a former colliery waggonway ran across the north-eastern portion of the study site. By the late 18th century the waggonway ran northwards to Gosforth Pit of Walker Colliery, sunk in 1780-82, but the route probably predates that and any sub-surface remains, would, therefore, be of **high** archaeological significance.

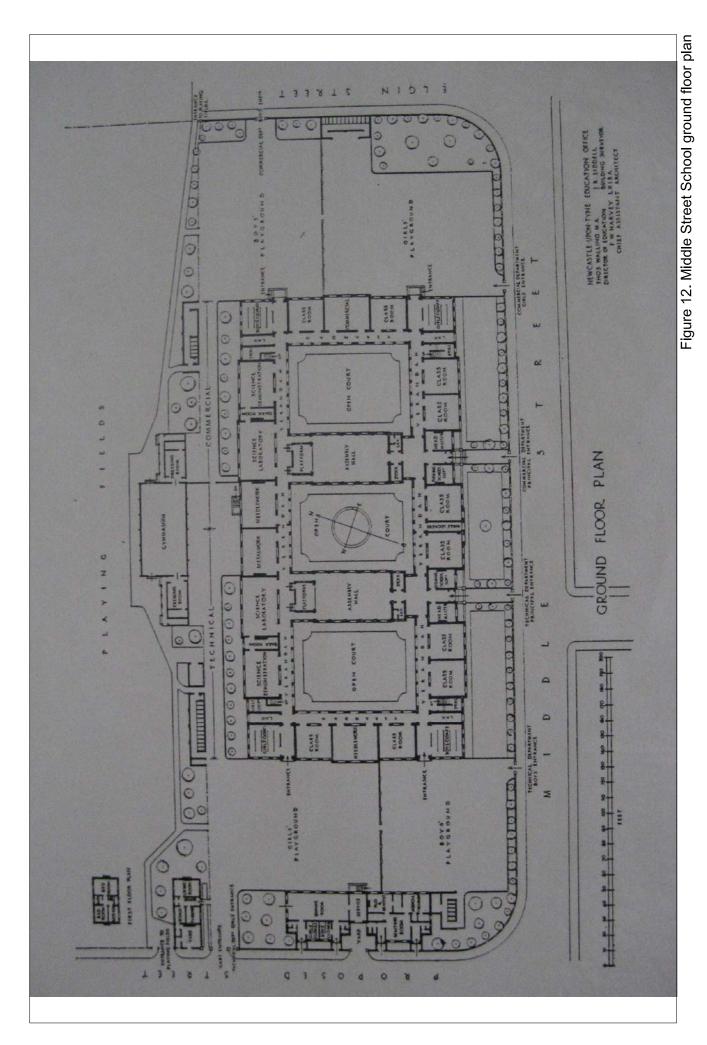
#### 6.7 Modern

- 6.7.1 For the modern era, there are no HER entries within the boundaries of the study site. The 1941 edition of the Ordnance Survey map (Figure 13) shows the study site occupied by what was then known as Middle Street School, with the main school building occupying the southernmost portion, fronting onto Middle Street, with ancillary buildings around it. The remainder of the site is occupied by a playing field with various buildings and small structures along its southern edge, including a large gymnasium with connected changing rooms for boys and girls either side and two separate pavilions. Housing had infilled the entire area around the site, with the existing streets Langley Road, Elgin Gardens and Ennerdale Road all in place by this time.
- 6.7.2 Middle Street School opened on 11 January 1932 (and thus is technically 'early modern' according to the designated timescales adopted for this assessment) with two departments, a Central Technical School, Headmaster Mr. F.L. Mills, and a Central Commercial School, Headmaster Mr. G Welch. While acknowledging the industrial past of the area and a 'long established tradition of fine craftsmanship', publicity material for the new school at the time of its opening referred to the 'growing district' of Walker, with its 'new housing estates' and was suitably forward looking by saying that 'the opening of the new schools give the present and future generations an opportunity to show their merit in a wider sphere of work'.
- 6.7.3 Middle Street School was the first school in Newcastle to use oil fuel for heating purposes and while the classrooms were designed on an 'open air principle' they were designed with 'sufficient safeguards against the stresses of bad weather'. Figure 12 is a design plan of the developed portion of the school. The main building (Plates 1 and 2) incorporated three enclosed courtyard areas and both departments each accommodating 480 scholars comprised a hall, eight classrooms, science laboratory, science demonstration room, art room, domestic subjects room and needlework room, while the commercial school also had a 'commercial room'.

