Watching brief at
Darlaston Community and Science College
(Grace Academy),
Herbert's Park Road,
Darlaston,
Walsall ,
WS10 8QJ

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Watching brief at Darlaston Community and Science College (Grace Academy), Herbert's Park Road, Darlaston, Walsall WS10 8QJ

Introduction

An archaeological watching brief was undertaken at Darlaston Community and Science College (Grace Academy), Herbert's Park Road, Darlaston, Walsall WS10 8QJ (SO 665 685; Fig 1) at the request of Mr Duncan Hutchinson (Senior Project Co-ordinator; Kier Construction (Central). This was carried out during the construction of new buildings for the Academy according to a brief (Appendix 1) produced by the Black Country Archaeologist and a Written Scheme of Investigation (Appendix 2) produced by the author, in consultation with the client and the Black Country Archaeologist.

Little was known about the history of the site although the presence of coal mines and other industry was attested from the early editions of the historic Ordnance Survey maps. In addition, from the same source, two canal basins were known to have been located within the limits of the site and material held by the Black Country Historic Environment Record indicated the presence of tramways (see below). There thus existed the possibility that deposits relating to the industrial period would be revealed during the course of the construction works. It was decided that the historic asset was not of such significance to warrant preservation *in situ*, and that the impact of the proposed development on the historic environment could be appropriately offset by a conditional programme of archaeological work. This took the form of a watching brief during site stripping and excavation of trenches for services.

Brief background to the site

Documentary research took place at Dudley County Record Office, Staffordshire County Record Office, Walsall Local History Centre and Warwick County Record Office.

The map evidence

The earliest available map of the area was the Darlaston tithe map of 1841 (Fig 2.1). This shows the site bordered to the west by the Walsall Canal, part of the Birmingham Canal Navigations. It also shows two of the fields (plot numbers 172 and 185) which are included within the current site, described as Herbert's Park Colliery. The former is shown with a canal basin towards its south-west end. Towards the northern end of the current site are the remains of strip fields (plot numbers 180, 182 and 184) which have the characteristic, reversed 'S' shape. These are all named Blakemores Cow Pasture. There are similar isolated examples elsewhere on the tithe map and it is likely that open field agriculture had effectively ceased in this area by this time. It is uncertain to what extent the tithe map truly represents the contemporary topographical situation. This doubt will become apparent when considering the next available map: the 1st edition of the Ordnance Survey.

The 1st edition Ordnance Survey map (Fig 2.2) of 1886 shows that the landscape has changed almost beyond recognition from that of forty-five years earlier. Not only have a colliery (Herbert's Park Colliery and a 'works', Herbert's Park Works been established but they have become disused. Many 'old shafts' are marked. One' marked as 'shaft' adjacent to plot 155, may still be in use. In addition to the canal basin marked on the earlier map, there is an additional one at the northern end of the site. Many structures of widely differing sizes have been built across the site, including a gasometer and some curious 'U' shaped structures immediately to the north of Herbert's Park Works. The whole area is covered with spoil heaps.

The Ordnance Survey map (Fig 2.3) of 1903 shows a scene of increasing dereliction. Most of the buildings shown on the map of 1886 have now disappeared although the canal basins and the spoil heaps remain. Three footpaths (rights of way) have become established across the site. Although mining must have ceased on the current site by this time, it was still being carried out in the vicinity.

A little to the east, there is a 'coal pit' shown adjacent to the New Junction Inn on Forge Road.

The Ordnance Survey map (Fig 2.4) of 1918 shown few changes from that of 1903. The canal basin to the north of the site has silted-up and the 'coal pit' shown adjacent to the New Junction Inn on Forge Road is now disused.

The Ordnance Survey map (Fig 2.5) of 1938 shows further, significant changes. The site has been landscaped, without altering too much the contours of the existing spoil heaps, and a recreational park (George Rose Park) has been established. The previously named 'Forge Road' has been renamed Herbert's Park Road and a housing estate (that that exists today) has been built to the south and east of the site.

Other documentary evidence regarding Darlaston
Coal mining in Darlaston was being carried out some time in advance of the industrial revolution, which was to arrive during the latter half of the 18th century (Augur 1926). A certain Sir John Leveson Gower, came to an agreement with a Mrs Offley, in June 1698. For a fine [payment] of twenty pounds and a good oak timber tree out of Madeley Park, Mrs Offley and her assigns [descendants] should

enjoy all the coals within such boundaries for 200 years, doing no damage to the tenants, or my Lady Gower's land, rent a peppercorn yearly.

At this early date coal was not considered to be a house fuel - it was used only in the kitchen and never in the best rooms. It was only when other forms of fuel became harder to obtain, such as peat and wood, that coal started to be used in other parts of the house.

Regarding Darlaston miners and the town itself, the following was said in 1838:

Great quantities of iron, coal and free stone are found in this neighbourhood. Steel furnaces and forges are here for the supply of steel for the locks and springs which are made. The ground has been so undermined, that pits are constantly being made in the earth in all directions, by the falling of mines when the pillars are taken down and consequently most of the houses are built low, in order that they may accommodate themselves to the sinking of the ground.

In 1856 there were nine coal mines in the township, one of which, Herbert's Park, was in the proprietorship of a David Jones (White's Directory of Staffordshire 1851).

There was a great deal of waste resulting from the methods used. The 10 yard seam required different mining techniques than the thinner seams found in areas like Shropshire. It was often necessary to leave very large pillars of coal eight or ten yards in diameter in order to support the excavations. The coal could then be got out by stalls; that is by working alternate pillars. When all the coal had be taken which could be reasonably be got, that part of the workings was sealed and left to fall; which sometimes resulted in the collapse of the surface.

The thick coal undoubtedly encouraged more waste than was necessary and this contributed to the working out of the field in the 19th century. It was estimated that one third of the coal was left standing in the mine, in the pillars; another third was small, broken coal, some of which was made into coke, some consumed in steam engines and the rest left in the pit. Thus, on average, about one third of the mine could be sold as large marketable coal.

Business directories
Robson's Directory of 1839 had the following to say:

Darleston is situated on a hill and in the neighbourhood are great quantities of iron, coal and freestone. The manufacture of the place is gunlocks and there are several steel furnaces and forges for the supply of steel for the locks and springs that are made. The Grand Junction railway passes Darleston about a mile eastward, the nearest station being that at James's Bridge, 10 miles from

Birmingham. Eastward of the line is the aqueduct of the Darleston and Walsall branch of the Birmingham Canal, which is carried over Bescot Brook at a height of 120 feet, by means of a handsome bridge of two lofty arches.

In 1851 White's Directory of Staffordshire commented that:

Darlaston, one of the largest villages in Staffordshire, has long been famous for the manufacture of gunlocks, stirrups, buckles, nails, bed and wood screws, bolts, latches and cast iron articles. There are also extensive coal and iron works. Bar, rod and sheet iron is manufactured. The area abounds in excellent beds of coal, ironstone and freestone.

In 1868, Kelly's Post Office Directory of Staffordshire reported that David Jones and Sons were iron and coal masters, based at Herbert's Park Colliery and in 1880 Kelly's Directory noted that Herbert's Park Furnace and Foundry Co were iron founders.

Thus, as late as 1880, the large building shown at the southern end of the site, adjacent to the canal, was in use producing iron goods. It is likely, though not certain, that the adjacent colliery continued to serve it. However, a mere six years later by 1886, both were disused.

Coal mining in general

In opening up a new colliery the laying out of the pit bank and erection out of the surface buildings will be carried on at the same time as the preliminary operations below ground in order that the requirements of the sub-surface workings may be met as soon as they are sufficiently developed to allow the output to be commenced (Andre 1876).

Surface equipment comprises the pit head gear, the floors and staging by which the pit mouth is reached and upon which the coal as it is landed is run out, weighed and tipped. These structures are usually at a sufficient height that a railed waggon may be positioned underneath to receive the material.

The engine house is one of the most important of the surface buildings. It should be sufficiently large to allow all the operations to be carried on there with facility; it should be well-lighted so that the engineman may see distinctly every part of his engine and the signals from the shaft and it should extend sufficiently far to enclose the winding drums. In addition to the winding engine house there will usually be one for pumping and several lesser buildings for workshops and offices. The surface works may also include a wharf and the means for discharging the coal into the vessels lying alongside.

When the coal is of a quality that renders it suitable for metallurgical operations [as is likely at the site of Grace academy] coke ovens may have to be provided. This also affords a means of utilizing the small coal made in working. An extensive system of tramways will usually have to be provided, especially when coking is carried on. Among the surface apparatus of a mine are often included homes for the miners.

It is clear from the above that there was very considerable potential for recovering information relating to the layout and operation of the industrial site which now lies beneath Grace Academy.

In the vicinity of Darlaston

Darlaston lies on what was known as the South Staffordshire coal-field (Hull 1905). This coal-field extended from the Clent Hills on the south, to Brereton, near Rugeley, on the north, a distance of some 21 miles, with an average breadth of 7 miles.

This district had been one of extreme productiveness in coal and iron and its proximity to the towns of Wolverhampton, Dudley and Birmingham has imparted an extraordinary impetus to these centres of industrial pursuits. It was said that the whole line of country connecting these towns, a distance of 12 miles, formed one great workshop. The spectacle from the walls of Dudley Castle, which was located in the centre of the coal-field was one with scarcely a parallel. The whole country within a

radius of five or six miles seemed to be overspread with collieries, iron foundries, blast furnaces, factories and the dwellings of a dense population; and, from amidst the thick smoky atmosphere, the tongues of fire from the furnaces shoot up an intermittent light which illuminated the whole heavens. However, this did not represent the whole sum of human labour; for whilst 10,000 hands are at work above ground, one-half as many, perhaps, were beneath the surface hewing out the coal which was the prime mover of the whole machinery above ground.

Attempts to locate the thick coal to the south of Halesowen, towards the Clent Hills failed. However, other attempts to the east were successful. In the neighbourhood of Birmingham, the 'thick coal' was reached in 1876 in the shafts of the Sandwell Colliery Company. After passing through about 330 feet of Permian beds, the coal-measures were reached and ultimately the 'thick coal', 24 feet in thickness and of good quality was reached at a depth of 1254 feet. At Baggeridge Wood, outside the western boundary fault, the 'thick coal series' was proved by boring in 1901 nearly a mile outside the visible coal field, and shafts were being sunk to develop this new area. Borings were also put down at Moat Farm, below the Permian beds at Smethwick. In 1880, the thick coal (24 feet in thickness) was sunk through at Hamstead at a depth of 1836 feet, about 1 mile north of Sandwell and productive measures have been proved at Langley, to the south of the same place.

