# Archaeological investigations at 167-170, Abbey Foregate Street, Shrewsbury, Shropshire



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## Contents

# Archaeological investigations at 167-170 Abbey Foregate Street, Shrewsbury, Shropshire

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With contributions by Rob Hedge and Andy Howard

## Summary

Archaeological investigations were undertaken at 167-170 Abbey Foregate Street, Shrewsbury, Shropshire (NGR 350048, 312337). They were undertaken on behalf of CgMs Consulting acting on behalf of McCarthy and Stone Lifestyles Ltd, who have constructed a number of apartments for which a planning application was granted by Shropshire Council (reference 14/01861/FUL).

The site lies in the eastern part of the town of Shrewsbury, in the suburb of Abbey Foregate. The Rea Brook runs northwest-southeast along the southern boundary of the study site. Prior to works the site comprised a garage on the street frontage with open ground to the rear dropping southwards to the river.

Initially an archaeological evaluation of the site was intended, but after one trench was opened and a considerable depth of modern made ground was apparent a revised strategy was agreed with Shropshire Council. Four window samples were taken in the rear of the site to recover alluvial sequences and a watching brief was undertaken on geotechnical works in the area of the garage. The window samples were analysed be a geo-archaeologist.

Analysis of the boreholes demonstrates that the made ground, likely of 20th Century origin, lies directly on natural deposits and no indication of cultural activity was recorded at this interface. It appears from the considerable depth of some areas that the former ground surface was uneven and hollows were deliberately filled. Apart from one thin lens of undated organic material, no deposits of palaeo-environmental interest were identified.

Brick structures were recorded on the street frontage, likely to represent the remains of the cellars of buildings which were demolished prior to the construction of the garage. Fuel tanks were also recorded within the footprint of the garage.

Despite the prominent position of the site within the medieval core of Shrewsbury and adjacent to the River Rea and its former mill race, no significant archaeological features were recorded within the site.

# Report

# 1 Background

## 1.1 Reasons for the project

Archaeological investigations were undertaken at 167-170 Abbey Foregate Street, Shrewsbury, Shropshire (NGR: SJ 350048, 312337). They were commissioned by CgMs consulting on behalf of their client McCarthy and Stone Retirement Lifestyles Ltd, who intended to construct a number of apartments for which a planning application has been granted by Shropshire Council (reference 14/01861/FUL).

The proposed development site was considered to include heritage assets and potential heritage assets, the significance of which may be affected by the application.

Although no brief was prepared, discussions held between CgMs Consulting and Andrew Wigley, Historic Environment Manager at Shropshire Council (North Area) enabled a Written Scheme of Investigation (CgMs 2014) to be produced.

The project also conforms to the *Standard and guidance: Archaeological field evaluation* (CIfA 2014a) and *Standard and guidance: Archaeological watching brief* (CIfA 2014b).

The event reference for this project will be provided on deposition of this report and archive, whilst the internal reference number provided by Worcestershire Archaeology is P4492.

# 2 Aims

The aims of these investigations were:

- to describe and assess the significance of the heritage asset with archaeological interest;
- to establish the nature, importance and extent of the archaeological site;
- to assess the impact of the application on the archaeological site;
- to examine available evidence for any mill activity associated with the Mill Race located south of the study area.

# 3 Methods

## 3.1 Personnel

The project was led by Graham Arnold (BA (hons) MSc); who joined Worcestershire Archaeology in 2009 and has been practicing archaeology since 2004, assisted by Jonathan Webster and Michael Nicholson. The project manager responsible for the quality of the project was Tom Rogers (BA (hons) MSc). Illustrations were prepared by Carolyn Hunt (BSc (hons.); PG Cert; MCIfA). Rob Hedge (MA Cantab) provided the finds analysis. Andy Howard CMIfA contributed the geotechnical borehole analysis.

## 3.2 Documentary research

An archaeological desk-based assessment (DBA) was undertaken by CgMs Consulting (CgMs 2013) on behalf of their client McCarthy and Stone Retirement Lifestyles Ltd.

The DBA identified that although the area of investigation did not directly affect the scheduled ancient monument of Shrewsbury Abbey (SAM HER 00983) located 225m to the west, the theoretical potential for significant archaeological deposits and structures dating to the early medieval, medieval and post-medieval periods was high. A former Mill Race (HER 62653), which is thought to have potentially pre-conquest origins, runs along the southern edge of the area of investigation whilst the north end of the site is located on the historic Abbey Foregate street that would have provided access into the Abbey precinct and been a main thoroughfare throughout the

medieval period. As such the potential for structures and deposits associated with trade, cottage industry and domestic activity was thought to be high.

### 3.3 Fieldwork strategy

Fieldwork was undertaken intermittently between 12 January 2015 and 15 December 2015 following progress of the ground investigations and groundworks. The internal site reference number and site code is P4492.

A detailed specification for archaeological works on the site was prepared by CgMs Consulting (CgMs 2014). This set out a methodology for an archaeological watching brief on the removal of slabs in the footprint of the garage and the excavation of six evaluation trenches, each 30m long, two of which were in the footprint of the garage and the remainder in open ground to the rear.

One trench (Trench 4) was opened in the southern part of the site and a substantial depth of modern made ground was revealed. The presence of this made ground was confirmed by geotechnical investigations carried out in parallel and also archaeologically monitored (Trenches 11-15 on Fig. 2). It was therefore agreed between CgMs Consulting and Shropshire Council that three evaluation trenches (Trenches 3, 5 and 6) should not be excavated but that instead four window samples should be undertaken to sample alluvial deposits adjacent to the River Rea. This was undertaken and the cores from the interface between the modern made ground and alluvium down to the base depth of natural substrate were retained and examined by a geo-archaeologist (see Appendix 3).

Archaeological monitoring was also undertaken of geotechnical works along the frontage of the site with Abbey Foregate. This consisted of two trial pits and a number of boreholes. Trial pit 203 comprised a 200mm deep soil sampling location (hand-dug), entirely within recent made ground (John Whittle, Crossfield Consulting, pers. comm). Access issues limited any further geotechnical sampling. Test pits along the western edge of the building and the lifting of the slab in the northeast corner of the site to gain access to fuel tanks were also monitored.

This demonstrated that this part of the site had been substantially disturbed by activity related to the garage and the cellars of earlier buildings and it was determined that no further archaeological evaluation trenches were required in this area.

Furthermore Trenches 1 and 2, within the garage footprint, were not required to be excavated because the existing ground beams of the garage were to be re-used in the new development.

Deposits were recorded according to standard Worcestershire Archaeology practice (WA 2012a). On completion of excavation the trench was reinstated by replacing the excavated material.

The location of the evaluation trench, test pits and window samples is indicated in Figure 2.

### 3.4 Structural analysis

All fieldwork records were checked and cross-referenced. Analysis was effected through a combination of structural, artefactual and ecofactual evidence, allied to the information derived from other sources.

### 3.5 Artefact methodology, by Rob Hedge

#### 3.5.1 Artefact recovery policy

All finds recovered from the evaluation trench, were found within 19$^{th}$/20$^{th}$ Century made ground and not from *in situ* contexts. These included glass bottles and metal signs which were discarded.

### 3.6 Environmental archaeology methodology

The environmental methodology is available in Appendix 3.