<sup>&</sup>lt;sup>22</sup> Information from a file, 'Middle Street Technical School, Walker' held by Tyne and Wear Archives.

- 6.7.4 The school gymnasium was highlighted in publicity material as being an early example of a purpose-built structure detached from a main school building and served the dual purpose of providing changing facilities for pupils using the gymnasium, as well as for pupils of neighbouring schools who were allowed to use the extensive playing fields. To the west of the main building stood the 'Clinic' and 'Dining Centre' (Plate 3), as well as the 'School House' (Plate 4), this presumably a dwelling for the caretaker, all of which remain in place today.
- 6.7.5 There is just one HER entries for the modern era within the wider study area, this being the site of an anti-aircraft battery (Figure 4, Ref. 38) from World War Two, to the north-east of the study site.
- 6.7.6 Around 1960, Middle Street School amalgamated with Heaton Technical School to become Manor Park School and since then it has become Walker Technology College, with the addition of various buildings in the southern half of the site (Figure 2).
- 6.7.7 The potential for sub-surface archaeological remains of the modern era across the site is **high**, although these could only represent groundworks associated with construction and subsequent development of the school and would be of **negligible** archaeological significance.
- 6.7.8 The original school building at Walker Technology College represents a potential archaeological/historical resource of the (early) modern era at the study site. However, whilst acknowledging the cultural associations the school has within the development of education in Newcastle in the 1930s, the structure itself is of generally **low** architectural value. Guidance on the future of historic school buildings has been set out recently by English Heritage, in light of the substantial ongoing Government and local education authorities investment programme in school buildings.<sup>23</sup> It is the view of English Heritage that heritage specialists (both historic buildings and archaeological officers) based in local authorities are usually best placed to provide initial advice on the historical and architectural significance of a particular site. In this instance, the Tyne and Wear Archaeology Officer has not considered the earliest element of the school complex to be of sufficient character and architectural merit to warrant detailed photographic or other recording before demolition, if indeed this is to be its fate as part of the re-development proposal. Therefore, the brief photographic record compiled as part of this assessment is considered to represent an adequate record of the standing building.

<sup>&</sup>lt;sup>23</sup> English Heritage 2005.





#### 7. POTENTIAL IMPACTS

The following potential impacts upon the archaeological resource are considered:

- Loss of, or damage to, archaeological sites and remains.
- Settings and views of and from upstanding remains, listed buildings, scheduled ancient monuments and other archaeological sites affected.
- Changes to ground conditions as a result of changes to the drainage regime, which could affect archaeological remains.
- Loss of landscape features, structures and areas with historic and cultural associations.
- Other possible impacts, such as noise, vibration, compressions and other changed ground conditions.

#### 7.1 Loss of, or damage to, archaeological sites and remains

- 7.1.1 The assessment has established that there is **moderate** to **high** potential for archaeological remains of the post-medieval period and early modern/industrial era within the north-eastern portion of the study site, since a former colliery waggonway route is documented as having run through that area. The route (HER 4213) served Gosforth Pit of Walker Colliery in the late 18th century, but may have been operational in the 1740s and potentially earlier. Any sub-surface remains of the waggonway route from this era would be of **high** archaeological significance. For the remainder of the school site there is far less potential for archaeological remains of the post-medieval period and early modern industrial era and for the entire site the potential is considered **low** for all archaeological eras prior to the post-medieval period.
- 7.1.2 At the time of writing, it is proposed to demolish the existing Walker Technology College and construct a new school on land to the north-east, off Waverdale Avenue. Precise details of what will happen to the study site post-demolition are uncertain it may be grassed over. In general though, demolition and post-demolition groundworks, such as the removal of existing foundations and hard surfaces, along with general landscaping, can impact to a greater or lesser degree upon buried archaeological remains, depending upon the nature and extent of these works.
- 7.1.3 Prior to the construction of Middle Street School in the early 1930s, the study site had largely escaped previous development. Therefore, the survival of any potential sub-surface remains of the former colliery waggonway in the north-eastern portion of the site will depend largely on the extent of groundworks undertaken ahead of construction of the school, specifically landscaping for the playing fields in the 1930s, as well as any subsequent landscaping. While there may have been some levelling for the playing fields, ground level in this part of the site appears to have remained largely unaltered. In summary, however, until details of proposed demolition and any post-demolition groundworks are available, the likely degree of impact upon the potential archaeological resource in the north-eastern portion of the site cannot be accurately determined.