The coal-measures of the southern district are:

Succession of coal-seams

	Name	Thickness (ft	in)
Upper coal-measures			
	Red and mottled clays, red and grey sandstone and gravel beds	800	0
Middle coal-measures			
	Brooch coal	4	0
	Strata with ironstone	130	0
	Thick coal	24 to 30	
	Strata with 'Gubbin Ironstone'	20	0
	Heathen coal	4	0
	Strata with ironstone	109	0
	New mine coal	8	0
	Strata with ironstone	16	0
	Fire-clay coal	7	0
	Strata	30	0
	Bottom coal	12	0
	Strata with several courses of ironstone	140	0

It is apparent from the above that in the Dudley district there were 6 workable seams of coal, giving a total thickness of 65 feet. The most remarkable of these was the 'Ten-yard' or 'Thick coal' of a general thickness of 30 feet, and which was a source of enormous wealth to the district. It underlay a large area at a moderate depth and had either been worked out, drowned or destroyed to such an extent that probably little more than one-tenth remains to be won [in 1905].

In the northern part of the coal-field, at Essington and Pelsall, the Thick-coal of Dudley became split up into 9 distinct seams with a combined thickness of exactly 30 feet of coal but separated by 420 feet of sandstones and shales, all of which were absent to the south of the 'Great Bentley fault'. This remarkable thinning of the strata took place in a distance of five miles from north to south. Extensive mining operations have recently been commenced over the northern portion of Cannock Chase, which is partly formed of New Red Conglomerate and was thought to undoubtedly conceal an extensive coal-field. A pair of shafts were sunk in the Huntington Valley (by the Cannock and Rugeley Colliery Company) to the 'Deep coal' which was reached at 897 feet from the surface, all the shallower coals having been found in their usual positions in 1871. A typical section of these pits is as follows (omitting coals under 2 feet in thickness):

Succession of coal-seams

Name	Thickness (ft in)		Depth from surface (ft)
Coal	2	4	82
Cannock Brooch Coal	3	11	108
Five-feet coal	5	11	226
Coal	3	6	266
Old Park Coal	5	0	372
Coal	4	2	534
Coal	2	1	616
Coal	2	3	625
Yard Coal	3	2	662
Bass Coal	4	2	729
Cinder Coal	3	10	796
Shallow Coal	9	3	814
Coal	2	2	842
Deep Coal	4	4	898

Another shaft was been sunk in the same neighbourhood by the Huntington Colliery Company, which, after passing through 354 feet of new Red Sandstone and conglomerate, entered the coal-measures and passed through several seams of coal, one of which was 5 feet in thickness. These were considered to be representative of the Upper Wyrley series of coal seams.

Site formation processes

It became apparent during the watching brief that not only had a very considerable quantity of material been excavated during the course of mining operations at the Grace Academy site but most of it remained on the site. Excavation adjacent to the canal (see below) clearly showed a depth of deposit that reached a thickness of 4m. Although this excavation could not be entered to record features it was clear that both brick and ground-fast structures survived. Very little of the site was excavated to this depth (most was excavated to a depth of a metre or less) and it is practically certain that structures relating to the 18th and 19th centuries will have survived the modern development. At higher levels, as is typical before the later 20th century, redundant structures had been demolished to ground level and the remains buried. This was apparent from the very considerable quantity of brick and concrete rubble.

The fieldwork

Description

This fieldwork was divided into two principal phases: that undertaken during the stripping of the site to formation level and that undertaken during the excavation of the service trenches. Fieldwork therefore took place on 12 days in November 2011, 2 days in January 2012, 1 day in June 2012, 1 day in November 2012 and 1 day in January 2013.

In the majority of cases the features recorded were to be preserved *in situ* (where they were not cut through by the service trenches) and therefore no further excavation was undertaken beyond cleaning and recording. Only significant contexts are discussed below. A complete description of the contexts is given in Appendix 3.

The stripping of the site

The site was stripped of topsoil overall and this was stored temporarily at the southern extremity. Ground reduction was then carried out across the middle and eastern part of the site. These operations were carried out by the use of a bulldozer, backhoe excavator and six-wheeled articulated hauler (Fig 4.5). The northern part of the site was to be raised in level and only topsoil stripping took place there.

During this early stage the character of the top metre or so of deposits was established. Section 1 (Figs 4.13 and 4.14) was recorded on the eastern side of the site, towards the middle part (Fig 3).

This comprised a thin topsoil (Fig 4.13; context 001), a mid brown sandy clay with occasional to common small rounded stones and common to abundant small brick fragments (context 002) which was loosely interpreted as a subsoil and context 003, which was a very dark grey brown, almost black, sandy clay with occasional to common large brick fragments, common stone fragments and abundant coal dust and flecks. This was believed to represent the landscaped remains of up-cast from coal mining.

In a similar way section 2 (Figs 4.16 and 4.17) which lay a little to the north-east of section 1 (Fig 3) demonstrated the way that buildings on the site had been demolished and buried. Beneath the topsoil and landscaped coal mining debris (contexts 001 and 015 respectively) were heaps of concrete rubble (context 013) and brick rubble (context 014).

This overall site stripping also produced the best find of the project (Figs 5.1, 5.2 and 5.3). This was a cast iron tramway sill (a combined sleeper-chair) for a plateway (L-section rail for flangeless wheels) which was found at the position marked 'X' (Fig 3). This is believed to date from 1810-1820 (pers com David Gwyn *via* Paul Quigley - see also below).

The excavation of the service trenches

It was only when excavation reached a metre or (sometimes significantly) more below existing ground level that undisturbed deposits were encountered. The first of these was a rectangular brick structure (context 008; Figs 4.1 and 4.2) which lay towards the southern side of the site (Fig 3). This was quite small, approximately 3m across the single complete dimension that was exposed, with a smaller rectangular protrusion to its south. It was built within an ashy, coaly deposit on the edge of a pit (context 011) which itself was filled with a light grey sandy ash (context 009). The function of the structure is unknown but it is believed to be associated with the gasometer shown on the 1st edition Ordnance Survey map of 1886 (Fig 2.2).

The section of the excavation that exposed the above brick structure was drawn (Figs 4.3 and 4.4). The topsoil (context 001) lay above a layer of light orange buff decayed stone or mortar (context 004) which in turn lay above a layer of light brown grey fragmented stone, thought to be demolition debris. Beneath this was context 006, brick rubble with lime mortar, which was clearly the fill of a small excavation. Beneath this was a cast iron plate (context 007) supported upon a brick structure (context 010). The whole was clearly an inspection pit presumably also associated with the gasometer.

A similar sized excavation to the north-east (Fig 3) resulted in the recording of another section (section 4; Figs 4.6 and 4.7). Beneath the ubiquitous topsoil (context 001) there was a layer of mid-grey gritty sand with abundant small to medium stone fragments (context 016). Beneath this a small, vertically sided, flat bottomed cut (context 018) had bee excavated in a layer of very light yellow lightly cohesive sand (context 020). This in turn overlay a layer of very hard and compact dark orange slaggy stone (context 019). This appears to have been a 'capping' layer as beneath this was a substantial pit filled with a succession of layers of very light yellow lightly cohesive sand (context 022) and very hard and compact dark orange slaggy stone (context 023). A layer of light grey, loose, small angular ashy slag (context 025) lay at the limit of excavation. This feature appears to have been simply a large pit whose limits, in plan or section, were never discovered.

Completing the recording at the southern end of the site was the excavation of the canal basin in this vicinity (Figs 3, 4.8 and 4.9). This was done to locate its position and no entry to the excavation was possible. It was clearly built of brick in what appeared to be English bond.

At the northern end of the site, adjacent to the canal, a substantial excavation for a storage tank to a depth of nearly 4m was carried out (Figs 3 and 4.10). Again, no entry to the excavation was possible, but it was clear that at this depth brick and cut features survived. A small rectangular building, an adjacent circular shaft and a large rectangular cut were evident.

Finally, the excavation of a service trench for a gas supply pipe adjacent to Herbert's Park Road (Fig 3) was recorded (Figs 4.11 and 4.12). A tarmac surface and sub-base (contexts 026 and 027) overlay

a layer of light grey ashy, stoney material. Beneath this was a layer of very mixed light buff and light grey ashy material (context 029) which included an isolated large, flat, pale yellow stone (context 031). Beneath context 029 were two layers (contexts 030 and 032) whose predominant feature was abundant coal and charcoal fragments. At the limit of the excavation was a layer of light grey tenacious clay (context 033). This section had much in common with section 1 in that it shows the typical deposit sequence at this depth for this part of the site.

The finds
Finds on this site, at least in the generally understood sense of pottery, bone and other domestic material of a like nature, were conspicuous by their absence. Perhaps this should not come as a surprise as the superficial deposits (down to a metre or so beneath existing ground level), which were, in the main, those that were disturbed by the construction works, were clearly the spread-out and levelled remains of spoil heaps associated with the coal extraction industry.

The single find of particular interest, the cast iron tramway sill (a combined sleeper-chair) for a plateway (L-section rail for flangeless wheels), was found at the position marked 'X' (Fig 3). This is believed to date from 1810-1820 (Figs 5.1, 5.2 and 5.3; pers com David Gwyn *via* Paul Quigley), and has been commented upon above. Almost identical examples are on display at the Museum of Iron in Coalbrookdale (Fig 6.1) and the type of tramway that would have likely existed at the Grace Academy site has been reconstructed at the Black Country Museum (Fig 6.2). The arrangement of tramways that are known to have existed at the Grace Academy site is depicted in the Black Country Historic Environment Record (Fig 6.3). It is clear that a couple of legs of this tramway pass close to the find-spot of the sill that was found but there is no reason to believe that it was *in-situ*. It seems more likely that the tramway was taken up to be used elsewhere or possibly for scrap and this sill was accidentally left behind.

The only other finds of some interest were bricks which were present in super-abundance. A very considerable number were locally made by the Darlaston Brick Company Ltd (Fig 5.3) which is believed to still be in existence.

Commentary
The most important information to come out of the watching brief was the clear evidence of surviving remains of coal mining operations in this area. It is apparent that very considerable quantities of material were extracted during these operations and that much of it remains on the site, raising the ground level by as much as 4m. This has resulted in the archaeological deposits relating to the industry on this site being deeply buried and preserved, in the greater part, from the modern construction techniques employed to construct the new school. The various excavations, although quite extensive by present archaeological standards (particularly that in the northern part of the site (Fig 4.10), in fact covered very little of the total area of the historic mining operations and nothing can sensibly be said regarding the layout of the former Herbert's Park Colliery. The project has, however, revealed the potential for future work on this site and, indeed, on others.

Summary
An archaeological watching brief was undertaken at Darlaston Community and Science College (Grace Academy), Herbert's Park Road, Darlaston, Walsall WS10 8QJ, on the site of the former Herbert's Park Colliery. The project revealed the very considerable depth of deposit that can exist on coal mining sites due to the enormous quantity of spoil generated and retained on site. The consequence of this is that archaeological deposits become very deeply buried and preserved even from modern development.

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Kelly's Post Office Directory of Staffordshire 1868
Kelly's Directory 1880

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http://distinctlyblackcountry.org.uk/2012/02/02/5-mins-from-a-lost-railway/.