### 3.7 Statement of confidence in the methods and results

The methods adopted allow a high degree of confidence that the aims of the project have been achieved. The depth of made ground over the site meant that the methodology had to be changed to borehole analysis and archaeological monitoring of the groundworks rather than the original plan of evaluation trenching.

# 4 The application site

### 4.1 Topography, geology and archaeological context

A desk based assessment was carried out prior to the works (CgMs 2013). The following topographical and geological context is taken from the desk based assessment:

The solid geology is mudstone and sandstone of the Salop Formation overlain by river terrace deposits in most of the study site, and alluvium in the south of the study site, near to the Rea Brook (British Geological Survey map sheet 152, 1978).

The study site lies in the eastern part of the town of Shrewsbury, in the suburb of Abbey Foregate. The Rea Brook runs northwest-southeast along the southern boundary of the study site. Most of the study site lies at 55m Above Ordnance Datum (AOD), with slightly higher levels at the street frontage. At the southern end of the study site, levels drop to 50m AOD (CgMs 2013, 11).

The desk based assessment also summarised the archaeological context of the site as follows:

Two watching briefs were carried out on works 55m west of the site in 1963 (HER ESA3914) in which a 13$^{th}$ Century pit under a cobbled surface was found and in 2001 (HER ESA4824) when no significant features were found and finds were limited to fragments of Post-Medieval pottery.

The National Monuments Record records an excavation undertaken in 1973 approximately 35m to the southeast of the study site (NMR 634528) in which evidence of a Medieval kiln (NMR 1172492) (CgMs 2013, 13) was recorded.

The Mill Race is recorded running along the southern boundary of the study site (HER 62653) dating to the pre-conquest period. A Roman coin was also found in 1888 (HER ESA3917) approximately 45m to the northeast of the site.

Due to the presence of Shrewsbury Abbey (SAM HER 00983) and the use of Abbey Foregate as a medieval thorough-fare the likelihood of structures and deposits associated with trade, cottage industry and domestic activity in the medieval and post-medieval period was considered to be high (CgMs 2013, 15-18) prior to works.

### 4.2 Current land-use

The site formerly comprised a large warehouse occupied by Kwik Fit, with a smaller garage to the south which has been demolished. The southern part of the study site comprises undeveloped land, bounded by the Rea brook.

# 5 Structural analysis

The evaluation trench, geotechnical pits and window sample locations are shown in Fig 2. The results of the structural analysis are presented in Appendix 1.

#### 5.1.1 Phase 1: Natural deposits

The natural substrate, comprising of river terrace deposits and overlain by clay and sandy silt alluvium was reached in the window samples in the south of the site. The alluvial clays were also reached in geotechnical pit 11 at a depth of 1.72m below the ground level. Geotechnical pits and groundworks monitoring the north side of the site uncovered sterile alluvial sandy silt deposits at 0.50m below ground level, directly under modern disturbed ground.

Analysis of the window samples carried out by Andy Howard (see Appendix 3) demonstrated that below 'made ground' (described below), stiff silty clays and clayey silts were encountered ranging from around 1.5-3.3m in thickness. The unit was generally homogeneous and of variable colour and interpreted as fine grained overbank alluvium, most probably directly associated with the Rea Brook, but also perhaps including sediments from the main River Severn, deposited as flow is backed up in tributary during periods of high discharge (slack water sedimentation). Reddish brown colouration reflects the prevalence of iron panning and manganese precipitation, whilst greyer tones reflect the influence of reducing environments and waterlogging (gleying); all these features are associated with fluctuation of the local groundwater tables and do not reflect cultural contexts . The upper half metre of alluvium in BHs 104 and 105 were mixed with 'made ground' deposits, probably reflecting the dumping of waste material into wetter hollows on the floodplain surface. Despite indications of the influence of groundwater across the area, no organic sediments (peats, humic silts) were recorded in any of the cores; occasional fragments of roundwood were noted but lacked a discrete context, diminishing their value for environmental reconstruction.

The only notable evidence of environmental interest within the alluvium was a 7cm unit of coarse sand and grit in BH WS104 (4.73-4.80m) that was interbedded between layers of fine grained alluvium. This unit is interpreted as a flood deposit. The alluvium has a relatively sharp basal contact and is underlain by a mixture of pinkish sands and clast-supported sands and gravels, which are interpreted as terrace deposits associated with the main river Severn and indicative of deposition under braided river conditions towards the end of the last glaciation. As well as local rocks (sandstones and siltstones), the gravels comprised igneous material reflecting the influence of late Pleistocene icesheets, which entered the region from North Wales and the Irish Sea basin. Occasionally, silty sediments were interbedded with the sand and were reminiscent of glaciolacustrine sediments, though these have low environmental potential since they were deposited in a glacial landscape largely devoid of vegetation.

### 5.1.2 Phase 2: Post-medieval and modern deposits

A series of dumped deposits of made ground, containing rubble, hardcore and refuse material were spread across the site and the later buildings of the warehouse and garage footings were cut into the modern materials.

All four cores indicated that 'made ground' deposits comprised at least the first metre of material across the site and in the case of BH 104, the first 4m of deposits. Analysis of the cores indicates that the 'made ground' was of relatively modern origin comprising 20th century brick fragments, roadstone foundation (doleritic MOT), tarmac waste, as well as local weathered natural sandstone and siltstone. Large fragments of charcoal were ubiquitous throughout, as was the pervasive odour of diesel oil, suggesting contamination. The made ground deposits usually had a clear, sharp base, probably reflecting the unconformable nature of the deposits (i.e. they are cut into the underlying material). No artefactual material of historic value was recorded in these deposits.

Brick cellars were recorded at the street frontage in Trench 18 and 20. The cellar walls were two bricks thick and consisted of a header/footer form. The bricks in the wall measured 9" x 4 1/2" x 3", whilst the floor consisted of thinner bricks that were 2" thick. A thin layer of black ash and clinker was used to bed the cellar floor, overlying the natural clay substrate.

Modern fuel tanks had truncated the northeast corner of the street frontage and were placed 0.75m below the ground level, overlain by red sand and hardcore and thick reinforced concrete hardstanding of the garage forecourt. This demonstrates that the street frontage has been heavily altered by modern works involving the site's use as a garage.

# 6 Synthesis

The archaeological investigations have shown that the site has been heavily disturbed by 19th Century cellars, dumping of made ground and modern foundations relating to the garage and property use. It appears that a significant quantity of made ground was brought into the site during

the 20th Century, probably to raise levels above the flood plain. Analysis of the boreholes demonstrates that this modern made ground lies directly on natural deposits and no indication of cultural activity was recorded at this interface. It appears from the considerable depth of some areas, for example BH4) that the former ground surface was uneven and hollows were deliberately filled.

The only notable evidence of environmental interest within the alluvium was a 7cm unit of coarse sand and grit in BH WS104 (4.73-4.80m) that was interbedded between layers of fine grained alluvium. This unit is interpreted as a flood deposit. However, it is the only such unit identified across the site and is not identified in the other boreholes, suggesting that it is either of very local extent or that evidence for it has been removed from the rest of the site by subsequent fluvial processes. The presence of this unit does not enhance greatly the environmental potential of the alluvium. However, it is a notable feature and event that should be considered during other archaeological works within either the site, or adjacent areas surrounding the Abbey.

Despite the prominent position of the site within the medieval core of Shrewsbury, no archaeological features relating to settlement or to the former mill race were recorded within the site.