# 7.2 Settings and views of and from listed buildings, scheduled monuments, upstanding archaeological remains and any other archaeological sites affected

7.2.1 There are no scheduled monuments, listed buildings or other known archaeological sites on or within the immediate vicinity of the study site, therefore the proposed re-development will not detrimentally affect the setting and view of and from any such monument, listed building or known archaeological site.

# 7.3 Changes to ground conditions as a result of changes to the drainage regime, which could affect archaeological remains

- 7.3.1 The specification for demolition and post-demolition groundworks at the study site is unavailable at the time of writing. In general, dewatering through penetrative construction and demolition techniques can lead to degradation and ultimate destruction of sub-surface organic deposits, which can contain particularly significant archaeological, biological and palaeoenvironmental information. However, while waggonway timbers could survive within the study site as they did at both the aforementioned excavations at Lambton D Pit and Rainton Bridge South deeply stratified deposits offering good potential for anaerobic survival of biological and palaeoenvironmental material are not anticipated, given the drift geology of the area.
- 7.3.2 In summary, any impact to the study site in this respect is considered **low**.

# 7.4 Loss of landscape features, structures and areas with historic and cultural associations

- 7.4.1 At the time of writing it is proposed that re-development of Walker Technology College will necessitate demolition of some or all existing structures at the study site. While the original school building is considered to be of generally **low** architectural value, it certainly has some important cultural associations, given that it formed a significant element in the development of secondary education in the East End of Newcastle in the 1930s. Personal and particularly educational relationships within the wider community, both past and present, may be considered an important historical and cultural resource.
- 7.4.2 In summary, until full details of the proposed demolition are available, the precise degree of impact of the scheme upon a structure with some cultural associations in recent history cannot be adequately determined.

# 7.5 Other possible impacts, such as noise, vibration, compressions and other changed ground conditions

7.5.1 Any demolition/construction programme - particularly preliminary groundworks - has a short-term impact, in terms of noise and vibration, on the immediate environment of any site.

### 8. CONCLUSIONS AND RECOMMENDATIONS

### 8.1 Conclusions

- 8.1.1 Although crossed by part of the eastern sector of the Hadrian's Wall corridor and, in terms of settlement focus, of certain medieval origin, the urban area of Walker in the East End of Newcastle remains largely synonymous with the intensive post-medieval and early modern industrialisation of this part of the city. Its situation close to the Tyne made the general area an ideal candidate as a focus of organised early colliery activity, with the study site itself lying to the north-west of the earliest such workings in Walker. Later industries in the area included chemical production, iron working and, ultimately, shipbuilding from the mid 19th century.
- 8.1.2 Probably unoccupied and largely unused until the post-medieval period, with the possible exception of agricultural usage during the medieval period, it is concluded that the study site has **low** potential for remains from all prehistoric eras, as well as the Anglo-Saxon and medieval periods. Lying *c*. 0.5km to the south of Hadrian's Wall, the study site cannot be seen as having anything but **low** potential for Roman remains.
- 8.1.3 By the post-medieval period, the site lay on the north-western margin of land occupied by Walker Colliery, the earliest workings of which date from the early 18th century. An estate plan of 1745 shows two colliery waggonway routes converging at the northern boundary of the site, with a single route then continuing to the south-east, across the north-eastern portion of the site, towards staithes on the Tyne. By the mid 19th century, the waggonway routes within the immediate vicinity of the study site were evidently out of use, presumably due to the abandonment of unproductive workings to the north and west. The route of the waggonway on the site remained preserved in the landscape as a footpath until the area became amalgamated into the sprawl of urban development in the first half of the 20th century. Middle Street School, the forerunner of Walker Technology College, dates from the early 1930s.
- 8.1.4 Any sub-surface remains of a colliery waggonway that originated in the post-medieval period and potentially continued in operation into the early modern industrial era, would be of local or regional importance. As described in Section 3, one of the two key research themes for this assessment, as set out in the NERRF, highlights that while archaeological investigations should focus on early waggonways and pre-locomotive hauled lines, the importance of existing landscape features along the course of known early waggonways, such as railway formations, track beds and gradients, should be given due regard, where appropriate, through survey.
- 8.1.5 Only the north-eastern quarter of the study site can be considered to have moderate to high potential for colliery-related archaeological remains. The critical factor in the likely survival of any such remains is the extent to which this part of the site has been landscaped since the site has been used as a school. Of most relevance in this respect will be the degree of landscaping undertaken at the time of the original setting out of the playing fields for Middle Street School in the 1930s.
- 8.1.6 The study site does not lie within a conservation area and the proposed re-development will not directly affect any listed buildings or scheduled monuments and will not directly affect the overall setting of or view to or from any site, building or monument with statutory protection.