Acknowledgements

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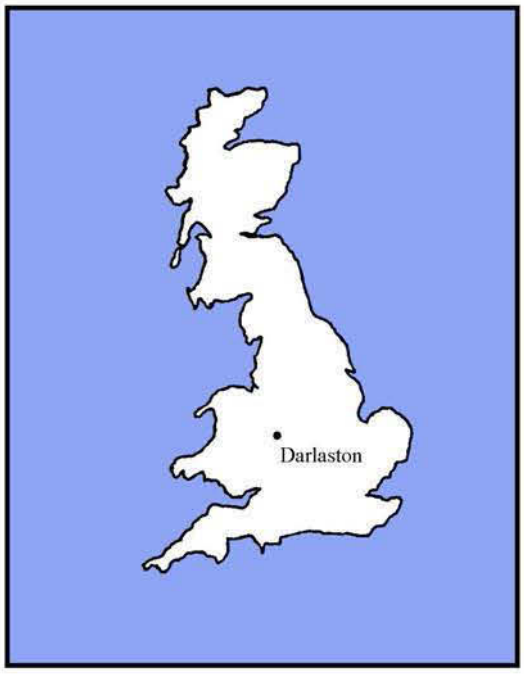
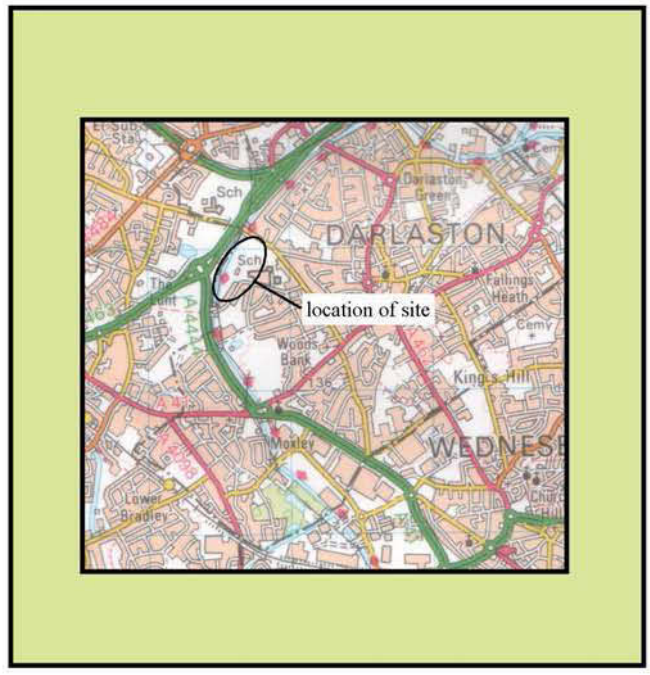
Archive

The archive consists of:

1	Index to the archive
1	Hard copy of the report
1	DVD-ROM
2	Annotated site drawings
2	Finds





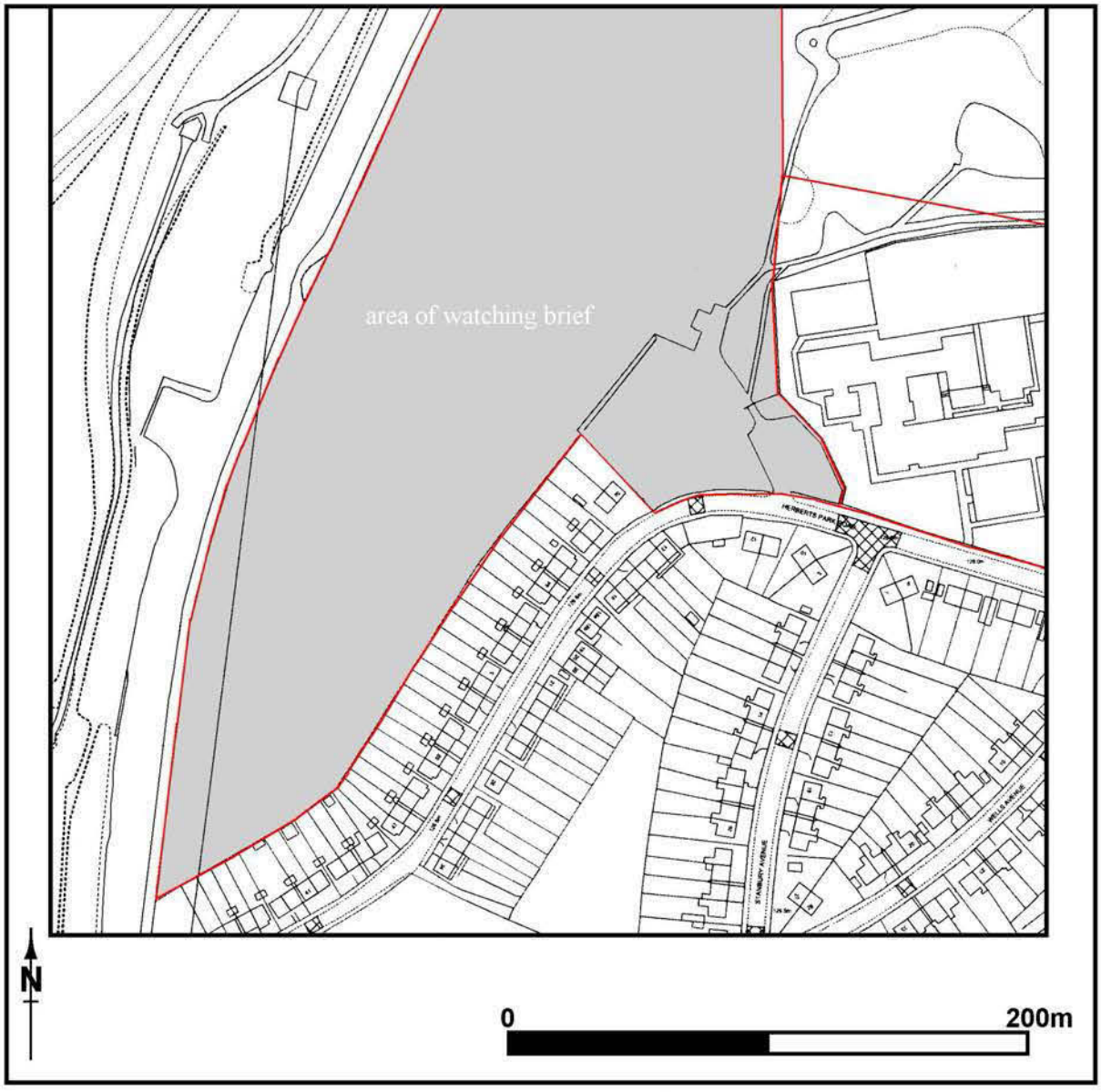
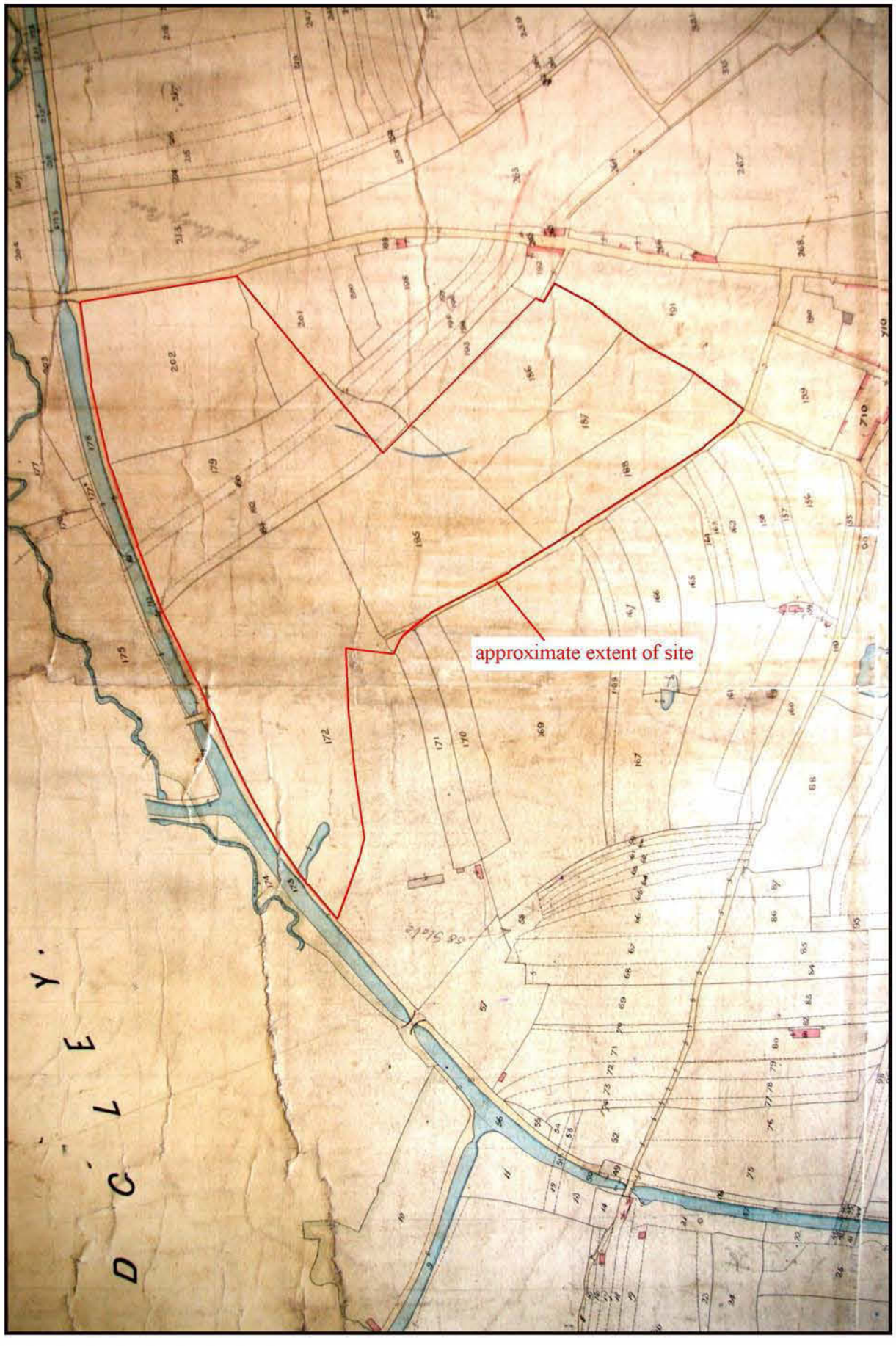