# 7 Publication summary

Worcestershire Archaeology has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, Worcestershire Archaeology intends to use this summary as the basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

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*Initially an archaeological evaluation of the site was intended, but after one trench was opened and a considerable depth of modern made ground was apparent a revised strategy was agreed with Shropshire Council. Four window samples were taken in the rear of the site to recover alluvial sequences and a watching brief was undertaken on geotechnical works in the area of the garage. The window samples were analysed be a geo-archaeologist.*

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*Despite the prominent position of the site within the medieval core of Shrewsbury and adjacent to the River Rea and its former mill race, no significant archaeological features were recorded within the site.*

## 8 Acknowledgements

Worcestershire Archaeology would like to thank the following for their kind assistance in the successful conclusion of this project, Dr Andy Howard, (Landscape and Research Management) Cathy Patrick, CgMs Consulting Ltd and Andy Wigley, Historic Environment Manager at Shropshire Council (North Area ).

## 9 Bibliography

CgMs Consulting 2013 *Archaeological desk based assessment: Abbey Foregate, Shrewsbury*, CgMs Consulting Ltd, unpublished document dated April 2013

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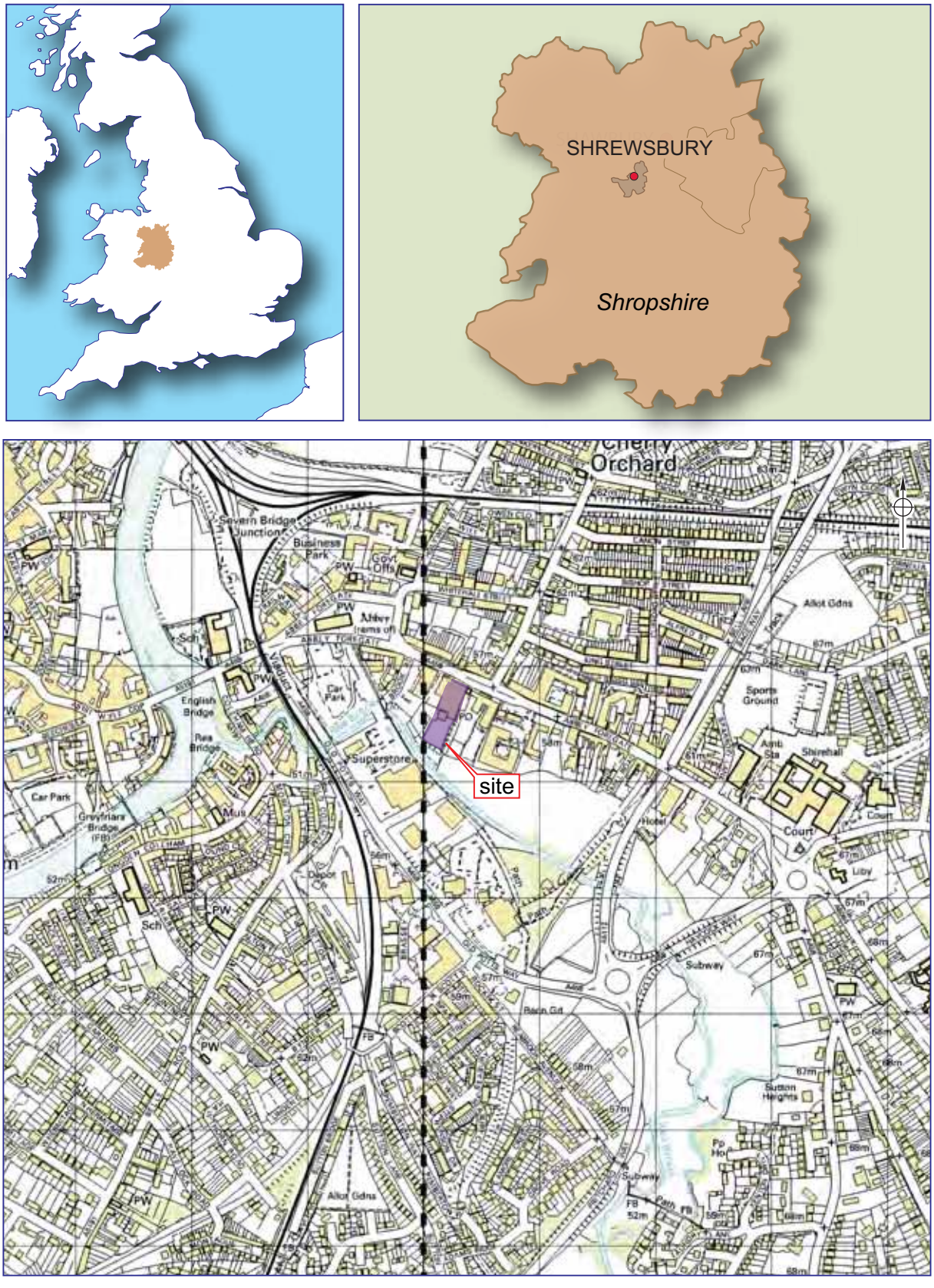
CIfA 2014a *Standard and guidance: Archaeological field evaluation*, Chartered Institute for Archaeologists

CIfA 2014b *Standard and guidance: Archaeological watching brief*, Chartered Institute for Archaeologists

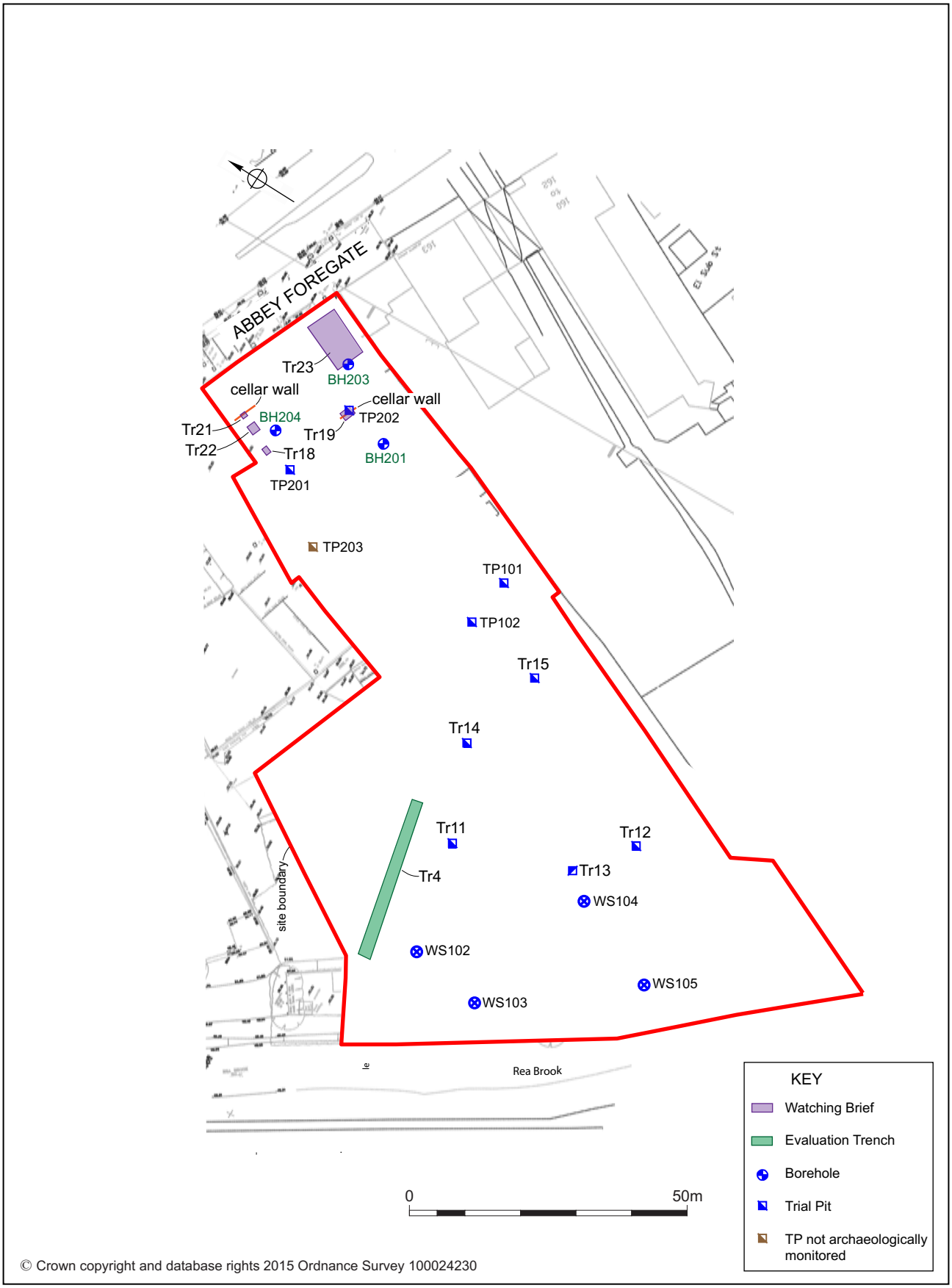
WA 2012 *Manual of service practice, recording manual*, Worcestershire Archaeology, Worcestershire County Council, report **1842**

