Watching brief
at land at
Blakesley Hall School
Yardley Green Road
Stetchford

SMR 20628

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20th November 2008
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Watching brief at land at Blakesley Hall School, Yardley Green Road, Stetchford

Introduction

A desk-based assessment carried out in 2005 (Cook 2005) identified the site of a brick kiln adjacent to Yardley Green Road, Stetchford (SMR 20628; SP 1263 8636; Fig 1). It was established in the late 19th century when it is shown on the 1st edition Ordnance Survey map but ceased to be used in the early 20th century. The associated clay pit, within which the brick kiln was constructed, was used as a landfill site up to about the time of the Second World War. In the late 1950s a school was built on the site. The replacement of this school, constructed during 2006/7/8 was likely to affect buried deposits relating to the brick kiln.

Originally, archaeological evaluation was proposed for the area in the vicinity of the brick kiln. However, following a site meeting between Balfour Beatty Construction Ltd, Birmingham City Council and Martin Cook BA MIFA it was decided not to carry this out due to the restricted nature of the site and the anticipated depth of the archaeological deposits. A watching brief was subsequently substituted for the evaluation and a brief (copy in Appendix 1) was produced by Birmingham City Council to reflect this. This report is therefore in fulfilment of that brief.

Aims

The aims of the watching brief were to:

1) to record the structures comprising the brickworks and compare them with other contemporary brickworks in Birmingham and elsewhere, as identified in the desk-based assessment (Cook 2005)

2) to identify any phasing in the development of the brickworks

3) to identify the size and fabric of bricks produced on the site.

Brief background to the site

Documentary research had already been undertaken during the desk-based assessment (Cook 2005) and any further documentary work or research was undertaken to assist in the interpretation of deposits or finds recorded by the watching brief. The watching brief took place intermittently, as required, between 28 February 2007 and 1 August 2008.

Method of construction of the new school

The site had previously been terraced into the natural slope of the ground. This terracing had been undertaken in a number of fairly shallow steps. By contrast, the current construction involved substantial ground reduction in the eastern and southern corners of the site (*c* 4m reducing to *c* 2m) in order to produce a single formation level from which all other ground reduction activities and construction took place. These other ground reduction activities took the form of vibro-compaction piling, pile caps and service trenches. Vibro-compaction piling comprises the boring of a shaft down to a level where good bearing capacities may be anticipated. This shaft is then filled with gravel which is vibrated, causing it to both consolidate and to migrate outwards into the surrounding material. Pile caps were excavated to a depth of *c* 1m. They varied in size but were generally *c* 2m square and were filled with mass concrete in the conventional way. The service trenches that were excavated close to the site of the brick kiln comprised storm water and foul sewers. These were excavated to between 2 and 4m beneath the formation level described above.

Analysis

Summary descriptions of salient contexts are given below. A full description of the contexts is given in Appendix 2.

The fieldwork

The land on which the site lies slopes from the north-west to the south-east (Fig 2). Very substantial ground reduction was undertaken in the eastern corner of the site (to a depth of *c* 4m beneath existing ground level; Figs 2 and 6). In this area the depth of archaeological deposit was about 0.6m (Figs 2 and 3; section 1) with the remainder of the depth being natural sub-soil. Deposits recorded were topsoil (context 001) and a clayey subsoil with a lens of pebbles (context 002) that overlay the natural Mercian Mudstone (context 003). A short distance to the north-east (Figs 2 and 3; section 2) the depth of excavation had decreased to *c* 3m but the depth of archaeological deposit had increased to around 2m. A very substantial depth of topsoil was encountered here. This is thought to relate to landscaping associated with the ceasing of the use of the site for landfill and the construction of the 1950s school. Beneath this was a very dark grey, almost black, burnt, slaggy layer (context 004) believed to be a landfill deposit. This lay above a layer of mid-brown tenacious clay (context 005). This layer was approximately 0.6m thick and may have been the next clay deposit exposed for exploitation by the brickworks, but never used. Below this was the undisturbed Mercian Mudstone (context 003).

In the vicinity of the brick kiln the sections of two of the pile caps were recorded (Figs 2 and 3; sections 3 and 4). Ground reduction was significantly less here, the depth of excavation being around 1.6m beneath existing ground level. Here, beneath topsoil (context 001) and other layers associated with the ceasing of landfill and school construction (contexts 009 and 010) were substantial layers of landfill including a similar slaggy material to that identified in context 004 and abundant pottery fragments (context 016). The pottery has been dated to the 19th century (see below). Some reworking of the landfill material had clearly taken place as a large posthole or small pit (context 012) had been excavated into the landfill and filled with another variation on the slaggy material described above (context 011).

In the south-east corner of the site the depth of ground reduction varied from *c* 3m adjacent to the site's south-western boundary to zero adjacent to the existing school buildings (Figs 2 and 4). This area of ground reduction took place through similar layers to that encountered elsewhere on the site (ie topsoil of varying depths, landfill of a slaggy material containing abundant pottery fragments and undisturbed Mercian Mudstone.

In this area two deep service trenches, the bases of which were approximately 4 or 5m beneath existing ground level, were subsequently excavated to the south-west and south-east of the brick kiln, at a distance of approximately 35m and, in the case of the latter, immediately adjacent to or immediately over it. (Figs 2, 4; (section 5) and 9). These were excavated through the remains of the landfill recorded elsewhere (to a depth of *c* 0.4m; context 004) and the Mercian Mudstone (context 003). The part of the trench that passed immediately adjacent to the anticipated position of the brick kiln (Fig 2) was not sufficiently deep to reach it, the bottom of the trench still being in landfill deposits. However, an interesting deposit was recorded in section 5 (Fig 4). This was an alignment of bricks (context 020), lying upon the natural subsoil which, at this point, was a grey clay (context 021). These bricks had the superficial appearance of an arch. They were not, however, mortared together and it soon became clear that they did not, and had not, formed part of any structure. Their disposition was, however, peculiar. No entirely satisfactory explanation can be offered but the following is proposed. Since they lay upon the natural subsoil, rather than within a landfill deposit, it is possible that they are one of the final products of the brick kiln; perhaps a few tens or scores of bricks that were never taken off site. Their deposition might be accounted for by the antics of children playing in the abandoned brickworks (ie piling up bricks and knocking them over). A sample of one of these bricks, which were all identical was taken (brick 5; see below).