Fig 1: Location of site



not to scale

Fig 2.1: Tithe map of Darlaston; 1841

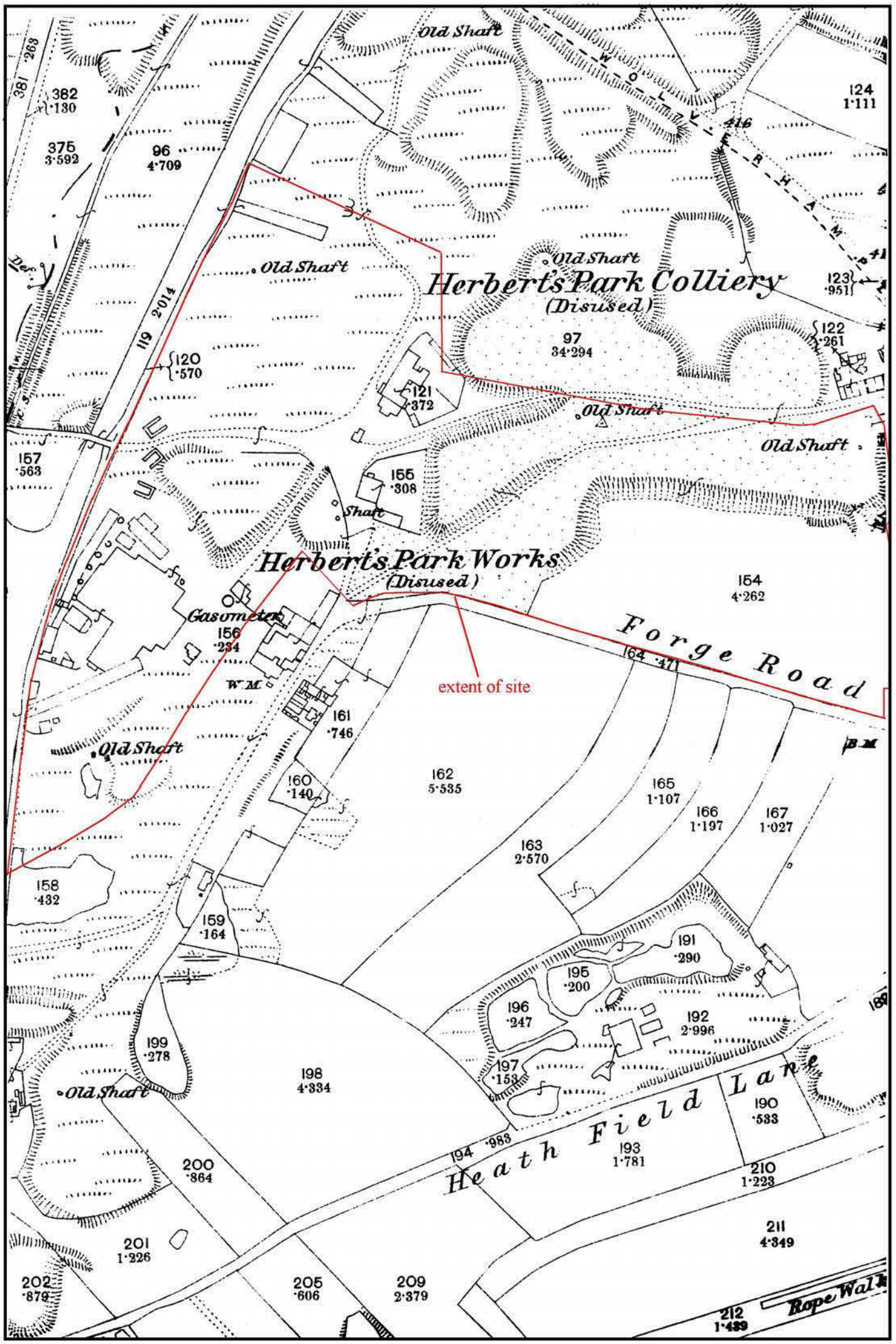


Fig 2.2: Ordnance Survey map of 1886

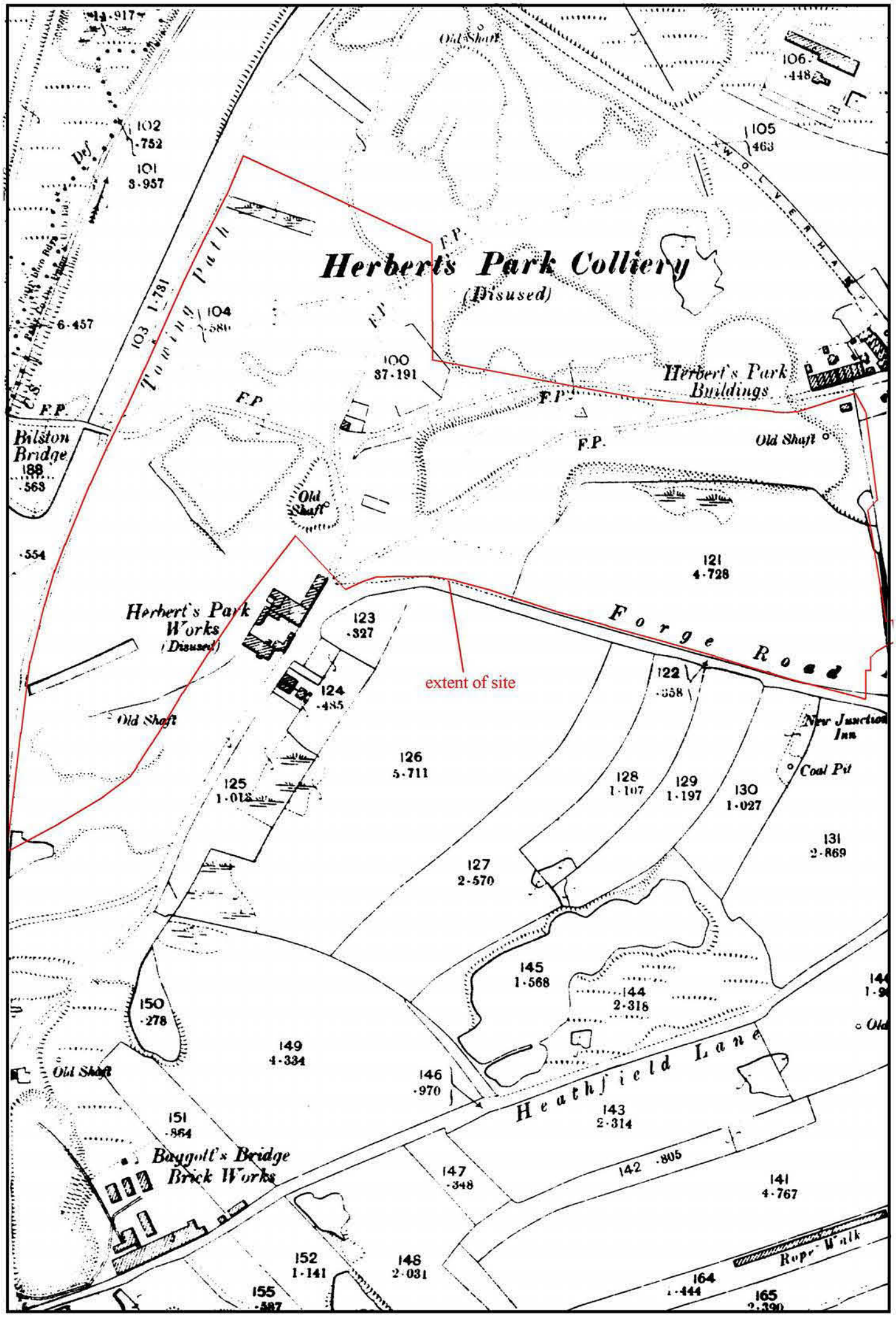