## Figures






*Location of the site* *Figure 1*






*Location of trenches, trial pits and boreholes* *Figure 2*

## Plates

*Plate 1 The site prior to excavation from the southeast*

*Plate 2 Evaluation trench 1 showing unstable nature of made ground and stepping*

*Plate 4 Geotechnical pit 12 showing made ground*

*Plate 5 Geotechnical pit 13 showing made ground and natural alluvial deposits.*

*Plate 6 Geotechnical pit 14 showing made ground*

*Plate 7 Geotechnical pit 15 showing unstable made ground*

*Plate 8 Geotechnical pit 16 (TP101) showing made ground*

*Plate 9 Geotechnical pit 18 (TP201) showing cast iron pipe and natural strata within garage.*

*Plate 10 Geotechnical pit 18 (TP201) showing backfilled cellarage*

*Plate 11 Trench 20 showing cellar wall and ring beams*

*Plate 12 Trench 21 showing made ground and ring beams*

*Plate 13 Trench 22 showing natural alluvial silts*


*Plate 14 Drilling rig undertaking WS 104, looking towards location of WS105.View southeast*

# Appendix 1 Trench descriptions

## Evaluation Trench

### Trench 4

Length: 30.00m Width: 5.00 Orientation: North to south

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 401 | Topsoil | Layer | Loose light blueish brown rubble | 0.42m | Highly mixed and disturbed deposit containing frequent CBM, metal and glass objects. Part of a deliberate land reclamation/ground build up. |
| 402 | Layer | Layer | Moderately compact light brownish blue silty sand | 0.62m | Highly mixed rubble with frequent CBM, metal, stone and glass inclusions throughout. Part of a late post-med reclamation/ground build up deliberate deposit. Material being important from sources unknown to help raise ground from watercourse to the south. |
| 403 | Layer | Layer | Loose dark greyish blue loam | 0.74m | 'Dark earth' like material with very high ash content along with bandings of charcoal, industrial waste and mortar flecks. Contains high percentages of CBM, bone, glass and metal and appears to be the deliberate redeposition of industrial and domestic waste used as a deliberate dump/reclamation to raise the ground level, probably to try and reduce the risk of flooding from the stream to the south |
| 404 | Layer | Layer | Loose mid greenish blue ash | 0.62m | Loose clinker and ash mix with frequent slag, CBM, metal and glass inclusions throughout. As with the above it is clear that this material has been imported onto the site to help raise the ground level and reclaim it from low lying flood plain located next to the stream to the south |

| | | | | | |
|---|---|---|---|---|---|
| 405 | Layer | Layer | Firm light greenish grey sandy silty clay | 0.39m | Contains occasional CBM and frequent rounded to sub angular gravels throughout. Deliberately deposited band of redeposited mixed natural that was used as part of the large scale land build up/reclamation |
| 406 | Layer | Layer | Loose dark blueish brown ash | 0.72m | Ash and clinker rich deposit very frequent CBM, glass, metal, mortar and charcoal throughout. As with the above it is clear that this is material that has been imported onto the site to help raise the ground surface level in an attempt to stop flooding events |
| 407 | Layer | Layer | Firm light greenish grey sandy silt loam | | Occasional rounded to sub-rounded gravels along with mortar and charcoal flecks throughout. Appears to be a deliberate deposition of redeposited naturally derived material imported from sources unknown. Thought to be further evidence of land reclamation and build up. |

## Geotechnical monitoring

### Trench 11

Length: 3.00 Width: 0.50 Orientation: unknown

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 1100 | Topsoil | Layer | Loose dark blueish brown loam | 0.10m | Highly mixed and disturbed organic rich topsoil of modern date |
| 1101 | Layer | Layer | Loose dark greyish brown loam | 0.42m | Mixed rubble with high concentrations of CBM, glass and metal throughout. Part of a large scale reclamation of the area to build the ground level up |
| 1102 | Layer | Layer | Loose dark brownish black loam | 0.52m | humic rich fill with occasional sub-rounded pea grit to gravels throughout along with CBM, glass and metal throughout. Appears to be a band of imported material that has been deliberately dumped to help raise the ground level. |
| 1103 | Natural | Layer | Firm mid greyish brown clay | 1.20m | Occasional sub-rounded gravels throughout and no datable material seen. Thought to be natural substrate |
| 1104 | Natural | Layer | Firm mid greyish brown clay | 0.40m + | Mottled clay with occasional bands of light greyish blue clay. Thought to be a natural substrate deposit |

### Trench 12

Length: 3.00 Width: 0.50 Orientation: unknown

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 1200 | Layer | Layer | Friable mid greyish brown loam | 0.18m | Highly mixed material with moderate amount of root action and humeric material. |
| 1201 | Layer | Layer | Loose mid greenish grey rubble | 0.25m | Rubble make up that is thought to have been a former surface used as a car park or yard area to the rear of the properties. |
| 1202 | Layer | Layer | Loose dark blackish brown | 0.80m | Mix dump of a combination |

| | | | | | |
|---|---|---|---|---|---|
| | | | loam | | of industrial and domestic waste that has been deliberately imported onto site and used to help raise ground level and reclaim area from flooding from the south |
| 1203 | Layer | Layer | Loose dark blueish grey ash | 0.87m | Ash rich material of primarily clinker and ash with frequent charcoal inclusions along with CBM, glass and metal. Large scale dump of material used for land reclamation |
| 1204 | Layer | Layer | Friable dark blackish brown ash | 0.77m | Similar to 1203 this band had occasional sub angular to sub-rounded gravels and CBM throughout. Thought to be a deliberate deposition of material used to raise the ground level |
| 1205 | Layer | Layer | Loose mid orangey red rubble | 0.40m | Rubble deposit with large quantities of CBM seen although due to depth a sample was not possible to collect |
| 1206 | Natural | Layer | Firm mid greyish brown clay | 0.60m + | Mottled natural clays of probable fluvial deposition associated with the watercourse to the south |