In the far south-east of the site a final service trench was excavated (Figs 2 and 4; section 6). This passed through landfill deposits only.

The finds (Appendix 3)

The analysis below is a summary of the artefacts by material type. Where possible, dates have been allocated and the importance of individual finds commented upon as necessary.

Analysis of bricks

Brick 1 (Not retained; unstratified)

Dimensions: 8¾ x 4 x 2¾ inches
Description: Had slight frog

Brick 2 (unstratified; Fig 11)

Dimensions: 9¼ x 4½ x 3 inches
Description: Well-made of red fabric containing subangular, pink argillaceous inclusions (?mudstone). No frog. Fragments of mortar on all surfaces, indicating use in a structure.

Brick 3 (unstratified; Fig 12)

Dimensions: 9¼ x 4 x 2¾ inches
Description: Appears to be of the same fabric as Brick 1 above. However this example is slightly smaller in overall size and notable due to it having been subjected to extreme heat which has caused vitrification of the brick at one end and distortion along one edge. This heat has also caused the majority of the fabric to turn grey in colour.

Brick 4 (unstratified; Fig 13)

Dimensions: 9 x 4 x 2¾ inches
Description: Bears close resemblance to Brick 2, being a dark grey/black colour and completely mishapen and distorted due to exposure to extreme heat.

Brick 5 (context 020; Fig 14)

Dimensions: 9¼ x 4½ x 3½ inches
Description: Of same fabric and of similar appearance to Brick 1 with the same well-made body, regular surfaces and no frog.

Analysis of pottery

A total of 25 sherds of pottery were recovered from context 016. The majority were biscuit fired fragments from modern stone china vessels of a domestic nature, primarily tablewares including plates and dishes. It is likely that these would have been decorated with transfers had they survived this first firing. Some of the surfaces of these fragments had turned grey and a small number showed areas of vitrification due to high levels of heat.

Two biscuit fired sherds from a stoneware jar were also identified within the group. One came from the rim and upper section of the body and was moulded with a series of lines running down the body and the other was from the base and had the words '[MAD]E IN […]' on the underside.

Other pottery included two highly burnt, almost vitrified sherds of blue transfer decorated modern stone china. Remaining pottery was unburnt and consisted of three sherds from a modern stone china vessel with purple transfer decoration and one eathernware sherd, probably from a flowerpot.

Analysis of other material

Other material consisted of two clay pipe stems, both burnt and blackened and a small fragment of ceramic (context 016). Once again, this had been subjected to extreme heat resulting in complete distortion and a slag-like appearance to two surfaces where the clay had vitrified. It was originally thought that this, and other similar material, may have been kiln lining but as it was not found *in situ* this could not be proved.

Significance

The condition of much of the material from this site would indicate that some sort of industrial activity has taken place during the 19th century. Despite the presence of biscuit ware and highly

fired 'waster' pottery, it is not thought that pottery production took place on this site, rather that it was transported from elsewhere and dumped on this land.

However, the evidence seen in the brick assemblage would suggest that a kiln-type structure of some sort was present on the site prior to the later 19th century date indicated by the pottery. Indeed, comparison with the dimensions of the bricks from Floodgate Street, would indicate them to be of later 18th century at the earliest (Hewitson, forthcoming). The two 'waster' bricks (bricks 3 and 4) show exposure to extremely high heat and it is not unreasonable to consider that they have either been used in a kiln structure itself, or are the product of a misfired load.

In addition, evidence seen on the site itself would also point towards the possibility of brick production on the site, with brick 5 having been found in a gently curving pile (unmortared) on top of a layer of grey clay, believed to be the natural subsoil. It is possible that this pile was the remains of a stockpile of bricks produced on site. Once the site was turned over to landfill, these bricks were buried in the topsoil, along with other rubbish. Unlike the misfired pottery present within the assemblage, it is unlikely that bulky material such as kiln structure and bricks would have been transported any distance for disposal.

All bricks are similar both in general appearance and dimensions and all seem to be of the same fabric despite some being far more highly fired than others. If this was indeed a brick production site prior to the later 19th century, it is likely that the products have been used in structures across Birmingham. Unfortunately, at present there is no 'fabric type series' for bricks in this region (Hewitson pers comm.) and as a result, fabric is rarely discussed in any detail within reports and comparisons are not easily made. This coupled with the fact that the majority of this material is disposed of 'in-situ' often following only a brief examination and much information regarding the source and production of bricks within the Birmingham area and west Midlands as a whole is being lost.

Discussion of the finds

The assemblage retrieved from the site consisted of four complete bricks, one brick fragment and 25 sherds of pottery. All material was came from the site landfill (see Table 1). The pottery was of a domestic nature dating between the late 19th and 20th centuries.

Recommendations

Due to the problems relating to the provenance, dating and fabric identification of bricks in this region and in the light of a possible manufactory being present on this site, it is suggested that local units, groups and specialists need to work closely together to try and fill in the gaps with a view to the production of a regional brick fabric type series.

The need for such a resource is also strongly supported by the Archaeological Ceramic Building Materials Group, whose minimum standards document states that:

> 'Regional CBM (form and fabric) type series should be established and curated, preferably by the local collecting museum or similar curator, and their use encouraged by the planning archaeologist. This would result in standardised identifications, the basis of future synthetic work. The necessity of consulting a recognised CBM type series should be built into briefs and specifications, and should apply to all contractors working in each region (ACBMG 2001).