Fig 2.3: Ordnance Survey map of 1903

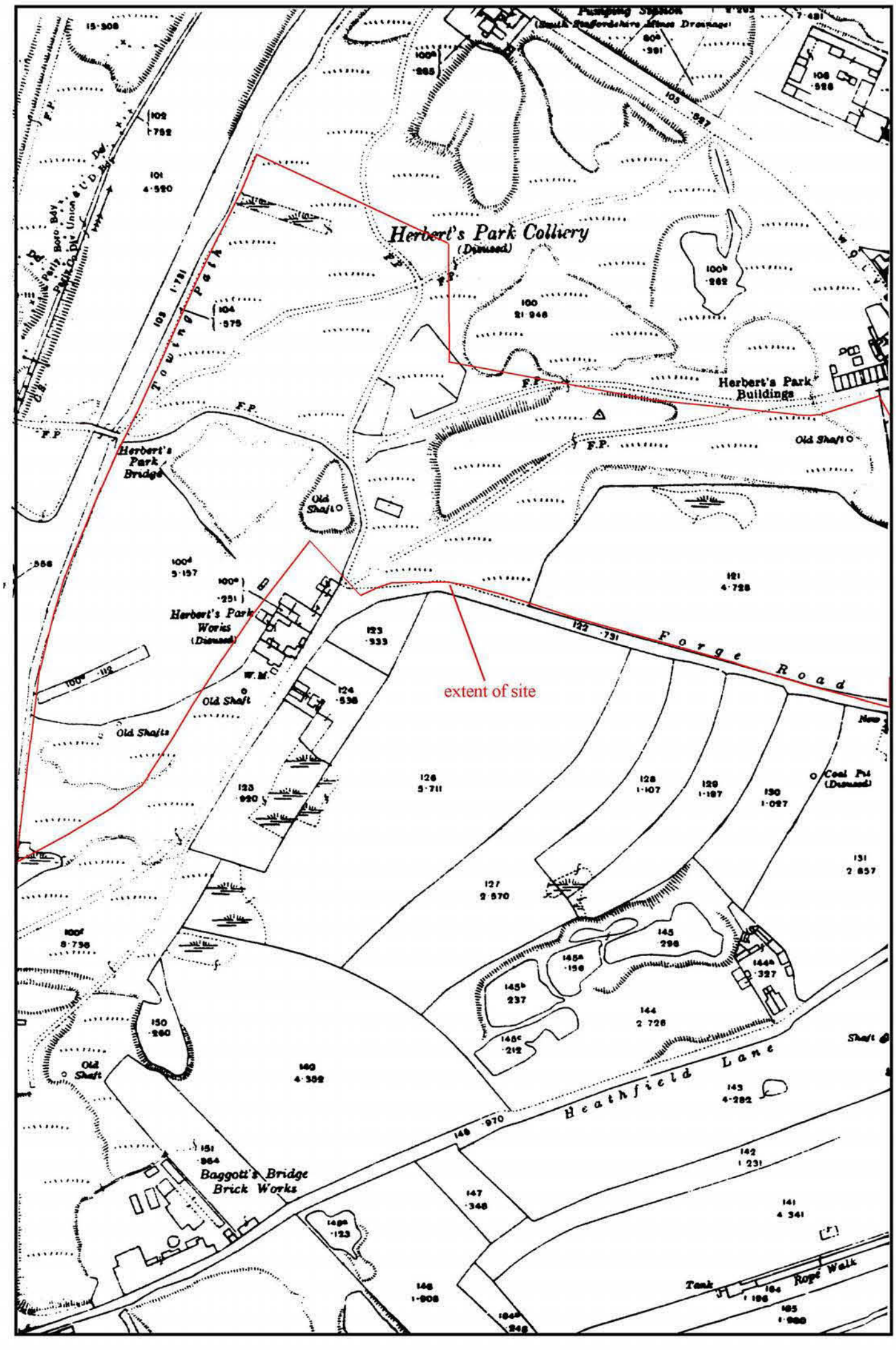


Fig 2.4: Ordnance Survey map of 1918

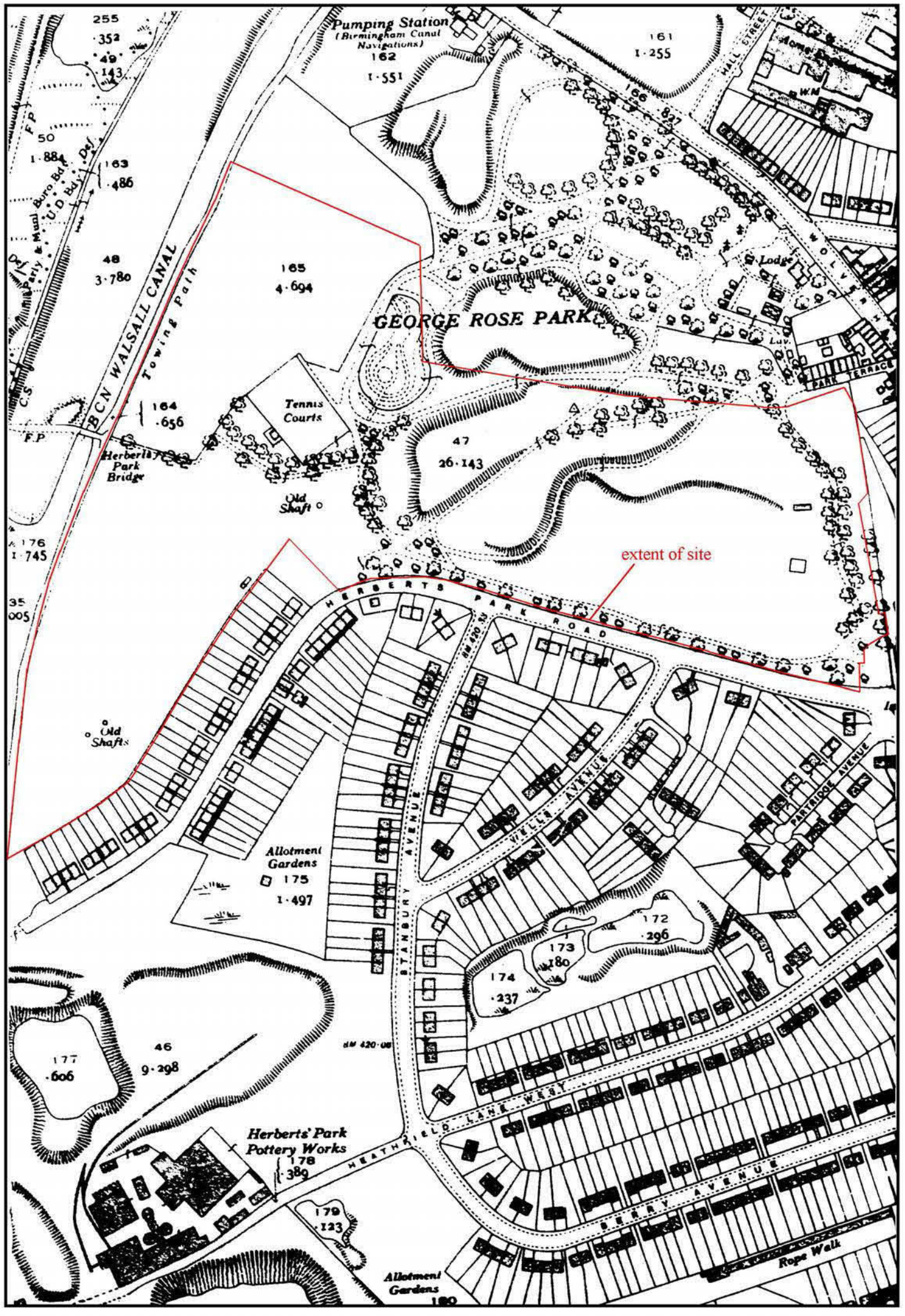
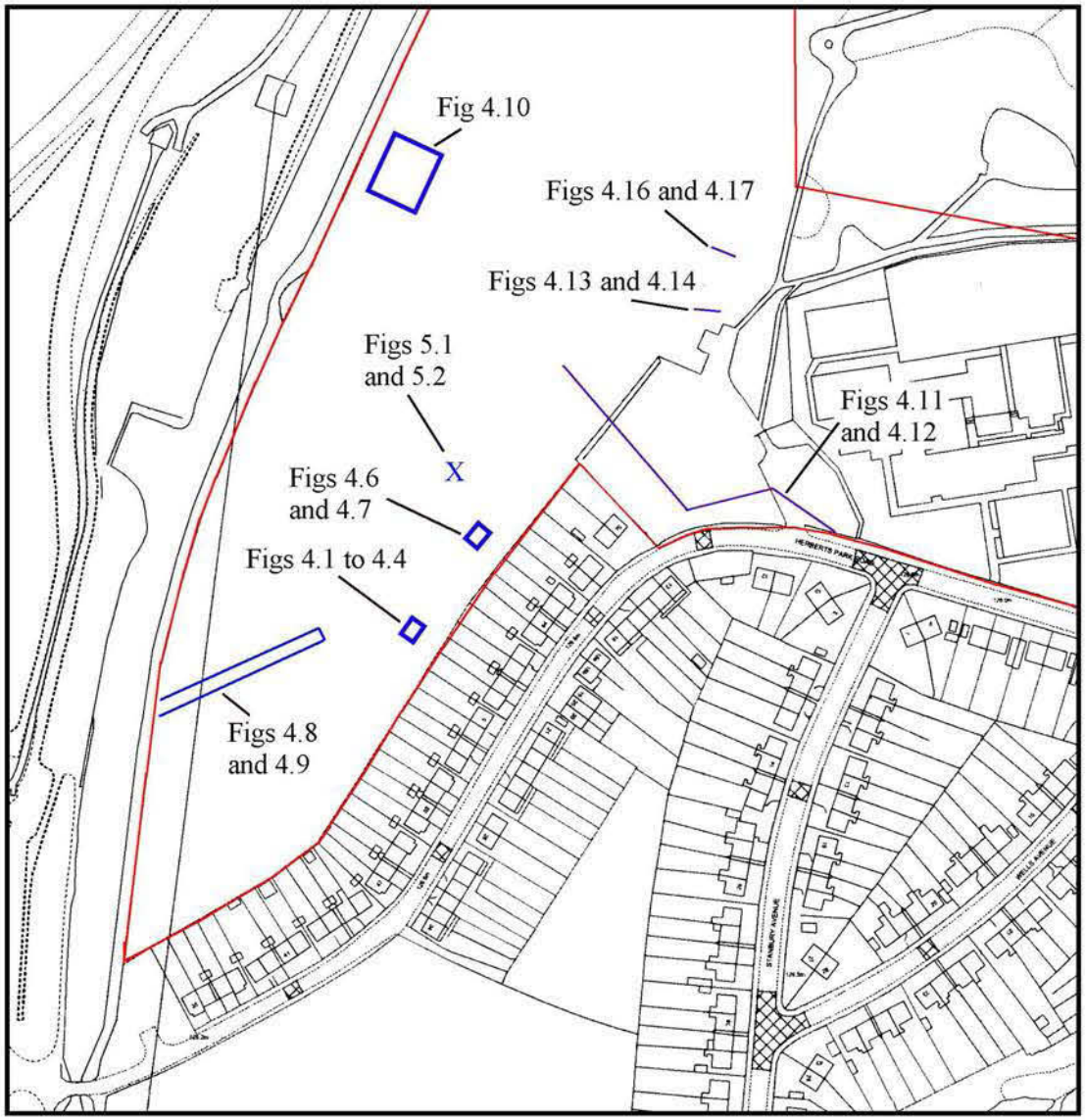