## Trench 13

Length: 3.00 Width: 0.50 Orientation: unknown

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 1300 | Topsoil | Layer | Friable mid greyish brown loam | 0.12m | Moderate root disturbance and humeric nature which was highly mixed with frequent CBM inclusions |
| 1301 | Layer | Layer | Loose light blueish grey Hardcore | 0.17m | Layer of clinker that appears to have been used as a bedding layer for the overlaying car park surface. |
| 1302 | Layer | Layer | Loose dark blueish grey ash | 0.06m | Thin band of ash which was not seen elsewhere and has been considered as a former surface layer of clearance ahead construction of current car |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | park area |
| 1303 | Layer | Layer | Firm light greyish brown sandy clay | 2.10m | Band of redeposited natural that appears to have been imported and dumped at this location as part of an extensive period of ground reclamation |
| 1304 | Layer | Layer | Moderately compact dark greyish blue clay loam | 0.65m + | Another band of deliberately imported industrial and domestic waste used as deliberate reclamation to increase the ground level. Contains high percentages of ash, clinker, CBM and glass fragments throughout. |

## Trench 14

Length: 3.00 Width: 0.50 Orientation: unknown

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 1400 | Topsoil | Layer | Friable dark blueish grey rubble | 0.14m | Highly mixed loam and rubble mix with high percentages of CBM throughout. |
| 1401 | Layer | Layer | Loose light reddish orange rubble | 1.46m | High content of CBM rubble deliberately deposited on site to help artificially raise the ground surface level during a concerted effort to stop the area flooding from the south. |
| 1402 | Linear | Layer | Loose dark greyish brown silty sand | 1.20m | Ash and clinker rich deliberate deposition of industrial and domestic waste that has been deliberately imported into the site and used as reclamation in an attempt to raise the natural flood plain higher and stop the area from flooding |
| 1403 | Layer | Layer | Loose dark blueish brown loam | 0.35m | Similar to 1402 with high percentages of ash, clinker and CBM throughout and the result of deliberate deposition |

## Trench 15

Length: 3.00 Width: 0.50 Orientation: unknown

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 1500 | Surface | Layer | Compact mid blueish grey Tarmac | 0.06m | Tarmacadam car park surface |
| 1501 | Layer | Layer | Loose light yellowish grey Hardcore | 0.17m | Bedding for surface 1500 |
| 1502 | Layer | Layer | Loose light whiteish grey Hardcore | 1.40m | hardcore of angular gravels used to create an artificial ramp to gain access to the workshop buildings to the immediate north |

## Trench 16 (TP101)

Length: 3.00 Width: 0.50 Orientation: east-west

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 1600 | Surface | Layer | | 0.50m | Concrete and hardcore hardstanding of garage floor |
| 1601 | Layer | Layer | | 0.70m | Loose brick rubble layer |
| 1602 | Layer | Layer | | 1.40m | Loose dark grey brown silty sand with inclusions of mortar, cbm, concrete and stone rubble |

## Trench 17 (TP102)

Length: 3.00 Width: 0.50 Orientation: North to south

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 1700 | Layer | Layer | | 0.50m | Compact Brick hardcore (concrete already removed) |
| 1701 | Layer | Layer | | 0.70m | Loose dark greyish brown silty sand with frequent cbm and stone rubble |
| 1702 | Layer | Layer | | 0.70m | Compact orange clay with frequent gravels - redeposited natural |
| 1703 | Layer | Layer | | 0.60m | Loose dark greyish brown silty sand with frequent ash, clinker and rubble. Modern made ground Deposit |

## Trench 18 (TP201)

Length: 1.90 Width: 1.00 Depth: 1.30 Orientation East to West

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 1800 | Surface | Layer | | 0.10m | Reinforced concrete slab |
| 1801 / | Layer | Layer | Loose dark greyish brown gravelly silty sand | 0.40m | with frequent cbm and concrete and stone rubble |
| 1802 | Layer | Layer | Firm brown sandy silt | 0.80m | Natural laminated alluvial (Fluvio-glacial) deposit |

## Trench 19 (TP202)

Length: 1.90 Width: 1.00 Orientation: East to West

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 1900 | Surface | Layer | | 0.12m | Reinforced concrete slab |
| 1901 | Layer | Layer | reddish brown and grey gravel | 0.25m | Type 1 hardcore |
| 1902 | Fill | Layer | loose brick concrete and timber | 1.40m | Loose demolition rubble |
| 1903 | Structure | Layer | brick wall and floor | 1.40m | Brick cellar |
| 1904 | Layer | Layer | Blackish grey ash and clinker | 0.10m | make up under brick cellar floor |
| 1905 | Natural | Layer | Firm reddish brown sandy clay | 0.65m | Natural substrate |

## Street Frontage Watching Brief

## Trench 20

Length: 1.75 Width: 0.90 Depth: 2.00 Orientation: East to west

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 2000 | Surface | Layer | | 0.15m | Reinforced concrete slab |
| 2001 | Layer | Layer | reddish brown and grey gravel | 0.25m | Type 1 hardcore |
| 2002 | Structure | | | 1.00m | Reinforced concrete ring beam |
| 2003 | Fill | Layer | loose brick concrete and timber | 1.40m | Loose demolition rubble |
| 2004 | Structure | Structure | 19th C brick wall and floor | 1.40m | Brick cellar |
| 2005 | Layer | Layer | Blackish grey ash and clinker | 0.10m | make up under brick cellar floor |
| 2006 | Natural | Layer | Firm dark brown gravelly sand | 0.65m | natural substrate / made ground |

## Trench 21

Length: 1.80m Width: 1.60 Depth: 1.00m Orientation: North to south

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 2100 | Surface | Layer | | 0.15m | Reinforced concrete slab |
| 2101 | Layer | Layer | reddish brown and grey gravel | 0.25m | Type 1 hardcore |
| 2102 / | Layer | Layer | Loose dark greyish brown gravelly silty sand | 0.40m | with frequent cbm and concrete and stone rubble |
| 2002 | Structure | | | 0.75m | Reinforced concrete ring beam |
| 2002 | Structure | | | - | Modern concrete pad |

## Trench 22

Length: 1.40 Width: 1.00 Depth: 1.40 Orientation: East to west

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 2200 | Surface | Layer | | 0.15m | Reinforced concrete slab |
| 2201 | Layer | Layer | reddish brown and grey gravel | 0.35m | Type 1 hardcore |
| 2202 | Layer | Layer | Firm brown sandy silt | 0.80m | Natural laminated alluvial (Fluvio-glacial) deposit |

## Trench 23

Length: 7.50 Width: 5.00m Orientation: North to south

**Context summary:**

| Context | Feature | Context | Description | Height/ depth | Interpretation |
|---|---|---|---|---|---|
| 2300 | Surface | Layer | | 0.15m | Reinforced concrete slab |
| 2301 | Layer | Layer | reddish brown and grey gravel | 0.35m | Type 1 hardcore |
| 2002 | Structure | | | 0.75m | Reinforced concrete footings |
| 2303 | Structure | Layer | | | Modern fuel tanks |