8.1.7 Despite any historic and cultural associations that the school on the study site has generated since the 1930s, the original building itself is of generally low architectural value, and the brief photographic and written record of the structure compiled for the purposes of this assessment should serve to comprise an adequate record of its original form and subsequent development.

### 8.2 Recommendations

- 8.2.1 Where archaeological remains, as identified or predicted by desk-based assessment, are likely to be encountered at a proposed development site, it is imperative that an appropriate strategy is formulated to deal with them.
- 8.2.2 With regard to planning applications, PPG16 states that, where preliminary research suggests survival of archaeological remains:
  - "...it is reasonable for the planning authority to request the prospective developer to arrange for an archaeological field evaluation to be carried out before any decision on the planning application is taken".

### and continues:

"Evaluations of this kind help to define the character and extent of the archaeological remains that exist in the area of a proposed development, and thus indicate the weight, which ought to be attached to their preservation. They also provide information useful for identifying potential options for minimising or avoiding damage. On this basis, an informed and reasonable planning decision can be taken." <sup>24</sup>

- 8.2.3 Policy C04.2 of the Newcastle UDP establishes that it is necessary to undertake an archaeological field evaluation where a proposed development has potential to impact upon suspected archaeological remains whose extent and importance are not known and where preservation *in situ* is either not achievable or cannot be justified.
- 8.2.4 Given that the overarching conclusion of this DBA is that there is moderate to high potential for locally or regionally significant archaeological remains of the post-medieval period and early modern industrial era to exist at the site, it would be in line with both PPG16 and Newcastle UDP policy to undertake an archaeological field evaluation. The aim of any archaeological field evaluation is always to provide information of sufficient quality and detail that reasoned and informed decisions may be made with regard to the preservation, or not, of buried archaeological material.
- 8.2.5 Field evaluation can comprise one or more of the following procedures:
  - geophysical survey;
  - surface artefact collection ('fieldwalking');
  - trial trenching.

8.2.6 In this instance, geophysical survey may be a suitable method for determining whether or not archaeological remains were present in north-eastern portion of the study site, although this could prove to be a largely unproductive exercise due to the potential for former landscaping activity.

35

<sup>&</sup>lt;sup>24</sup> Department of the Environment 1990, paragraph 21.

- 8.2.7 In this instance, surface artefact collection is not practicable due to current and previous land use. 'Fieldwalking' is only of use across recently ploughed, harrowed or drilled fields, preferably after a period of weathering has taken place.
- 8.2.8 Trial trenching is considered to be the most appropriate method of archaeological field evaluation at the study site. It is recommended that the suspected route of the former colliery waggonway at the study site should be targeted for investigation in this way. The final decision regarding the requirement for such work and its extent lies with the Tyne and Wear Specialist Conservation Team, which, using the results of this DBA as a baseline, will advise the LPA accordingly. It is likely that details of proposed land-use following demolition of the existing school will be required in order to further inform any decision regarding the necessity for archaeological evaluation.

# 9. ACKNOWLEDGEMENTS AND CREDITS

# Acknowledgements

Pre-Construct Archaeology Limited would like to thank Sir Robert McAlpine Limited for commissioning this archaeological assessment.

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# **PCA Credits**

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Report: Robin Taylor-Wilson

Illustrations: Adrian Bailey

### 10. BIBLIOGRAPHY AND SOURCES CONSULTED

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### **Sources for Maps and Documentary Evidence**

### Tyne and Wear Historic Environment Record

Maintained by the Tyne and Wear Specialist Conservation Team (part of the Historic Environment Section of Newcastle City Council), the HER takes the form of paper mapping cross-referenced with indexed files containing paper entries ordered numerically. Relevant entries were photocopied during a pre-arranged appointment. A simplified version of the HER is available on–line at <a href="http://sine7.ncl.ac.uk">http://sine7.ncl.ac.uk</a> and this facility was utilised during preliminary research for the DBA.