Fig 2.5: Ordnance Survey map of 1938



N

0 200m

area of detailed recording

Fig 3: Location of recorded features


loam and/or topsoil


stones


sand/gravel

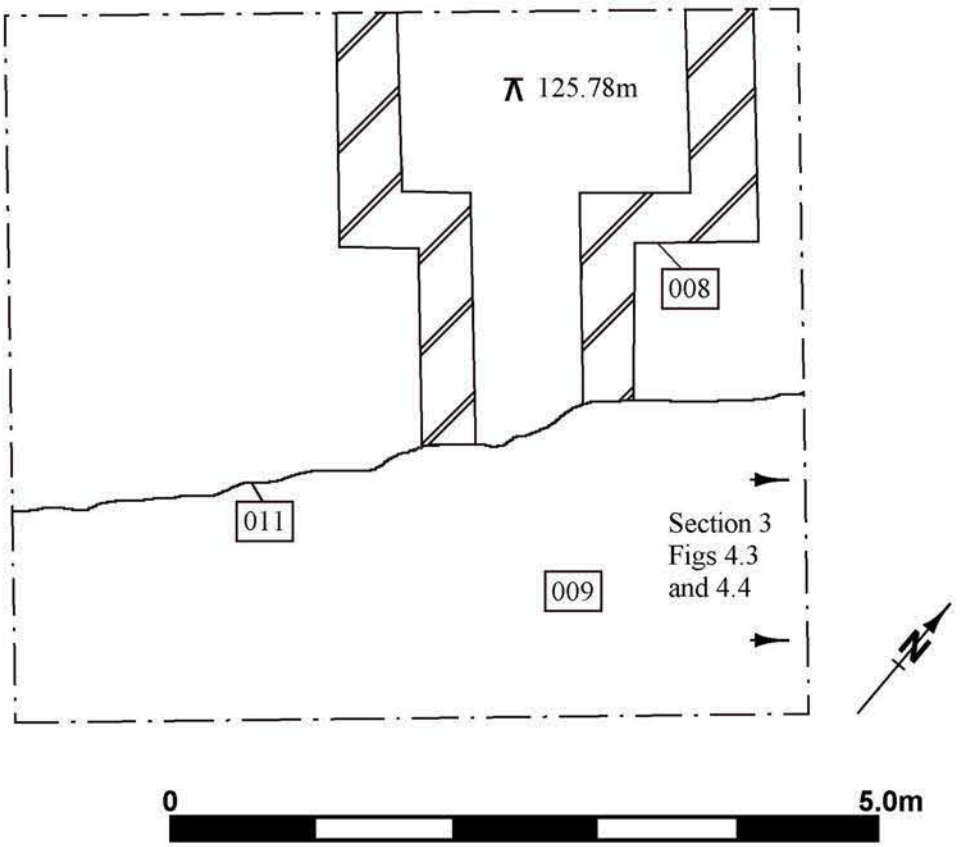

clay


ash and charcoal


limit of excavation


height above Ordnance Datum

Fig 4.0: Key to sections



brickwork

Fig 4.1: Plan of rectangular brick structure

Fig 4.2: Brick structure; context 008

Fig 4.3: Section 3; see also Fig 4.4

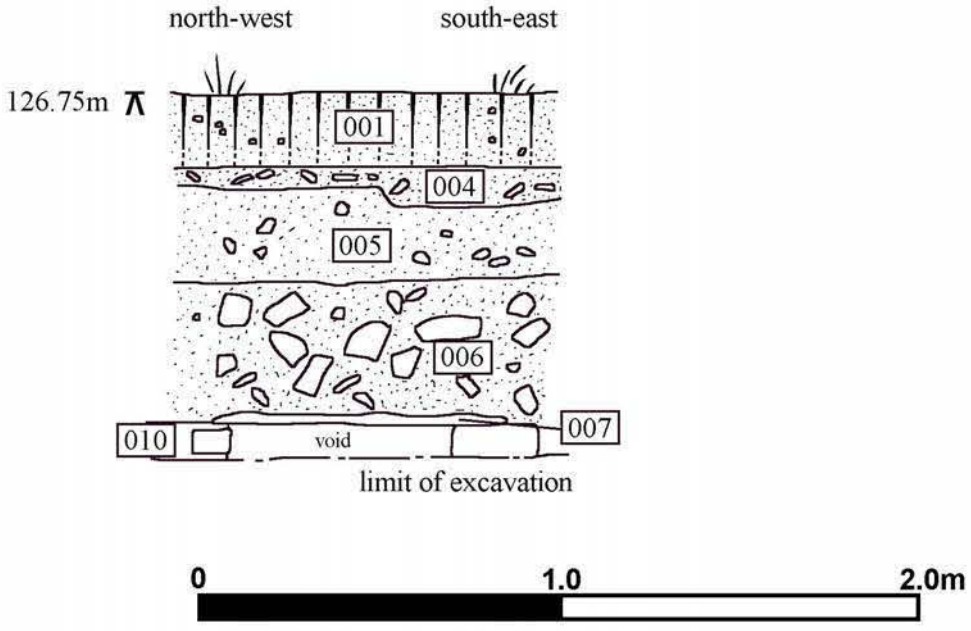


Fig 4.4: Section 3

Fig 4.5: Initial site strip

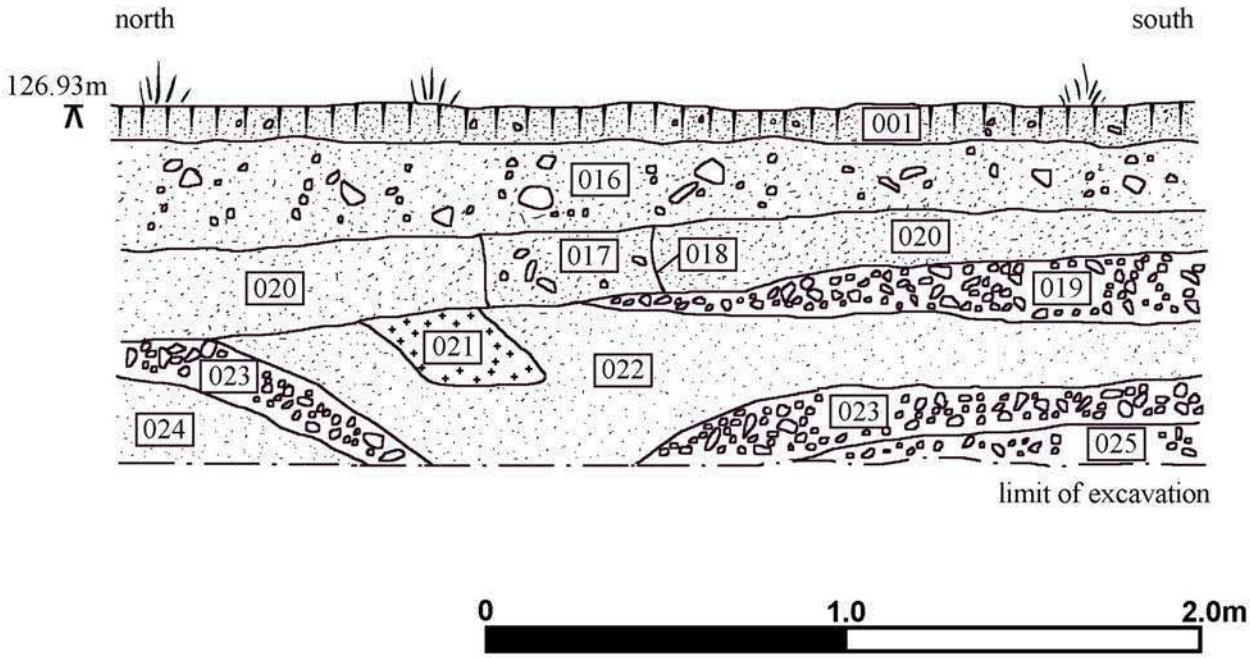


Fig 4.6: Section 4

Fig 4.7: Section 4

Fig 4.8: Canal basin in south-west of site

Fig 4.9: Detail of wall; canal basin in south-west of site

Fig 4.10: View of storage tank excavation showing brick structure and possible shaft