Some work of this nature has already been undertaken in Worcestershire as part of the specialist analysis for brick assemblages from large urban excavations in Worcester (Davenport and Dalwood, *et al*, in prep). However, this is only the beginning of what is a major undertaking and for such material to be placed in the wider regional context rather than looked at on a site by site basis, funding will need to be sort and the backing of City and County archaeologists sought.

Commentary

Aims 1) and 2) of the watching brief could not be fulfilled as the brick kiln was not encountered in any of the excavations. Aim 3), to identify the size and fabric of bricks produced on the site may have been fulfilled if the explanation for the bricks in section 5 is accepted.

A serious obstacle to the satisfactory completion of this project was the lack of a brick type series for the City of Birmingham. Indeed, little work has been done on the brick industry in general in Birmingham. A corollary of this is that the bricks from the site have had to be retained (and deposited in the Birmingham City Museum and Art Gallery) rather than being compared to a reference collection and then discarded.

It is unfortunate that the work on the work on the Blakesley Hall School brick kiln was unable to identify the structure of the kiln. The brick-making industry was undertaken on a wide range of scales from small kilns producing bricks for a single house to those operating on a truly industrial scale. The evidence that there is suggests that the example at Blakesley Hall School was in the middle of the range with a single, substantial kiln, a few associated structures and a clay pit of considerable dimensions, occupying most, if not all, of the current school site. This significant, local industry had effectively vanished from sight by the middle of the 20th century. That this has been repeated across the country is apparent from a simple internet search for 'brick kiln', which produced very few relevant results (most of which related to bed-and-breakfast accommodation which included this phrase). Even on the Isle of Wight, where development has probably been more limited than on the mainland, the Isle of Wight Industrial Archaeology Society reported that 'there is little structural evidence for brick kilns on the Isle of Wight' in spite of there being 'comprehensive documentation of sites and brick makers'. The Society also identified the difficulty of identifying and studying bricks that had no makers' mark or were not associated with a particular building (http://freespace.virgin.net/roger.hewitt/iwias/bricks/htm).

Destination of the excavated landfill

Contaminated waste from site, including pottery, kiln wasters and potential kiln lining (context 016), was taken to:

Sita Packington (Landfill)
Site MD7
Licence no BW0533ID

Summary

An archaeological watching brief was undertaken at land at Blakesley Hall School, Yardley Green Road, Stetchford. The excavations never attained a sufficient depth to encounter the brick kiln or associated deposits. All the recorded deposits were those associated with the site's later use as a landfill site in the first half of the 20th century. It is thought that a number of bricks recovered from the site may be associated with the brick kiln and these were recorded.

Bibliography

ACBMG, 2001, *Ceramic building material: Minimum standards for recovery, curation, analysis and publication*

Cook, M, 2005 *Desk-based assessment of land at Blakesley Hall School Yardley Green Road Birmingham*

Davenport, P and Dalwood, H, *et al*, in prep, *Newport Street, Worcester excavations in 2005*

Hewitson, C, in Edgeworth, M, and Hewitson, C, forthcoming, *The Birmingham Waterfront Vol 1: Excavations at Floodgate Street and Gibb Street.*

Acknowledgements
The author would like to thank Andrew Thompson project manager; Balfour Beatty Construction Ltd, Daniel Parry site agent; Balfour Beatty Construction Ltd and Mike Hodder; Birmingham City Council for their kind cooperation during this project.

Archive
The archive consists of:

6	Annotated scale drawings
1	CD-ROM
1	Box of finds

The archive will be deposited at the Birmingham City Museum and Art Gallery.