### **Tyne and Wear Archives**

The Tyne and Wear Archives Service (at The Discovery Museum, Blandford House, Newcastle) is the record office for the cities and metropolitan districts of Newcastle, Sunderland, Gateshead, South Tyneside and North Tyneside. Initially the computerised on-line catalogue at <a href="https://www.tyneandweararchives.org.uk">www.tyneandweararchives.org.uk</a> was searched for relevant material. Then the search room of the Archives Service was visited and the catalogue of material for Walker examined. Numerous items were requested and examined, with relevant information transcribed and, where appropriate, digital photographs taken. These items were examined:

Plan of the Lordship of Walker. Isaac Thompson, 1745. (Archives Service Ref. D/NCP/19/21).

Plan of Walker Colliery, High Main Seam. No surveyor, c. 1799-1807. (Ref. D/NCP/19/3).

Plan of Walker Estate in the County of Northumberland belonging to the Corporation of Newcastle Upon Tyne. Thomas Oliver, 1840. (Ref. D/NCP/19/4).

Walker Colliery Lease (tracing based on the Ordnance Survey 1:2,500 map with overlays of areas around Gosforth Pit and Ann Pit). City Property Office, 1884. Ref. (D/NCP/19/14).

Middle Street Technical School, Walker. No date, c. 1960s. File on shelves. (Acc. No. L5003).

The following Ordnance Survey maps were examined and photographed digitally:

1st edition, 6 inches to 1 mile. Northumberland Sheet XCVIII (surveyed 1858, published 1864).

1st edition, 25 inches to 1 mile. Northumberland Sheet XCVIII.5 (surveyed 1859) and Sheet XCVIII.1 (surveyed 1858, published 1877).

2nd edition, 6 inches to 1 mile. Northumberland Sheet XCVIII NW (surveyed 1894-95, published 1899).

2nd edition, 25 inches to 1 mile. Tyneside Sheet 13 (published 1897).

Special Edition 1912, 25 inches to 1 mile. Tyneside Sheet 13 (published 1912).

Revision of 1941, 25 inches to 1 mile. Northumberland Sheet XCV.10 (published 1941).

### **Newcastle City Library, Local Studies Section**

The City Library, Local Studies Section was visited (this facility was being temporarily housed at Newcastle Civic Centre, during rebuilding of the City Library). No historical maps were available for the study area.

## **Aerial Photographic Evidence**

With the site having been developed in the 1930s as Middle Street School, aerial photographic material was not considered to be a likely source of productive information.

## **Other Online Sources**

In addition to those online sources mentioned above, the following websites were consulted for this assessment:

Archaeology Data Service (National Monuments Record) website: http://ads.ahds.ac.uk/

Communities and Local Government website: www.communities.gov.uk/corporate/. Consulted for national planning policy regarding heritage.

*Durham Mining Museum* website: *www.dmm.org.uk*. Consulted for information about the collieries in the vicinity of the study site, particularly Walker Colliery.

*MAGIC* website: *www.magic.gov.uk/website/magic/*. MAGIC is a partnership project involving six government organisations including English Heritage and Natural England. The website is essentially an interactive map collecting information on key environmental schemes and designations.

Natural England website: www.naturalengland.org.uk/. This incorporates information compiled for the 'Countryside Quality Counts' project, including information on geology, topography and landuse for the various landscape character areas in North East England.

Newcastle City Council website: www.newcastle.gov.uk. Examined on this local government website was a 'Supplementary Planning Document', the 'List of Sites Inscribed on the Newcastle-upon-Tyne Local List of Buildings, Structures, Parks, Gardens and Open Spaces of Special Local Architectural and Historic Interest'.

North East Assembly website: www.northeastassembly.gov.uk. Consulted for regional planning policy regarding heritage.

North of England Institute of mining and mechanical Engineers website: www.mininginstitute.org.uk. An online catalogue lists all material in the Institute library, including several 'Special Collections' of coal-mining related documents.

*Pictures in Print* website: www.dur.ac.uk/picturesinprint/. Consulted for its catalogue, with viewable images, of printed maps and topographical prints of Tyneside before 1860. The following show the wider study area, but are at insufficient scale to be worthy of inclusion herein:

John Gibson, 1788. 'Plan of the collieries on the rivers Tyne and Wear.....'