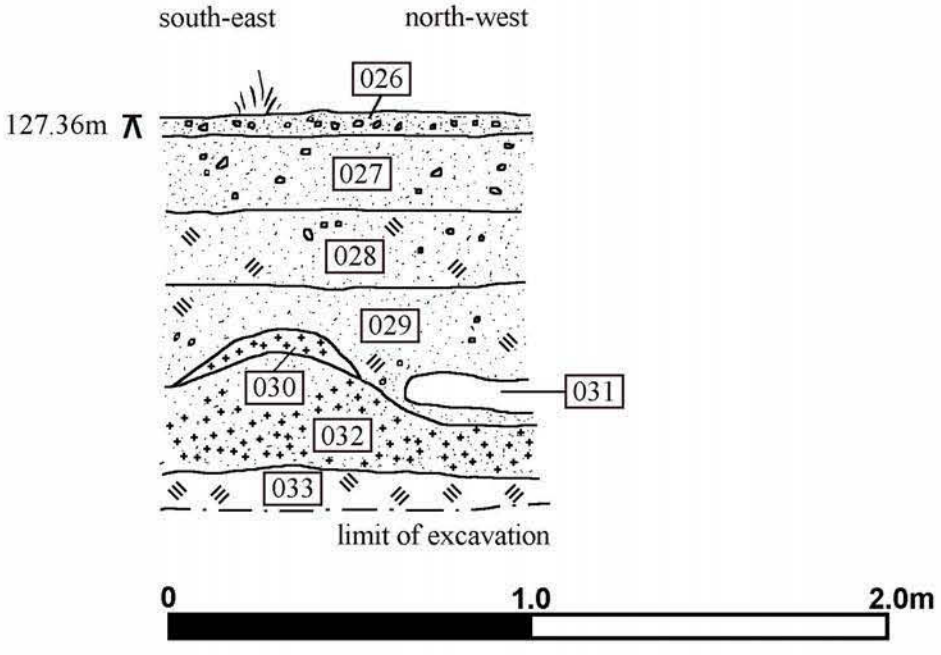


Fig 4.11: Section 5

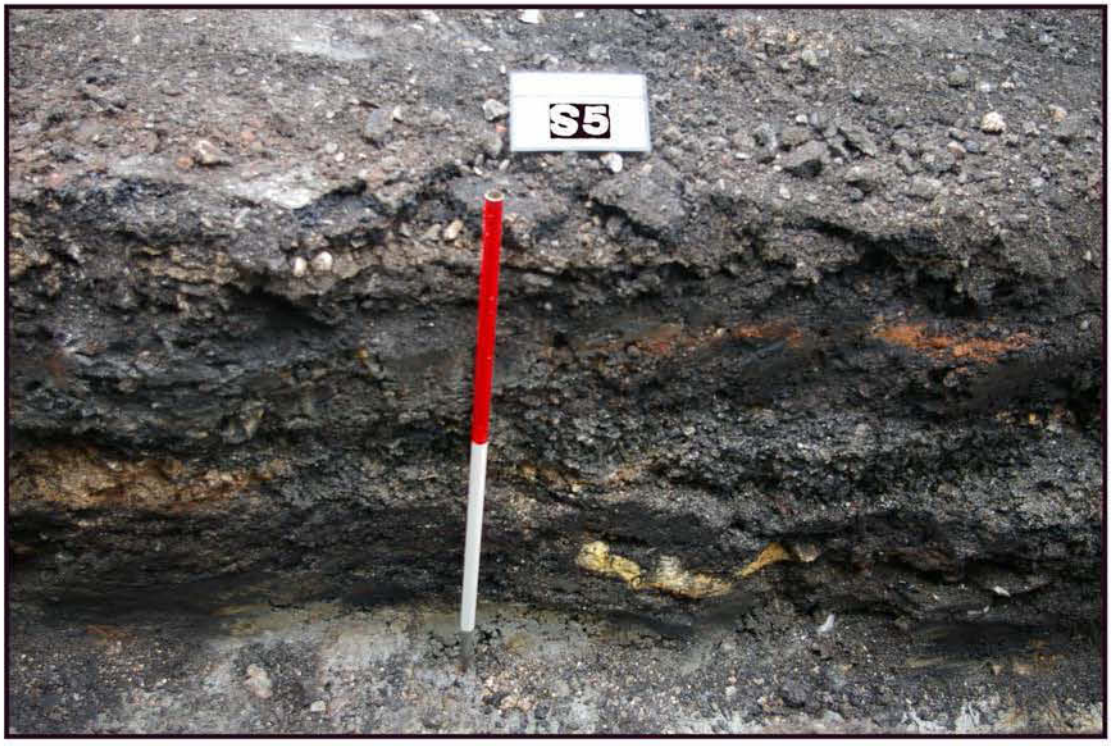


Fig 4.12: Section 5

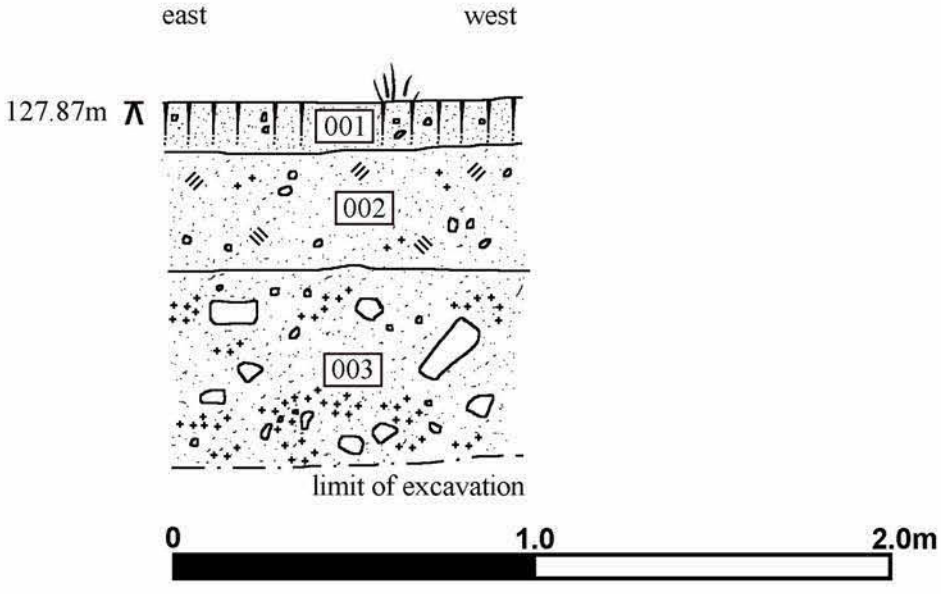


Fig 4.13: Section 1

Fig 4.14: Section 1

Fig 4.15 not used

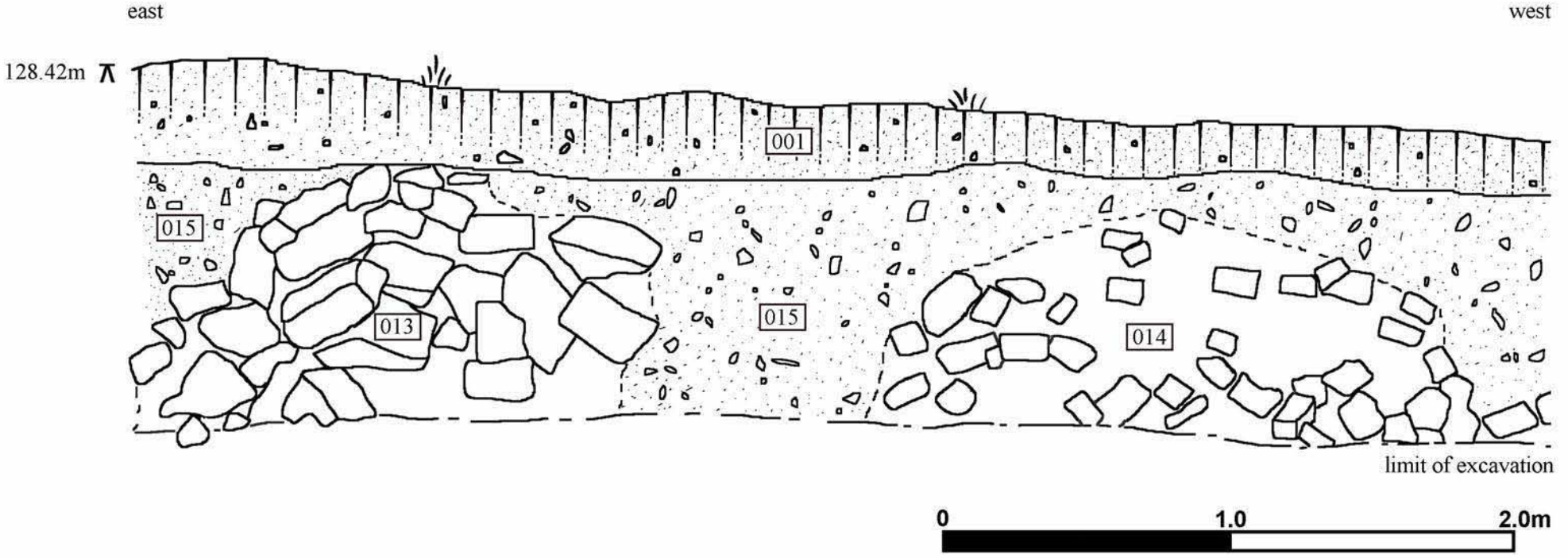


Fig 4.16: Section 2

Fig 4.17: Section 2

Fig 5.1: Detail of tramway sleeper; scale is 0.5m

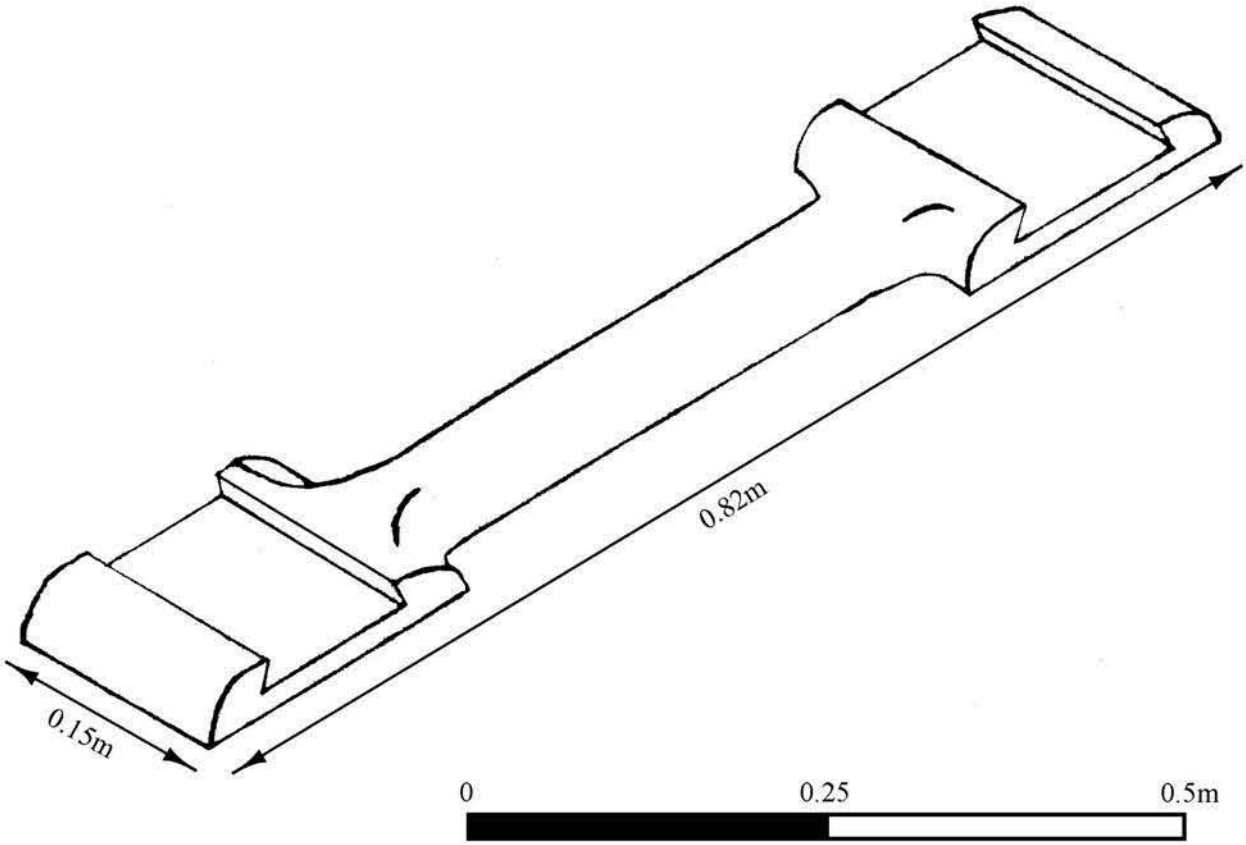


Fig 5.2: Dimensioned drawing of tramway sleeper

Fig 5.3: Detail of tramway sleeper; scale is 0.5m

Fig 5.4: Brick of Dalaston Brick Company; scale is 0.2m

Fig 6.1: Tramway sleeper at the Museum of Iron, Coalbrookdale

Fig 6.2: Tramway and pit head at the Black Country Museum

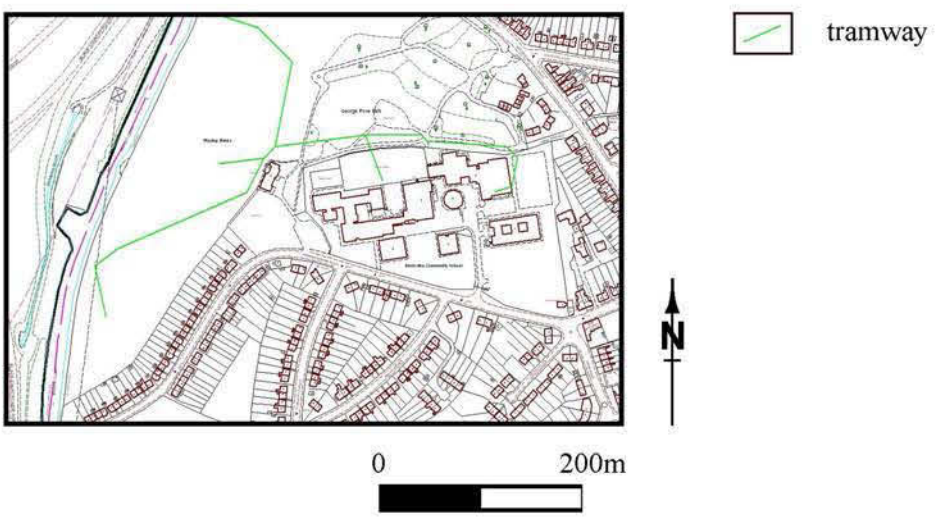


Fig 6.3: Extract from the Black Country Historic Environment Record: tramways on the site of Grace Academy, Darlaston

Appendix 1: Brief

Rushall Hall, Leigh Road, Walsall

Brief for Archaeological Work

1. Introduction

1.1 Darlaston Community and Science College (Grace Academy) has been granted planning permission for redevelopment of the school site. A report on the Archaeology and Cultural Heritage was submitted in July 2009 (Darlaston Community and Science College: Archaeology and Cultural Heritage). The report (Section 4) recommends archaeological mitigation in the form of a watching brief during the development. This document constitutes a brief for the work.

2. Requirements

2.1 The purpose of the work is to record any features associated with the former Herbert's Park Works or Herbert's Park Colliery uncovered during the groundworks for the development.

2.2 These two complexes are shown on the Ordnance Survey 25 inch plan of 1886, a copy of which is included with the Archaeology and Cultural Heritage Report. The watching brief area should comprise any part of these tow complexes which occur in the development area.

2.3 Any features uncovered should be rapidly cleaned, investigated and recorded. Particular attention should be paid to discovering the purpose, nature, shape and size of the feature. It will be useful to compare the features uncovered with the map evidence, as included with the original report.

2.4 On completion of the work the records and finds from the site should be analysed and a summary report produced detailing the results.

3. General conditions

3.1 The work should be undertaken by suitably qualified and experienced archaeological staff, under the supervision of a

Member of the Institute of Field Archaeologists or Project Manager with equivalent experience.

3.2 An appropriate recording strategy should be used and the method and justification for this stated in the reports.

3.3 The code of conduct, standards and guidance of the Institute of Field Archaeologists should be adhered to.

3.4 The English Heritage regional archaeological science adviser should be consulted on scientific issues and scientific work should be undertaken in accordance with the recommendations of Environmental Archaeology (English Heritage 2002).

3.5 A written scheme of investigation for the work required should be prepared by the contractor and agreed with English Heritage, the sponsor and the local planning authority (LPA) before the work commences.

3.6 On completion of the work the site archive should be deposited with an appropriate museum/public archive. The site owner is encouraged to deposit any finds with the archive. In this case archives should be deposited with the Walsall Local History Centre (tel: 01922 721305).

3.7 Copies of all reports should be provided to the English Heritage, the LPA, the Black Country Historic Environment Record and Walsall Local History Centre. This should comprise a bound copy and a digital copy in pdf or similar format. The report will normally become a publicly accessible part of the HER within 6 months of completion.

3.8 Reports should contain the following information:

- Location, aims and methodology
- Results of documentary research
- A written summary of the findings together with appropriate illustrations, which should be related to the national grid. Levels should be related to the Ordnance Datum.
- An analytical summary of features and deposits
- A table showing categories and quantity of finds recovered from each feature/deposit and where finds are dateable, such as pottery, their date
- Finds research to an appropriate level to be agreed with the Black Country archaeologist
- List of sources consulted and their full titles/reference numbers

- A copy of the brief

3.9 On completion of the work an OASIS record form should be completed and a summary report should be sent for publication in West Midlands Archaeology and any other appropriate local or national archaeological journal.