Ordnance Survey map removed for copyright reasons

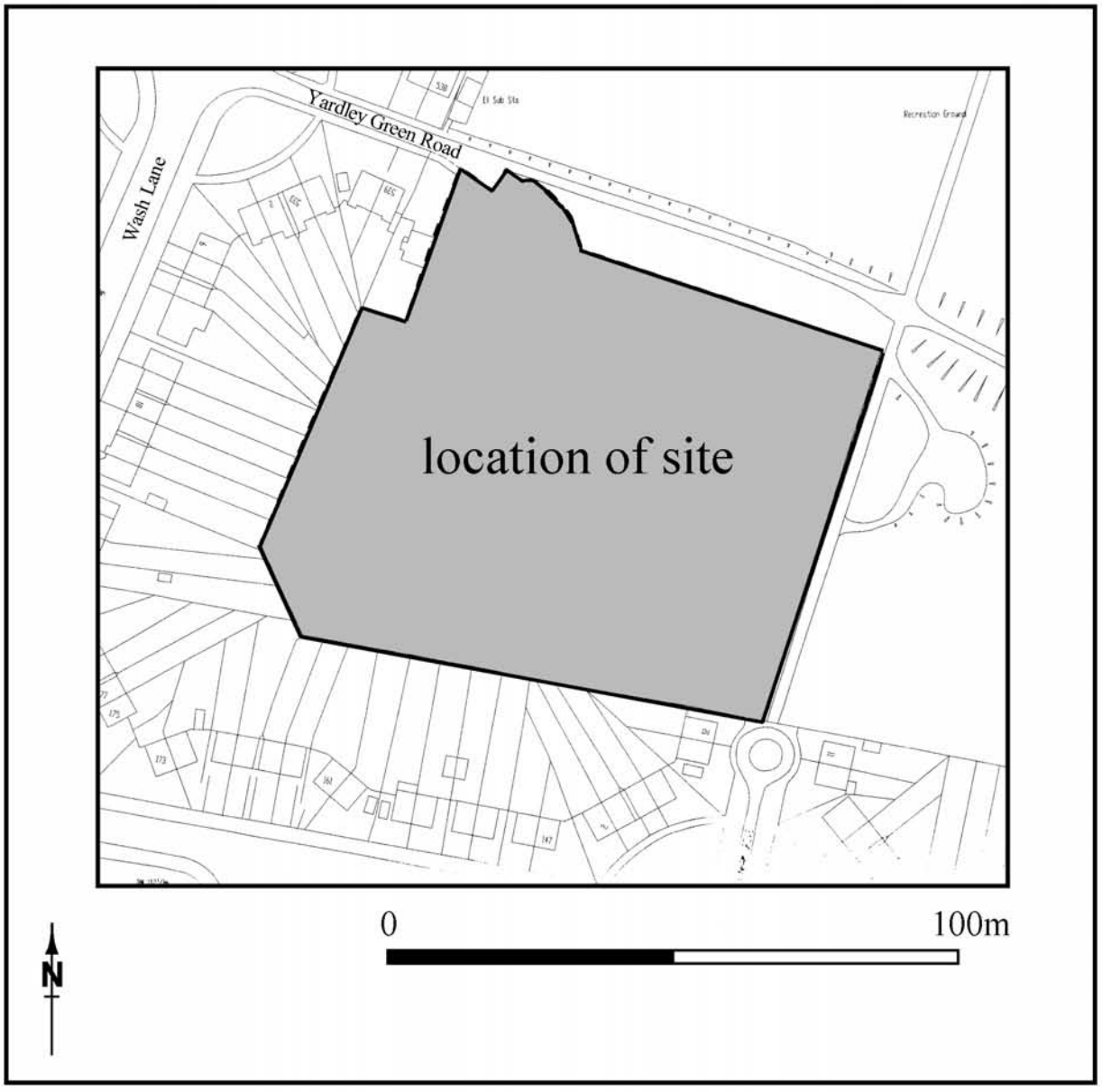

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Fig 1: Location of site

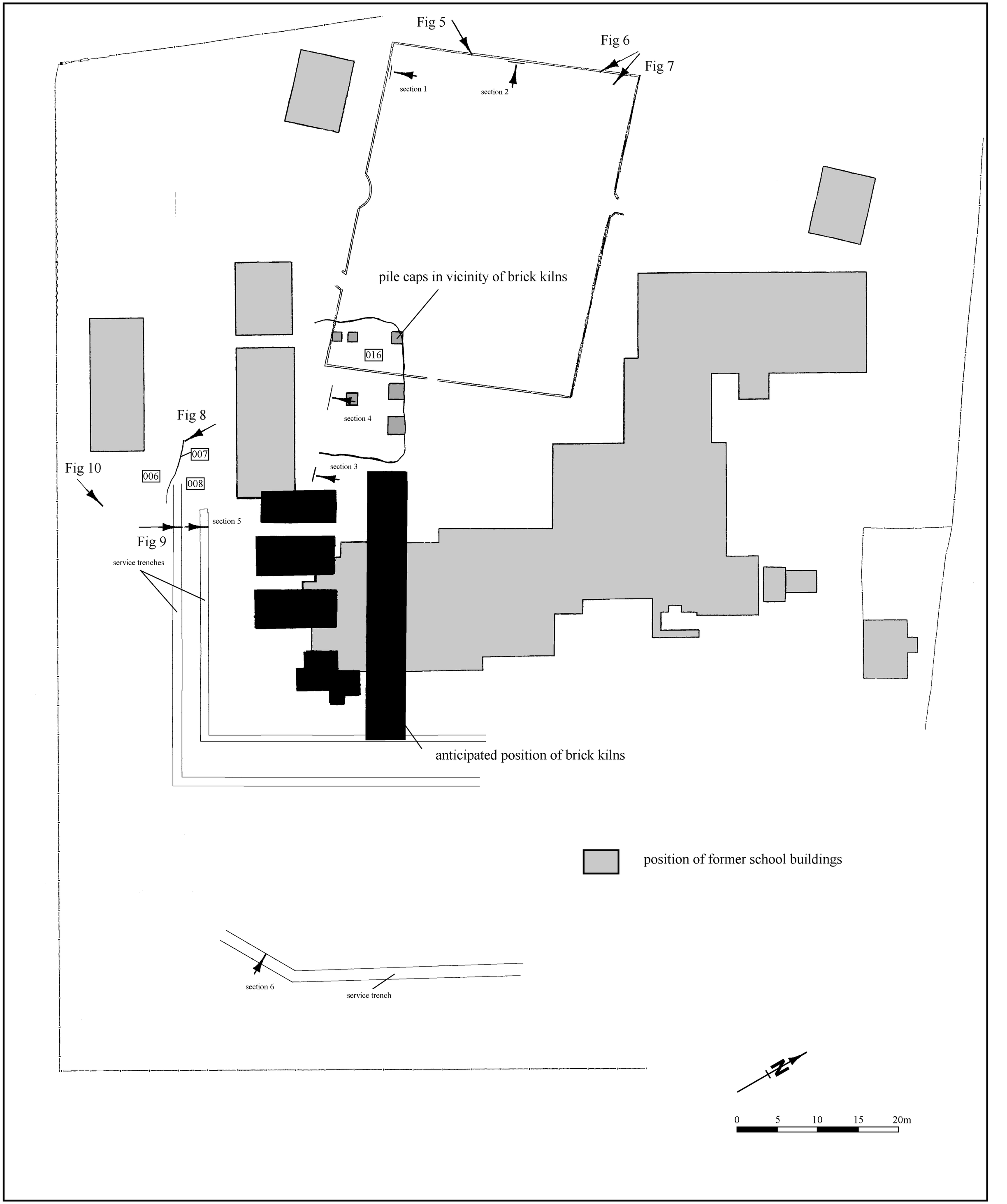
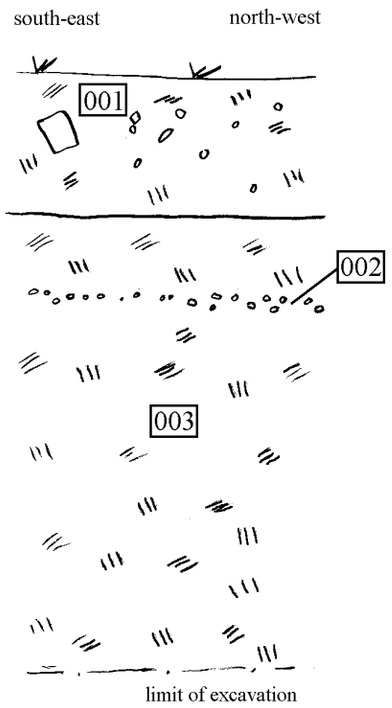