Lambert, 1807. 'Plan of the Rivers Tyne and Wear with the Collieries, Waggon-ways & Staiths.....'

John Thomas William Bell, 1847. 'Plan of part of the Newcastle coal district in the County of Northumberland.....'

*Planning Portal* website: www.planningportal.gov.uk. Consulted for information regarding local planning policy relating to archaeology and the historic built environment.

# APPENDIX A HER ENTRIES

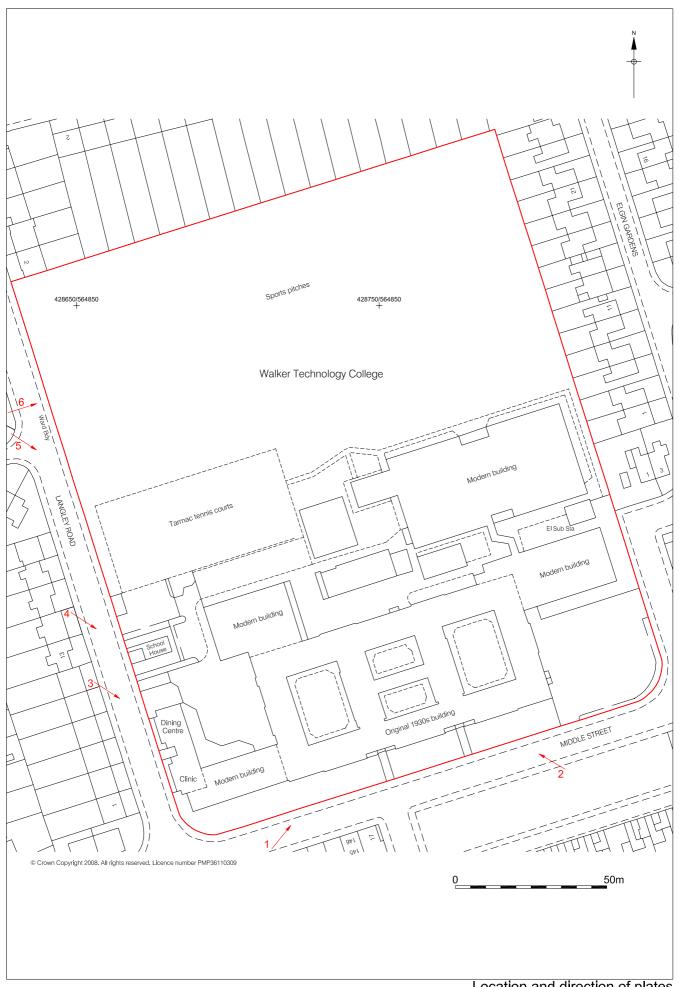
# WTW 08: HER Entries

Fig. 4 Ref. No.	HER No.	Grid Reference	Description	Period	Notes
<b>7</b> -	200	427640/565000- 429275/565700	Frontier Defence	Roman	Hadrian's Wall between St. Francis Presbytery, off Stott's Road, and Tunstall Road. Contains three scheduled sections: SAM 28(4) - 52m of the curtain wall in the grounds of the presbytery and 100m - in three sections - of the curtain wall west of Stott's Road; SAM 28(6) - 30m of the curtain wall in the grounds of The Fosse public house; SAM 28(7) - 171m of the curtain wall in Miller's Dene playing fields.
7	1392	428400/565330	Find (coins, etc.)	Roman	Small group of bronze objects discovered in debris of the Wall at Walker, probably in the 1860s. Comprised a fibula, four coins of the higher Empire and what was probably a peltate mount later presented to the Society of Antiquaries, this being a superb example of such an object, depicting two griffin's heads and a crouching feline.
m	1400	429000/565000	Find (building stone)	Roman	Inscribed stone seen by Horsley in 1732. 'coh(ortis) II / c(enturia) Vari / Celeri (s)' translates as 'from the second cohort the century of Varius Celer (built this)'. Probably found west of Wallsend fort.
4	6853	428975/565510	Find (stone head)	Roman	Found in 1936 but not accessed to the Museum of Antiquities until 1975. Third such 'Celtic head' found in the eastern sector of Hadrian's Wall. Triangular in shape with 'primitive' features, e.g. a broad nose and wide off-centre mouth; 250mm high.
5	1411	428400/565300	Village (Walker)	Medieval	Medieval village of Walker. Documented from the 12th century.
9	1191	436480/569030- 425530/564110	Toll Road	Post-medieval	Newcastle to North Shields turnpike road. No date for opening is known, but it is likely to have been in the post-medieval period. Mentioned by Eneas Mackenzie in his 1827 account of Newcastle.
7	4184	428480/565490	Colliery (Walker, Gosforth Pit)	Post-medieval (industrial)	Documentary evidence gives the date of sinking this pit as 1780-82. Appears on the Ordnance Survey 1st edition, annotated 'Old Shaft'.
ω	4185	429380/565870- 428520/565490	Waggonway (Gosforth Pit- Fair Pit)	Post-medieval (industrial)	This waggonway ran to the north-east from Walker Colliery, Gosforth Pit. Appears on Greenwood's map of 1828 but is out of use by Bell's plan of 1847 and shown as 'Old' on the Ordnance Survey 1st edition.