# Appendix 2 Technical information

## The archive

The archive consists of:

| | |
|---|---|
| 5 | Field progress reports AS2 |
| 2 | Photographic records AS3 |
| 97 | Digital photographs |
| 4 | Augerhole Record Sheets AS26 |
| 14 | Trench record sheets AS41 |
| 1 | Copy of this report (bound hard copy) |

The project archive is intended to be placed at:

Shrewsbury Museum & Art Gallery
Barker Street
Shrewsbury
Shropshire
SY1 1QH

Tel: (01743) 258891

# Appendix 3 Geoarchaeological Report

LANDSCAPE RESEARCH & MANAGEMENT

# Abbey Foregate, Shrewsbury: Borehole Description and Analysis

## A Report for Worcestershire Archaeology

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September 2015

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## List of Appendices

**1. Introduction and Context**

In advance of construction works on the site of the former Kwik-Fit garage, Abbey Foregate, Shrewsbury, 4 boreholes were recovered by Worcestershire Archaeology to inform Historic Environment investigations and to allow an assessment of the geoarchaeological and palaeoenvironmental potential of the site.

The site is situated adjacent to the Rea Brook, approximately 500m from its confluence with the River Severn, which within this stretch of the valley floor, is characterised by a well-developed meander loop that has dominated the development of the medieval town.

Modern mapping shows that the Rea Brook is heavily modified, straightened and realigned, especially north of the Asda Superstore, which is located 25m south of the Abbey Foregate site, on the opposite bank of the Rea brook A review of historic mapping dating back to the AD 1882 First Edition OS County Series, 1:2500) indicates that much of this modification was done prior to this date (see Figures 2-10, CgMs 2013).

British Geological Survey superficial deposit mapping indicates that the site comprises river terrace sands and gravels and fine-grained alluvium. The river terrace sediments were deposited by meltwater enhanced flows associated with the main River Severn during the last glacial maximum (*c*. 26-15,000 years before present); these terrace sands and gravels are restricted to the northern part of the site, closest to and including the area of the road of Abbey Foregate. In contrast, the alluvium is of postglacial (Holocene) age and occupies the lower ground of the contemporary floodplain, though it is underlain by terrace sands and gravels.

Previous interventions adjacent to the River Severn in Shrewsbury have demonstrated the potential of the lower lying areas of the town to yield significant environmental and cultural archaeological remains (e.g. Watson *et al*., 2001). Therefore, given the proximity of this site to Shrewsbury Abbey and the wider medieval town (Baker, 2002), these alluvial deposits have the potential to further elucidate its history and palaeoeconomy through geoarchaeological and palaeoecological analysis.

**2. Core Recovery**

Sediment samples were recovered from four boreholes drilled using a windowless sampler (Crossfield Consulting, 2013), close to the contemporary channel of the Rea Brook (WS 102, WS 103, WS 104, WS 105; Table 1). With the exception of WS 105, all samples were taken below a depth of 1m, reflecting the considerable thickness of modern 'made ground' deposits across the area (and hence not sampled). Borehole WS 104 was noted during drilling as encountering a water-table contaminated by 'hydrocarbons'. A small proportion of the cores were opened by the drilling team on-site to check content, but the remainder were stored unopened prior to this analysis.

**Table 1**. Boreholes examined, Abbey Foregate

| Borehole | Easting | Northing | Surface Height AOD (Metres) | Samples Lengths Taken (below ground surface) |
|---|---|---|---|---|
| WS 102 | 349986 | 312296 | 51.60 | 2-3m, 3-4m, 4-5m |
| WS 103 | 349984 | 312281 | 50.50 | 1-2m, 2-3, 3-4m |
| WS 104 | 350003 | 312281 | 52.05 | 3-4m, 4-5m, 5-6m |
| WS 105 | 350003 | 312256 | 50.00 | 0-1m, 1-2m, 2-3m, 3-4m |

**3. Methodology**

Sample tubes were opened, and their sedimentological properties examined and described using a range of standard geological criteria (Jones *et al*., 1999). These descriptions considered unit colour, texture, internal structure, grain size, lithology, fossil content, chemical signature and artefactual content. As well as written descriptions, all cores were photographed (Appendices 1 & 2).

**4. Results**

All four cores indicate that 'made ground' deposits comprise at least the first metre of material across the site and in the case of BH 104, the first 4m of deposits. Analysis of the cores indicates that the 'made ground' was of relatively modern origin comprising 20$^{th}$ century brick fragments, roadstone foundation (doleritic MOT), tarmac waste, as well as local weathered natural sandstone and siltstone. Large fragments of charcoal were ubiquitous throughout, as was the pervasive odour of diesel oil, suggesting contamination. The made ground deposits usually have a clear, sharp base, probably reflecting the unconformable nature of the deposits (i.e. they are cut into the underlying material). No artefactual material of historic value was recorded in these deposits.

Below the 'made ground', stiff silty clays and clayey silts are encountered ranging from around 1.5-3.3m in thickness. The unit was generally homogeneous and of variable colour and is interpreted as fine grained overbank alluvium, most probably directly associated with the Rea Brook, but also perhaps including sediments from the main River Severn, deposited as flow is backed up in the tributary during periods of high discharge (slack water sedimentation). Reddish brown colouration reflects the prevalence of iron panning and manganese precipitation, whilst greyer tones reflect the influence of reducing environments and waterlogging (gleying); all these features are associated with fluctuation of the local groundwater tables and do not reflect cultural contexts . The upper half metre of alluvium in BHs 104 and 105 is mixed with 'made ground' deposits, probably reflecting the dumping of waste material into wetter hollows on the floodplain surface. Despite indications of the influence of groundwater across the area, no organic sediments (peats, humic silts) were recorded in any of the

cores; occasional fragments of roundwood were noted but lacked a discrete context, diminishing their value for environmental reconstruction.

The only notable evidence of environmental interest within the alluvium was a 7cm unit of coarse sand and grit in BH WS104 (4.73-4.80m) that was interbedded between layers of fine grained alluvium. This unit is interpreted as a flood deposit. However, it is the only such unit identified across the site and is not identified in the other boreholes, suggesting that it is either of very local extent or that evidence for it has been removed from the rest of the site by subsequent fluvial processes. Little more can be made of this unit here and its presence does not enhance the environmental potential of the alluvium. However, it is a notable feature and event that should be considered during other archaeological works within either the site, or adjacent areas surrounding the Abbey.

The alluvium has a relatively sharp basal contact and is underlain by a mixture of pinkish sands and clast-supported sands and gravels, which are interpreted as terrace deposits associated with the main River Severn and indicative of deposition under braided river conditions towards the end of the last glaciation. As well as local rocks (sandstones and siltstones), the gravels comprised igneous material reflecting the influence of late Pleistocene icesheets, which entered the region from North Wales and the Irish Sea basin. Occasionally, silty sediments were interbedded with the sand and were reminiscent of glaciolacustrine sediments, though these have low environmental potential since they were deposited in a glacial landscape largely devoid of vegetation.

**5. Concluding Remarks and Recommendations**

- Four borehole cores recovered from Abbey Foregate, Shrewsbury, revealed a tripartite sequence of 'made ground' fine grained alluvium and terrace sands and gravels.