Fig 2: Location of recorded deposits, sections and Figures 5 to 10

Section 1



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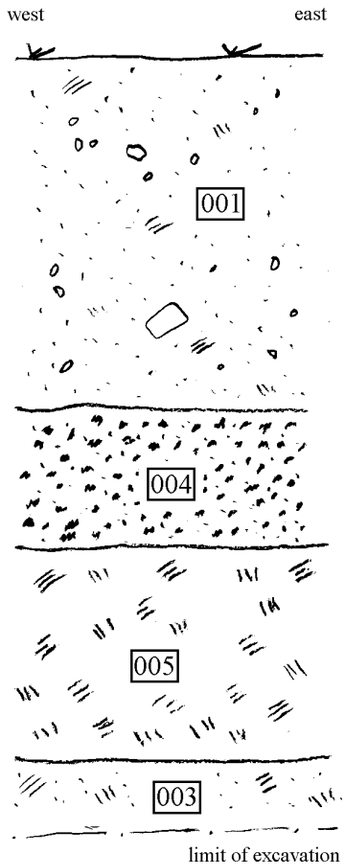

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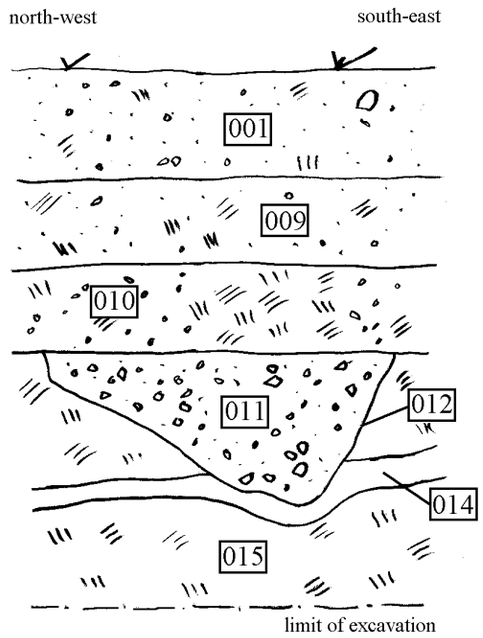

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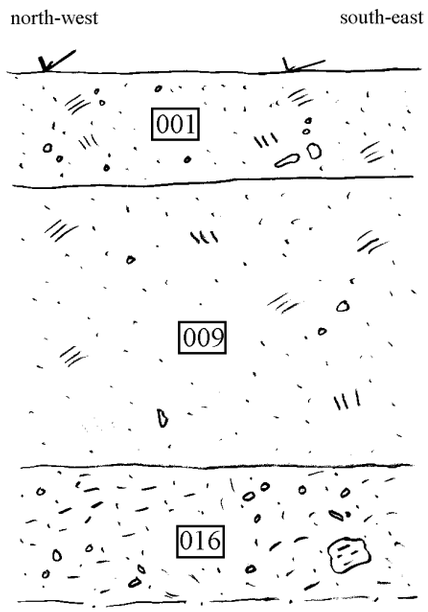
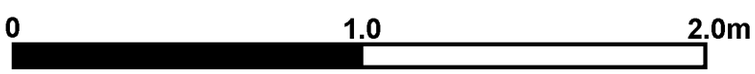
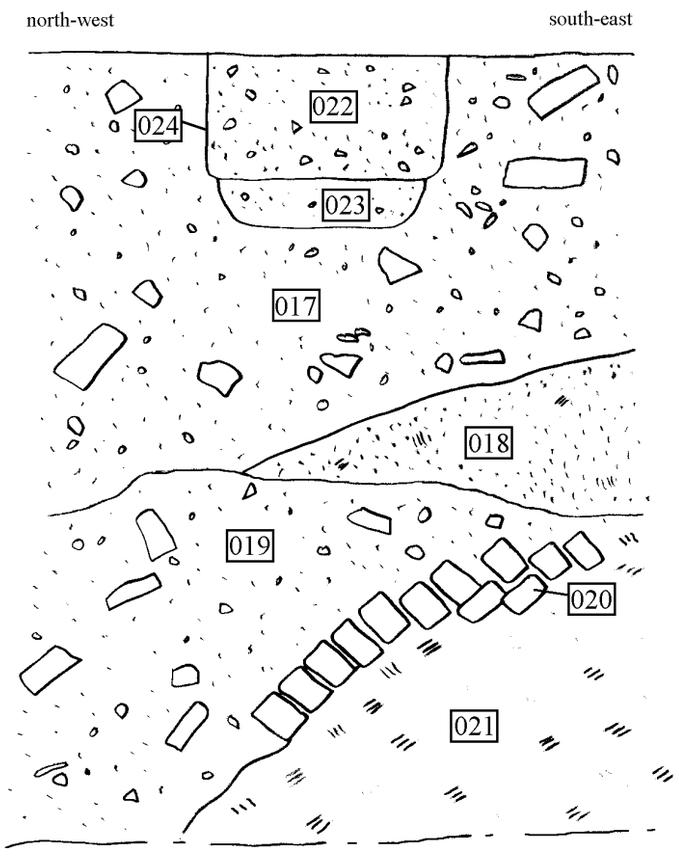