တ	4186	428860/565750	Windmill	Post-medieval	Walker Mill (Corn) appears on Ordnance Survey 1st edition. Documentary evidence indicates that a lease was first granted in 1808.
10	4206	429290/564470	Colliery (Walker, B Pit)	Post-medieval (industrial)	Walker Colliery opened before 1765, possibly in 1713, and closed in 1920. B Pit may have been one of the first workings. Marked as 'Old Shaft' on the Ordnance Survey 1st edition.
<del>-</del>	4207	429210/564600	Colliery (Walker, Ann Pit)	Post-medieval (industrial)	Walker Colliery opened before 1765, possibly in 1713, and closed in 1920. Ann Pit may have been the first working. Marked as 'Old Shaft' on the Ordnance Survey 2nd edition.
12	4209	429160/565030- 429240/564700	Waggonway (Delight Pit- Low Walker)	Post-medieval (industrial)	Possible waggonway branching from the Gosforth and Delight Pits Waggonway (HER 4210). Runs down to Low Walker on the Ordnance Survey 1st edition.
13	4210	429480/564800- 428540/565420	Waggonway (Gosforth & Delight Pits-Low Walker)	Post-medieval (industrial)	Shown as an 'Old Waggonway' running from Gosforth Pit, Walker Colliery and serving Delight Pit, on the Ordnance Survey 1st edition. Ran down to Low Walker.
4	4211	429270/565710- 429480/564800	Waggonway (East Pit-Low Walker)	Post-medieval (industrial)	Shown as an 'Old Waggonway' serving East Pit, Walker Colliery on the Ordnance Survey 1st edition. Ran down to Low Walker.
15	4212	428890/565150- 428460/565050	Waggonway (Delight Pit-Old Walker)	Post-medieval (industrial)	Short length of 'Old Waggonway' on the Ordnance Survey 1st edition. Crossed the line of another waggonway (HER 4213), but the workings it served are not named.
16	4213	428460/565360- 429040/564630	Waggonway (Gosforth Pit- Low Walker)	Post-medieval (industrial)	Line of waggonway which first appears on Thompson's plan of 1745. Runs from Gosforth Pit, Walker Colliery past Old Walker on the Ordnance Survey 1st edition, but is not annotated, so presumably out of use. Ran down to Low Walker.
17	4214	428910/565190	Colliery (Walker, Delight Pit)	Post-medieval (industrial)	Walker Colliery opened before 1765 and closed in 1920. Delight Pit is documented from 1824 but may be of late 18th century origin. It was evidently still working at the time of Ordnance Survey 2nd edition.
78	4215	429410/565320	Colliery (Walker, East Pit)	Post-medieval (industrial)	Walker Colliery opened before 1765 and closed in 1920. East Pit may date from the late 18th century, although this is uncertain. It is marked 'Old Shaft' on the Ordnance Survey 2nd edition.