- The made ground comprised relatively modern material and is of no palaeoenvironmental interest. No artefacts of historic value were recorded within these sediments.

- The fine-grained alluvium had no environmentally significant deposits such as peat associated with it. A flood unit was recorded at depth within the alluvium of borehole WS104 but it was not identified in other boreholes from the site. As an isolated context not directly associated with any cultural layers identified from borehole material, its value within the context of this study is relatively low.

- On the basis of the results of this borehole analysis, no further palaeoenvironmental or geoarchaeological investigations are suggested for the site.

**6. References**

Baker, N. 2002 (Ed), *Shrewsbury Abbey: studies in the archaeology and history of an urban abbey*. Shropshire Archaeological and Historical Society (No 2).

CgMs Consulting 2013 *Archaeological desk based assessment: Abbey Foregate, Shrewsbury*, CgMs Consulting Ltd, unpublished document dated April 2013

Crossfield Consulting 2013*. McCarthy and Stone retirement lifestyles Ltd, Abbey Foregate, Shrewsbury, Site Investigation Report.* Unpublished Geotechnical and Environmental Report. Long Itchington: Warwickshire.

Jones, A.P., Tucker, M.E. and Hart, J.K. 1999 (eds), *The Description and analysis of Quaternary stratigraphic field sections*. Technical Guide **7**, Quaternary Research Association, London.

Watson, B., Brigham, T., and Dyson, T. 2001 *London Bridge: 2000 years of a river crossing*. Museum of London Archaeology Service Monograph 8, London.

# Appendix 1: Core Descriptions

**Core WS 102: 2-3m**

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| | No core retention. | 2.0–2.15m |
| Made ground | Black-Brown silty clay with abundant brick fragments, charcoal and fine weathered sandstone (greenish colour). Sharp basal contact. | 2.16–2.59m |
| Alluvium | Grey to dark reddish grey, stiff silty clay (5YR 5/1 – 5YR 4/2). Occasional fragments of charcoal (medium grained) and significant areas of iron precipitation creating orange patches to the core. | 2.60–3.0m |

**Core WS 102: 3-4m**

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| | No core retention. | 3.0–3.28m |
| Alluvium | Dark reddish brown silty clay (5YR 3/2). Occasional charcoal throughout and notable sandier band around 0.37m. Clear, sharp basal contact. | 3.29–3.58m |
| Alluvium | Dark reddish brown, stiff silty clay. Unit has more silt than the overlying unit, giving a greater sheen to the surface. Notable manganese precipitation throughout the unit. Large isolated fragment of wood at 0.84m (no context, so not retained). Wavey basal contact. | 3.59–3.92m |
| Terrace sand | Dark brown (5YR 3/2) medium to coarse sand, structureless and silty. | 3.93-4.0m |

**Core WS 102: 4-5m**

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| | No core retention | 4.0–4.10m |
| Terrace sand | Silty, medium to coarse sand, clear base. | 4.11-4.20m |
| Terrace gravel | Clast-supported, fine pea gravel predominantly composed of fine sandstone. Sharp, basal contact. | 4.21-4.39 |
| Terrace gravel | Gravel lag deposit with notable large angular sandstone clast. Evidence of imbricated structure. Unit grades downwards into pebbly clayey sand (medium to coarse pebbles of fine, greenish grey sandstone, weathered appearance). Odd fragment of charcoal. Clear upper and lower contacts. | 4.40-4.46m |
| Terrace gravel | Clast-supported, clayey sand and gravel. Poorly sorted fine to coarse fragments of fine sandstone (greenish colour). Abundant areas of pea gravel. Faint bedding structure. | 4.47-5.0m |

**End of Borehole**

**Core WS 103: 1-2m**

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| Alluvium | Stiff, sandy clay. Abundant fine to medium charcoal fragments and large weathered fragments of sandstone, both buff brown and ruby red in colour (the latter sandstone gives the unit an overall red tinge). Evidence of abundant iron and manganese precipitation. Gradational base. | 1.0-1.50m |
| Alluvium | Yellowish red stiff, homogenous silty clay (5YR 4/6). Colouration a result of significant iron and manganese precipitation giving sediment a mottled appearance. Large sandstone clast at interface of two units. | 1.51-2.0m |

**Core WS 103: 2-3m**

| Classification | *Description* | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| | *No core retention* | 2.0-2.44m |
| Alluvium | *Yellowish red stiff, homogenous silty clay (5YR 4/6). Colouration a result of significant iron and manganese precipitation giving sediment a mottled appearance. Below 0.75m, the unit has a greyer appearance (5YR 4/1) and is increasingly gritty in texture with occasional fine to medium angular siltstone fragments and occasional manganese precipitation.* | 2.45-3.0m |

**Core WS 103: 3-4m**

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| Alluvium | Grey laminated silt with occasional isolated small clasts (angular, greenish grey siltstone). | 3.0-3.32 |
| Terrace gravel lag | Clast supported, medium to coarse sandstone and siltstone gravel. Sub-rounded. | 3.33-3.38m |
| Terrace sand | Greyish brown, fine sandy silt, irregular base and becoming pinkish fine sand (treated as single composite unit). | 3.39-3.55m |
| Terrace silt | Pinkish, fine sandy silt (7.5YR 5/8) mixed with brown, stiff silt. Unit has a wavey texture reminiscent of mixing through sediment loading under saturated conditions. Sharp base. | 3.56-3.72m |
| Terrace sand | Well sorted, clean fine sand. | 3.73-3.78m |
| Terrace silt and clay | Strong brown, laminated fine sandy silt, becoming clayey silt below 0.88m. Has the feel and texture of glacial (lake) clay. | 3.79-4.0m |

**End of Borehole**

**Core WS 104: 3-4m**

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| | No core retention | 3.0-3.45m |
| Made ground | Black, clayey grit. Oily with abundant brick fragments. | 3.45-3.60m |
| Made ground mixed with alluvium. | Olive grey/greenish grey (5YR 4/1) clayey silt with notable concentration of mafic igneous rock between 0.75-0.85m (dolerite roadstone packing?). Degraded modern root fragments at 0.94m. Small degraded sandstone fragments at 0.90m. | 3.61-4.0m |

**Core WS 104: 4-5m**

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| Alluvium | Stiff, grey-brown silty clay with blackened areas caused by significant manganese precipitation. Also, it has siltier and sandier patches with iron precipitation. Notable coarse sandstone clast (sub-rounded) at 0.12m. Clear, sharp basal contact. | 4.0-4.72m |
| Flood unit | Medium to coarse clayey sand and fine grit. Strong brown colour, Sharp, basal contact. | 4.73-4.80m |
| Alluvium | Dark grey black clayey silt. Homogenous and laminated. Manganese precipitation throughout. | 4.81-5.0m |

**Core WS 104: 5-6m**

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| | No core retention | 5.0-5.55m |

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| Terrace sand and gravel | Bedded sand and gravel. Upper 10cm is pea-gravel with coarse sand, but below is a tightly packed, medium to coarse clayey sand and gravel comprising angular to sub-rounded fine sandstone and some igneous material. Abundant iron precipitation gives unit a strong brown colouration. | 5.56-6.0m |

**Core WS 105: 0-1m**

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| Made ground | Crushed MOT abundant in the upper part of the core passing down into abundant brick fragments and crushed tarmac. Notable large angular siltstone clast at 0.95m and becoming increasingly silty with depth. Unit overall black colour with notable hydrocarbon odour. | 0-1.0m |