Fig 3: Sections 1 to 4



Section 5



Section 6

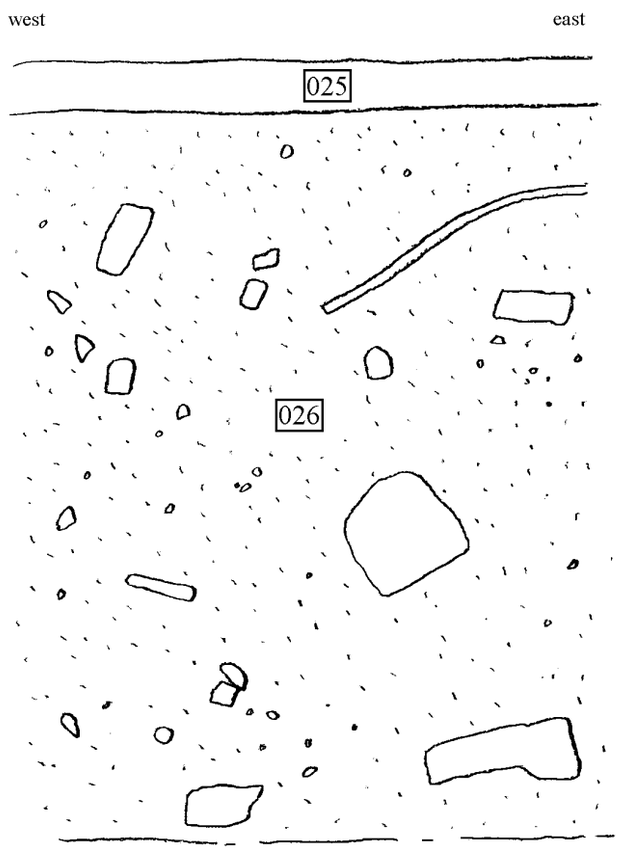


Fig 4: Sections 5 and 6

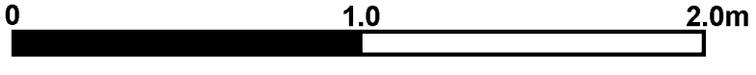


Fig 5: View of ground reduction in south-west corner of site

Fig 6: View of ground reduction in south-west corner of site

Fig 7: View of ground reduction to west of anticipated position of brick kilns

Fig 8: Contexts 006, 007 and 008

Fig 9: Contexts 023, 024, 017, 018, 019, 020, and 021

Fig 10: View of ground reduction to south of anticipated position of brick kilns

Fig 11: Brick 2

Fig 12: Brick 3

Fig 13: Brick 4

Fig 14: Brick 5

Appendix 1: Copy of the brief from Birmingham City Council

BIRMINGHAM CITY COUNCIL
DEVELOPMENT DIRECTORATE
Application number C/04173/05/FUL
Blakesley Hall School, Yardley Green Road (SMR 20628; SP 1263 8636)
Brief for *archaeological works* during development as a condition of planning permission

1.Summary

Proposed development at Blakesley Hall School, Yardley Green Road, is likely to affect below-ground archaeological remains of a former brickworks. This brief is for archaeological observation and recording during development.

2.Site location and description

The site is located on the south side of Yardley Green Road. It is currently occupied by a school, with buildings on part of the site and a playground on the rest. The playground area is roughly horizontal and slightly raised above the surrounding land on north and east.

3.Planning background

The proposed development consists of demolition of existing buildings and construction of a new school on the same site. Because the site is likely to include archaeological remains which would be affected by the proposed development, a condition of planning permission requires implementation of a scheme of archaeological investigation and programme of archaeological works. This is in accordance with Policy 8.36 of the City Council's Unitary Development Plan, the City Council's Archaeology Strategy which has been adopted as Supplementary Planning Guidance, and government advice in Planning Policy Guidance Note 16, "Archaeology and Planning".

4.Existing archaeological information

A desk-based archaeological assessment carried out in 2005 brings together existing information about the site. It is not marked on the 1847 Tithe map but was in existence by 1887 when it is marked on the Ist Edition Ordnance Survey Map and consisted of three kilns and a long ancillary building. The kilns are likely to have been of the "Scotch" type. The brickworks is unlikely to have used any sophisticated brick-making machinery because of its small size. The size of the works was probably between small-scale "cottage" brick production and the industrial scale of contemporary brickworks nearer the city centre.

5.Requirements for work

The kiln and ancillary buildings shown on the 1887 map lie under the eastern part of the existing school site, partly under the buildings and partly under open areas. The raised form of the existing playground suggests that remains of the

brickworks may survive under it. Although small brickworks of this date were numerous in the Yardley area, little is known about the details of their layout.

The proposed development at Blakesley Hall School will affect remains of the brickworks, therefore a programme of archaeological work is required to ensure that these remains are appropriately recorded. This will be achieved by observation and recording during groundworks for the development in the eastern part of the existing school site.

The particular aims of the archaeological work on this site are:
(i)To record the structures comprising the brickworks and compare them with other contemporary brickworks in Birmingham and elsewhere, as identified in the desk-based assessment
(ii)To identify any phasing in the development of the brickworks
(iii)To identify the size and fabric of bricks produced on the site

6.Stages of work
An appropriately skilled and qualified archaeologist is to be on site to observe all groundworks for the development in the eastern part of the existing school site, including topsoil stripping, foundation trenches, access and services. Any archaeological features exposed are to be recorded by written description, drawing and photography. Exposed deposits are to be cleaned and partially excavated where necessary for better definition. Adequate time is to be allowed for observation and recording to take place. Finds are to be retrieved as they are revealed during groundworks or cleaning. Finds are to be cleaned, marked and bagged and any remedial conservation work undertaken.

7.Staffing
The archaeological observation and recording is to be carried out in accordance with the Code of Conduct, Standards and Guidelines and practices of the Institute of Field Archaeologists, and all staff are to be suitably qualified and experienced for their roles in the project. It is recommended that the project be under the direct supervision of a Member or Associate Member of the Institute of Field Archaeologists.