# WTW 08: HER Entries

19	4265	429620/565470-	Waggonway (East Pit-	Post-medieval	Shown as an 'Old Waggonway' serving East Pit. Walker Colliery on the Ordnance Survey 1st edition. Ran to
	!	429390/565290	Walker)	(industrial)	the north-east to join another waggonway (HER 4266).
20	6224	428770/564400	House	Post-medieval	Scrogg House on Scrogg Road. Appears on Ordnance Survey 1st edition.
21	7884	428410/565330	Farmstead	Post-medieval	Walker East Farm. Appears on Ordnance Survey 1st edition, but supposedly appears on a plan of 1675. Demolished c. 1937. Buildings reportedly incorporated much Roman material.
22	2146	433500/567260- 426390/564850	Railway	Early modern (industrial)	North Eastern Railway, Newcastle and Tynemouth , Riverside Branch. Opened in 1879 to serve the riverside industries, with stations at Byker and Walker. Passenger trains ceased in 1973. Line now closed and converted into a pathway.
23	4182	428330/565680	Toll House	Early modern	Walker Turnpike toll house on the Newcastle to North Shields Road. Out of use by 1895.
24	4205	429470/564580	Brick Works	Early modern (industrial)	Wincomblee Brick and Tile Works. Appears on the Ordnance Survey 1st edition, but not on the 2nd edition.
25	4216	429590/565220	Brickfield	Early modern (industrial)	Appears to the south-east of East Pit, Walker Colliery on the Ordnance Survey 1st edition, and as a 'Brick Works' on the 2nd edition.
26	4264	429160/564650	School	Early modern	Walker Colliery School. North of Ann Pit, Walker Colliery. Annotated on the Ordnance Survey 1st edition, but not annotated on the 2nd edition.
27	4286	429270/564520	Blacksmiths	Early modern (industrial)	Appears on the Ordnance Survey 2nd edition.
28	6213	429550/564790	School	Early modern	Unnamed, in Low Walker. Appears on Ordnance Survey 2nd edition.
29	6218	429110/564370	Church	Early modern	Christ Church, Walker. Mid 19th century. Appears on Ordnance Survey 1st edition.
30	6219	429100/564490	Chapel (Methodist)	Early modern	Methodist Chapel, Walker. Mid-late 19th century. Appears on Ordnance Survey 2nd edition.
31	6220	429060/564650	Chapel (Wesleyan Methodist)	Early modern	Wesleyan Methodist Chapel, Low Walker. Appears on Ordnance Survey 1st edition.
32	6221	428980/564660	Chapel (RC)	Early modern	Roman Catholic Chapel, Low Walker. Appears on Ordnance Survey 2nd edition.
33	6222	428970/564640	School	Early modern	Unnamed, off Welbeck Road, Walker. Appears on Ordnance Survey 2nd edition.
34	6223	428690/564500	lnn	Early modern	Scrogg Inn on Scrogg Road. Appears on Ordnance Survey 2nd edition.
35	7885	428340/565640	Chapel (Methodist)	Early modern	Methodist Chapel, Walkergate. Mid-late 19th century. Appears on Ordnance Survey 2nd edition.
36	2066	429080/564370	Memorial	Early modern	Sandstone memorial to Robert Chambers made by George Burn in 1869. Chambers was a 19th century Tyneside hero who died an early death - aged 37 - in 1868 after becoming a world champion in rowing.
37	9911	428610/564550	Library	Early modern	Walker Library on Welbeck Road. Opened in 1908. Brick and stone Edwardian building with coat of arms of Lady Stephenson above original doorway, she being the wife of the local industrialist who presented the library to the city of Newcastle. Appears on the Newcastle City Council 'Local List of Buildings'.
38	2203	429300/565300	Anti-aircraft Battery	Modern	Site of a heavy anti-aircraft battery from World War Two.
36	11113	428400/565500- 430000/565400	Watercourse (Stott's Burn)	Unknown	Originally began inland as several burns. The first originated at a pond at the junction of Benfield Road and Shields Road, the second rose to the east of Scrogg Road, these two combining south of Fossway - on the Waverdale Open Space - then continuing east to join a third burn at 'Dean Well' (shown on the Ordnance Survey 1st edition), this third burn having run north-eastwards from Elgin Gardens. The watercourse then continued roughly north-eastwards to meet another burn which roughly followed the line of Stott's Road, in the area of Neptune Road, close to the railway line.

# APPENDIX B PLATES



Location and direction of plates Scale 1:1,250



Plate 1. Original school building, south elevation, looking north-east.



Plate 2. Original school building, south elevation, detail, looking north-west.



Plate 3. Dining Centre and Clinic, west elevation, looking south-east.



Plate 4. School House, north elevation, looking south-east.



Plate 5. School complex, looking south-east.



Plate 6. Sports pitches, looking north-east.