3.10 Health and Safety

It is the responsibility of the contractor to ensure that all work is carried out in accordance with relevant Health and Safety regulations.

Site procedures should be in accordance with the guidance set out in the Health and Safety Manual of the Standing Conference of Archaeological Unit Managers

3.11 Monitoring

The work will be monitored by Mike Shaw, the Black Country Archaeologist on behalf of the LPA and provisions for monitoring should be agreed with him. At least five working days notice of commencement of any fieldwork should be given to the Black Country Archaeologist. A draft of any report should be submitted to the Black Country Archaeologist for approval ahead of finalisation.

Prepared on 9th December 2010 by Mike Shaw, Black Country Archaeologist on behalf of Walsall MBC

Contact Details:

Mike Shaw: tel 01902 555493; e-mail mike.shaw.@wolverhampton.gov.uk; fax 01902 555637; address Black Country Archaeologist, Wolverhampton City Council, Regeneration and Transportation, Civic Centre, St Peter's Square, Wolverhampton WV1 1RP

Appendix 2: Written Scheme of Investigation

Written Scheme of Investigation for a watching brief at Darlaston Community and Science College (Grace Academy), Herberts Park Road, Darlaston, Walsall WS10 8QJ

1 Background

The archaeological background to the site is given in a report by Wardell Armstrong LLP (2009): *Darlaston Community and Science College: Archaeology and Cultural Heritage* and the Brief issued by Wolverhampton City Council, dated 9 December 2010.

2 Aims and objectives

The aims of the archaeological project are to locate, rapidly clean and record archaeological deposits associated with the former Herbert's Park Works or Herbert's Park Colliery uncovered during the ground works for the development. These two complexes are shown on the Ordnance Survey 25 inch plan of 1886. Particular attention will be paid to discovering the purpose, nature, shape and size of the feature(s). Comparison will be made with the map evidence, as included with the report above.

3 Methods

Stage 1: Documentary research
Initially, no further documentary research will be undertaken. If it transpires that the interpretation of the recorded deposits would benefit from further documentary research, particularly in respect of placing them in their more general context, then this will be undertaken. Visits to the Black Country Museum, Ironbridge Museum and other appropriate working museums may be undertaken for the purpose of acquiring comparative material.

Stage 2: Fieldwork
Clean surfaces will be inspected. Selected deposits will be rapidly cleaned in order to determine their purpose, nature, shape and size of the feature. Deposits will be selected for excavation on the basis of the minimum required to meet the aims of the Brief. It is anticipated that deposits are likely to comprise the lower courses and footings of the works and colliery together with cut features, some of which may be very substantial (eg canal basins shafts etc). Selection for investigation will be on the judgment of the project leader who will be informed by the above report. It is intended to have a laptop computer on site in order to facilitate comparison of historic mapping with uncovered deposits. The Black Country Archaeologist is invited to attend the site whilst fieldwork is being undertaken.

Recording of deposits will be undertaken. Recording will utilize *proforma* recording sheets, following practice established in the many standard works on the subject (eg Barker, P, 1982 *Techniques of archaeological excavation*, 2nd ed), Schofield, J, (ed*) Site manual, Part 1: the written record*, Department of Urban Archaeology Handbook, Museum of London, Harris, E C, 1997 *Principles of archaeological stratigraphy*, Hogg, A H A, 1980 *Surveying for archaeologists and other fieldworkers*. Plans and sections of the trenches will be drawn at scales of 1:20 or 1:10 as appropriate. Photographs will be taken in digital format with a suitable scale in each photograph. A Harris matrix will be produced for each trench, if appropriate, and, as far as possible, stratigraphically linked and phased.

Stage 3: Reporting
The results of the documentary research and the fieldwork will be presented as an archive report.

The report will contain, as a minimum:

4 the location, aims and methodology
5 the results of the documentary research
6 a written summary of the findings together with appropriate illustrations, which will be related to the national grid. Levels will be related to the Ordnance Datum.
7 an analytical summary of features and deposits
8 a table showing categories and quantity of finds recovered from each feature/deposit and where finds are dateable, such as pottery, their date
9 finds research to an appropriate level will be agreed with the Black Country archaeologist
10 a list of sources consulted and their full titles/reference numbers
11 a copy of the brief

A draft copy of the report will be supplied to the the Black Country Archaeologist who will be invited to comment. These comments will be incorporated into the report before its final submission.

On completion of the work an OASIS record form will be completed and a summary report will be sent for publication in West Midlands Archaeology and any other appropriate local or national archaeological journal.

4 Principles

The Institute of Field Archaeologists: Code of Conduct and *The Institute of Field Archaeologists: guidelines for finds work* will be followed.

The project will conform to *The Institute of Field Archaeologists Standard and guidance for archaeological watching briefs, The Institute of Field Archaeologists Standard and gui dance for archaeological desk-based assessment* and *the Institute of Field Archaeologists Standard and gui dance for the Archaeological Investigation and Recording of Standing Buildings or Structures.*

All artefacts, except articles defined as treasure under the Treasure Act 1996 (or other legal requirements), discovered in the course of the archaeological project shall be and remain the property of the Client. When the nature of any artefacts is known the project leader will encourage the Client to donate them to an appropriate museum where they may be curated and made available for research and education

The record archive will be donated to the Wolverhampton Archive Service.

5 Health and safety

It is anticipated that the watching brief will come within the Construction (Design and Management) Regulations 1994.

The Archaeological Contractor will follow any proper instruction given by the Site Foreman, Clerk of Works, or Site Manager for the purposes of health and safety when on site.

Protective clothing will consist of hard hat, protective boots, and high visibility jacket.

The Client must notify the Archaeological Contractor of any hazards within the archaeological site before the project commences. These include the location of existing services, contaminated ground, dangerous structures, etc.

6 Personnel

The project will be undertaken by Martin Cook BA MIFA. It is anticipated that the finds analysis will be carried out by Laura Griffin BA of the Worcestershire County Archaeology Service and any necessary environmental analysis by Elizabeth Pearson of the same organisation.

7 Programme

All times are in person days.

Table 1		**Stage 1**	**Stage 2**	**Stage 3**
Activity	**By**			
Documentary	Martin Cook	2 days		
Fieldwork	Martin Cook		day rate	
Report	Martin Cook			5 days
Finds	Laura Griffin			Lump sum
Environmental	Elizabeth Pearson			Lump sum

The project is intended to commence on a date to be mutually agreed in writing.

8 Conditions and requirements

Notification must be provided of any hazards within or adjacent to the site before the project commences. Such hazards might include the location of existing

services above or below ground, contaminated ground, presence and nature of any agricultural chemicals, areas of the structure that are hazardous or dangerous, etc.

The Client will be responsible for obtaining any necessary permissions for undertaking the project. Of particular importance may be any consents for areas of archaeological importance or sites scheduled under the Ancient Monuments and Archaeological Areas Act 1979 and listed building status.

Access to the site is the responsibility of the Client. Permission for access must be arranged by the Client with the landowner and/or tenant and any security personnel as appropriate.

The project will be undertaken only when supported by a written agreement.

This proposal is current until 30th November 2013. Should the project straddle or take place after this date, the quotation will be adjusted according to the new rates applicable from this date.

Payment will be made on receipt of invoices which will be issued at the completion of Stage 3. Payment should be made within 30 days of the receipt of the report.

All requests for variations to the proposal will be considered only when made in writing.

No responsibility for claims for agricultural or commercial compensation arising out of loss of crop or interruption of business due to the project can be accepted. These matters must be resolved by the Client.

Public liability insurance, arranged through the Council for British Archaeology with a limit of £5,000,000, is in force.

All legal obligations will be followed. All finds of gold or silver will be reported according to the procedures of the Treasure Act. All human remains will be reported and licences for removal obtained (if required) following Home Office procedures. No responsibility can be accepted for the results of fulfilling legal obligations.

Health and Safety

It is anticipated that the archaeological project will fall within the Construction (Design and Management) Regulations 1994.

The Archaeological Contractor will establish safe working practices based on Construction Design and Management Regulations and other current Health and Safety Legislation.

During the project the Archaeological Contractor will follow any proper instruction given by the Site Foreman, Clerk of Works, Site Manager or security personnel for the purposes of health and safety when on site.

Protective clothing will consist of hard hat, protective boots, high visibility jacket, etc.

Any equipment or plant provided by the Client will be inspected before use.

The Client must notify the Archaeological Contractor of any hazards within the archaeological site before the project commences. These include the location of existing services, contaminated ground, dangerous structures, etc.

Appendix 3: Grace Academy Darleston context list

Context No	Description	Interpretation
001	Dark grey brown sandy loam	Topsoil
002	Mid brown sandy clay with occasional to common small rounded stones and common to abundant small brick fragments	Subsoil
003	Very dark grey brown, almost black, sandy clay with occasional to common large brick fragments, common stone fragments and abundent coal dust and flecks	Landscaped remains of upcast from mining in vicinity
004	Light orange buff decayed stone/mortar	Layer
005	Light brown grey fragmented stone	Demolition debris
006	Brick rubble with lime mortar	Demolition debris
007	Cast-iron plate	?inspection chamber cover
008	Brick structure in lime mortar; continues to north-west; cut by pit filled with 009; below 010; bricks L: 0.23, W: 0.11; D 0.08; cut by 011	Footing of building
009	Light grey sandy ash	Fill of 011
010	Very dark brown grey, almost black sandy silt	Layer
011	Irregular edged cut; only partly visible in plan	Pit
012	Arched brick structure, c 2m deep from ground level. Salt glazed pipe enters/leaves at high level; arched structure continues to south-east; row of tiles at bottom of picture is drain heading towards gas holder.	?culvert/settling tank for gas holder
013	Very large angular concrete rubble	Demolition debris
014	Brick rubble	Demolition debris
015	Mid-grey gritty sand with abundant small to medium stone fragments	Layer - probably landscaped debris
016	Mid-grey gritty sand with abundant small to medium stone fragments	Layer
017	Orange buff sand with dark orange stone fragments	Fill of 018
018	Small, near vertically sided, flat bottomed cut	?post hole
019	Very hard and compact dark orange slaggy stone	Layer
020	Very light yellow lightly cohesive sand	Layer
021	Small coal fragments	Part fill of depression
022	Very light yellow lightly cohesive sand	Part fill of depression
023	Very hard and compact dark orange slaggy stone	Part fill of depression
024	Very light yellow sand	Part fill of depression
025	Light grey, loose, small angular ashy slag	Part fill of depression
026	Tarmac surface	Former carpark
027	Tarmac sub-base	Former carpark
028	Light grey ashy, stoney material	Layer
029	Very mixed light buff and light grey ashy material	Layer

030	Light grey ash with abundant coal and charcoal fragments	Layer
031	Pale yellow stone	Inclusion
032	Very dark brown, almost black, gritty sand with abundant coal and charcoal fragments	Layer
033	Light grey tenacious clay	Layer