8.Written Scheme of Investigation
Potential contractors should present a Written Scheme of Investigation which details methods and staffing. It is recommended that the proposal be submitted to the City Council's Planning Archaeologist before a contractor is commissioned, to ensure that it meets the requirements of this brief.

9.Monitoring

The archaeological observation and recording must be carried out to the satisfaction of Birmingham City Council, and will be monitored by the Planning Archaeologist.

10.Reporting
The results of the archaeological observation and recording are to be presented as a written report, containing appropriate illustrations. A bound hard copy of the report and an electronic copy in pdf format must be sent to the Planning Archaeologist.
On completion of the project the contractor must complete the obligatory fields of the OASIS form and submit an electronic version of the report to OASIS (http://ads.ahds.ac.uk/oasis)

11.Archive deposition
The written, drawn and photographic records of the archaeological observation and recording, together with any finds, must be deposited with an appropriate repository within a reasonable time of completion, following consultation with the Planning Archaeologist.

12.Publication
The written report will become publicly accessible, as part of the Birmingham Sites and Monuments Record, within six months of completion. The contractor must submit a short summary report for inclusion in *West Midlands Archaeology* and appropriate period journals. Depending on the results, a more detailed publishable report may also be required.

BIRMINGHAM CITY COUNCIL
Date prepared: 23 February 2007
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Birmingham City Council
Development Directorate
Alpha Tower
PO Box 28
Suffolk Street Queensway
Birmingham B1 1TU

Appendix 2: List of the contexts

Context number	Description	Interpretation
001	Dark to mid-brown sandy loam with common small angular pebbles and occasional brick fragments	Topsoil
002	Lens of small rounded pebbles	Lens
003	Light grey tenacious clay with light to mid-brown streaks	Degraded Mercian mudstone - natural subsoil
004	Very dark grey (almost black) loose, burnt, slaggy material	Early 20th century landfill
005	Light to mid brown tenacious clay	Probably exposed by brickworks as next area of raw material to be exploited but never used
006	Light to mid brown tenacious clay	Natural subsoil
007	Linear cut	Edge of brick pit
008	Very mixed deposit: dark grey loose matrix of ash, clinker, etc with bricks, slag and other debris	Early 20th century landfill
009	Light red-grey sandy clay with occasional small fragments of slag and brick/tile	Layer
010	Very mixed layer of medium grey tenacious clay and sandy grey clay with common small rounded pebbles and occasional tile fragments	Layer
011	Dark red-brown slaggy matrix with small angular gravel	Fill of 012
012	Cut	?posthole or small pit
013	Light pink tenacious clay	Layer
014	Very dark grey (almost black) sandy clay with occasional tile fragments	Layer
015	Light pink tenacious clay	Layer
016	Very dark grey (almost black) slaggy matrix with common large kiln lining fragments and abundant pottery waster fragments. Lies on site of brick kilns.	Early 20th century landfill

017	Broken brick rubble	Early 20th century landfill
018	Light grey ashy material with a very small clayey component	Early 20th century landfill
019	Broken brick rubble	Early 20th century landfill
020	Bricks in curving layer ?collapsed brick pile	?remains of product of brick kiln
021	Light grey tenacious clay	Natural subsoil
022	Concrete	Strip foundation for 1950s school
023	Very dark grey silty sand	Levelling material for 022
024	Cut	Shallow, linear excavation for 022
025	Tarmac	Road for school
026	Mixed building rubble of bricks, concrete and cables	Early 20th century landfill

Appendix 2: Description of the contexts

001 Dark to mid-brown sandy loam with common small angular pebbles and occasiional brick fragments Topsoil

002 Lens of small rounded pebbles Lens

003 Light grey tenacious clay with light to mid-brown streaks Degraded mercian mudstone - natural subsoil

004 Very dark grey (almost black) loose, burnt, slaggy material Landfill

005 Light to mid brown tenacious clay Probably exposed by brickworks as next area of raw material to be exploited but never used

006 Light to mid brown tenacious clay Natural subsoil

007 Linear cut Edge of brick pit

008 Very mixed deposit: dark grey loose matrix of ash, clinker, etc with bricks, slag and other debris Early 20th century landfill

009 Light red-grey sandy clay with occasional small fragments of slag and brick/tile Layer

010 Very mixed layer of medium grey tenacious clay and sandy grey clay with common small rounded pebbles and occasional tile fragments Layer

011 Dark red-brown slaggy matrix with small angular gravel Fil of 012

012 Cut ?posthole or small pit

013 Light pink tenacious clay Layer

014 Very dark grey (almost black) sandy clay with occasional tile fragments Layer

015 Light pink tenacious clay Layer

016 Very dark grey (almost black) slaggy matrix with common large kiln lining fragments and abundant pottery waster fragments. Lies on site of brick kilns. Land fill

017 Broken brick rubble Landfill

018 Light grey ashy material with a very small clayey component Landfill

019 Broken brick rubble Landfill

020 Bricks in curving layer ?collapsed brick pile ?remains of product of brick kiln

021 Light grey tenacious clay natural subsoil

022 Concrete Strip foundation for 1950s school

023 Very dark grey silty sand Levelling material for 022

024 Cut Shallow, linear excavation for 022

025 Tarmac Road for school

026 Mixed building rubble of bricks, concrete and cables Landfill

Appendix 3: Report on the finds

The finds by L C Griffin

Artefactual analysis

Aims
The brief required an assessment of the quantity, range and potential of artefacts from the excavation.

The aims of the finds assessment were:

a) to identify, sort, spot date, and quantify all artefacts

b) to describe the range of artefacts present

c) to preliminarily assess the significance of the artefacts

This report covers artefacts of modern date.

Method of analysis

All hand-retrieved artefacts were examined and identified, quantified and dated to period. All information was recorded on a Microsoft Access 2000 database.

Results of analysis

The assemblage retrieved from the site consisted of four complete bricks, one brick fragment and 25 sherds of pottery. All material was came from the site landfill (see Table 1). The pottery was of a domestic nature dating between the late 19th and 20th centuries.

Discussion

The discussion below is a summary of the artefacts by material type. Where possible, dates have been allocated and the importance of individual finds commented upon as necessary.

Bricks

Brick 1 (Not retained; unstratified)
Dimensions: 8¾ x 4 x 2¾ inches
Description: Had slight frog

Brick 2 (unstratified)
Dimensions: 9¼ x 4½ x 3 inches
Description: Well-made of red fabric containing subangular, pink argillaceous inclusions (?mudstone). No frog. Fragments of mortar on all surfaces, indicating use in a structure.

Brick 3 (unstratified)
Dimensions: 9¼ x 4 x 2¾ inches
Description: Appears to be of the same fabric as Brick 1 above. However this example is slightly smaller in overall size and notable due to it having been subjected to extreme heat which has caused vitrification of the brick at one end and distortion along one edge. This heat has also caused the majority of the fabric to turn grey in colour.

Brick 4 (unstratified)
Dimensions: 9 x 4 x 2¾ inches
Description: Bears close resemblance to Brick 2, being a dark grey/black colour and completely mishapen and distorted due to exposure to extreme heat.

Brick 5 (context 020)
Dimensions: 9¼ x 4½ x 3½ inches

Description: Of same fabric and of similar appearance to Brick 1 with the same well-made body, regular surfaces and no frog.

Pottery

A total of 25 sherds of pottery were recovered from context 016. The majority were biscuit fired fragments from modern stone china vessels of a domestic nature, primarily tablewares including plates and dishes. It is likely that these would have been decorated with transfers had they survived this first firing. Some of the surfaces of these fragments had turned grey and a small number showed areas of vitrification due to high levels of heat.

Two biscuit fired sherds from a stoneware jar were also identified within the group. One came from the rim and upper section of the body and was moulded with a series of lines running down the body and the other was from the base and had the words '[MAD]E IN […]' on the underside.

Other pottery included two highly burnt, almost vitrified sherds of blue transfer decorated modern stone china. Remaining pottery was unburnt and consisted of three sherds from a modern stone china vessel with purple transfer decoration and one eathernware sherd, probably from a flowerpot.

Other

Other material consisted of two clay pipe stems, both burnt and blackened and a small fragment of ceramic (context 016). Once again, this had been subjected to extreme heat resulting in complete distortion and a slag-like appearance to two surfaces where the clay has vitrified.

Significance

The condition of much of the material from this site would indicate that some sort of industrial activity has taken place during the 19th century. Despite the presence of biscuit ware and highly fired 'waster' pottery, it is not thought that pottery production took place on this site, rather that it was transported from elsewhere and dumped on this land.

However, the evidence seen in the brick assemblage would suggest that a kiln-type structure of some sort was present on the site prior to the later 19th century date indicated by the pottery. Indeed, comparison with the dimensions of the bricks from Floodgate Street, would indicate them to be of later 18th century at the earliest (Hewitson, forthcoming). The two 'waster' bricks (bricks 3 and 4) show exposure to extremely high heat and it is not unreasonable to consider that they have either been used in a kiln structure itself, or are the product of a misfired load.

In addition, evidence seen on the site itself would also point towards the possibility of brick production on the site, with brick 5 having been found in a gently curving pile (unmortared) on top of a layer of grey clay, believed to be the natural subsoil. It is possible that this pile was the remains of a stockpile of bricks produced on site. Once the site was turned over to landfill, these bricks were buried in the topsoil, along with other rubbish. Unlike the misfired pottery present within the assemblage, it is unlikely that bulky material such as kiln structure and bricks would have been transported any distance for disposal.

All bricks are similar both in general appearance and dimensions and all seem to be of the same fabric despite some being far more highly fired than others. If this was indeed a brick production site prior to the later 19th century, it is likely that the products have been used in structures across Birmingham. Unfortunately, at present there is no 'fabric type series' for bricks in this region (C Hewitson pers comm.) and as a result, fabric is rarely discussed in any detail within reports and comparisons are not easily made. This coupled with the fact that the majority of this material is disposed of 'in-situ' often following only a brief examination and much information regarding the source and production of bricks within the Birmingham area and west Midlands as a whole is being lost.

Recommendations

Due to the problems relating to the provenance, dating and fabric identification of bricks in this region and in the light of a possible manufactory being present on this site, it is suggested that local units, groups and specialists need to work closely together to try and fill in the gaps with a view to the production of a regional brick fabric type series.

The need for such a resource is also strongly supported by the Archaeological Ceramic Building Materials Group, whose minimum standards document states that:

> 'Regional CBM (form and fabric) type series should be established and curated, preferably by the local collecting museum or similar curator, and their use encouraged by the planning archaeologist. This would result in standardised identifications, the basis of future synthetic work. The necessity of consulting a recognised CBM type series should be built into briefs and specifications, and should apply to all contractors working in each region.'
>
> ***Ceramic building material: Minimum standards for recovery, curation, analysis and publication, ACBMG 2001***

Some work of this nature has already been undertaken in Worcestershire as part of the specialist analysis for brick assemblages from large urban excavations in Worcester (Jackson *et al.*, forthcoming). However, this is only the beginning of what is a major undertaking and for such material to be placed in the wider regional context rather than looked at on a site by site basis, funding will need to be sort and the backing of City and County archaeologists sought.

Bibliography

Appendix 1: Tables

Material	Total	Weight (g)
Brick	**4**	**14330**
Modern pottery	**25**	**300**
Vitrified ceramic	**1**	**672**
Clay pipe stem	**2**	**4**

Table 1 : Quantification of the assemblage

References

Hewitson, C, in Edgeworth, M, and Hewitson, C, forthcoming, *The Birmingham Waterfront Vol 1: Excavations at Floodgate Street and Gibb Street.*

Davenport, P and Dalwood, H, *et al*, in prep, *Newport Street, Worcester excavations in 2005*

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