**Core WS 105: 1-2m**

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| Made ground mixed with alluvium | Reddish brown silty clay. Colouration significantly enhanced by crushed brick fragments. Significant abundance of charcoal fragments at 0.32m. Gradational base. | 1.0-1.38m |
| Alluvium | Greyish brown, stiff silty clay. Orange mottling associated with iron precipitation. Gleyed throughout and gritty texture to 0.70m associated with manganese precipitation. Sporadic pieces of charcoal throughout. | 1.39-2.0m |

**End of Borehole**

**Core WS 105: 2-3m**

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| Alluvium | Stiff silty clay of variable colour (reddish brown through to gleyed and grey; blackened where notable charcoal fragments – especially 0.56-0.66m). Manganese precipitation throughout. Below 0.90m, the unit has a gritty texture with notable pea gravel and a large, sub-rounded sandstone clast at the very base. | 2.0-3.0m |

**End of Borehole**

**Core WS 105: 3-4m**

| Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---|---|---|
| | No core retention | 3.0-3.54m |
| Alluvium | Grey, gleyed silty clay, clear base. | 3.55-3.63m |
| Terrace sand | Grey, medium to coarse sand with laminated silt layers. Woody fragments at 0.73m. | 3.64-3.87m |
| Terrace Gravel | Clast supported cobbles of igneous and sedimentary rock (sandstone). | 3.88-4.0m |

**End of Borehole**

# Appendix 2

# Borehole Photographs


Abbey Foregate (Shrewsbury) WS 102
2-3m


Abbey Foregate (Shrewsbury) WS 102
2-3m


Abbey Foregate (Shrewsbury) WS 102
3-4m


Abbey Foregate (Shrewsbury) WS 102
4-5m

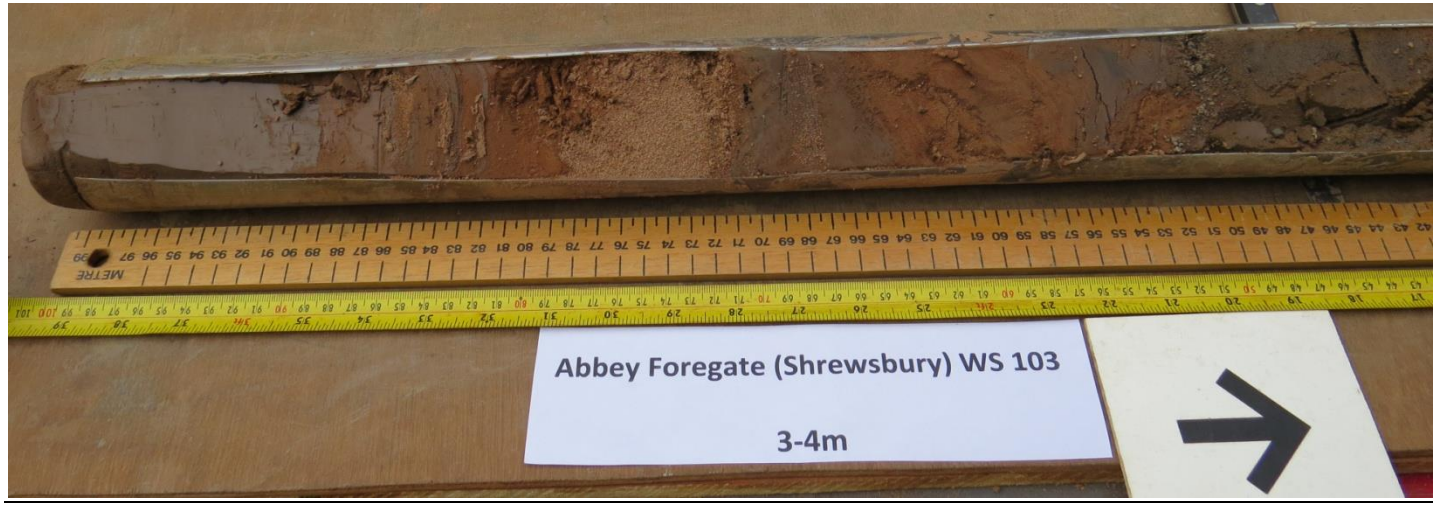

Abbey Foregate (Shrewsbury) WS 102
4-5m

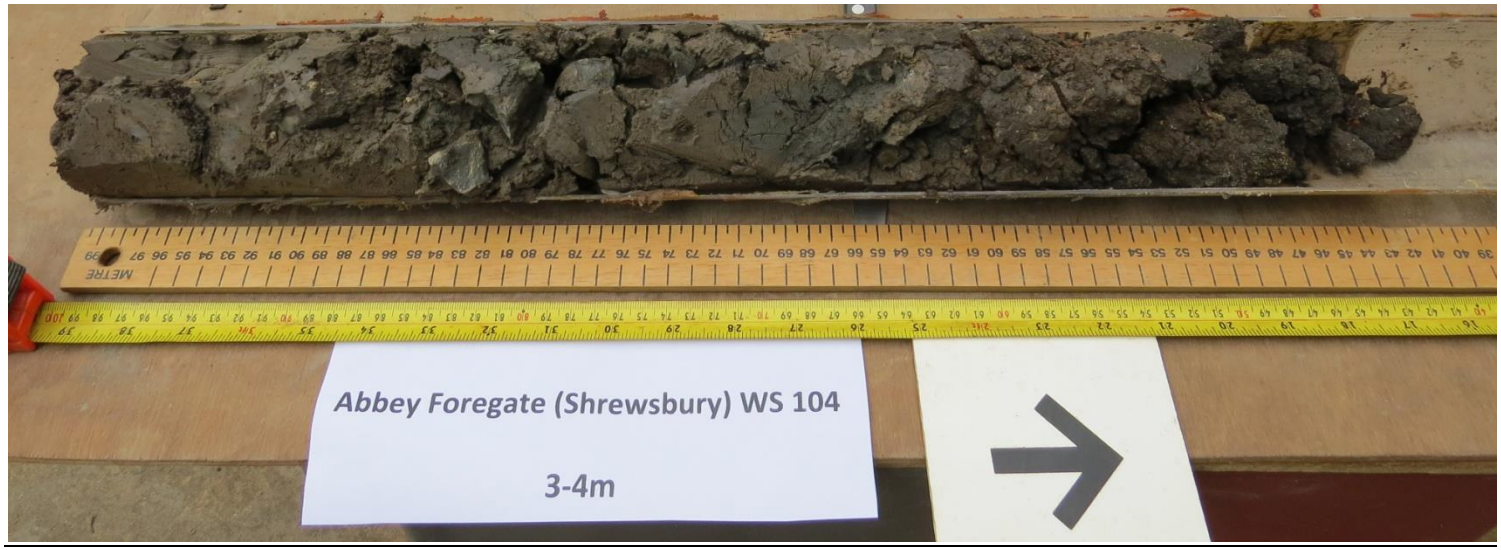

Abbey Foregate (Shrewsbury) WS 103
1-2m


Abbey Foregate (Shrewsbury) WS 103
1-2m


Abbey Foregate (Shrewsbury) WS 103
2-3m


Abbey Foregate (Shrewsbury) WS 103
3-4m


Abbey Foregate (Shrewsbury) WS 103
3-4m


Abbey Foregate (Shrewsbury) WS 104
3-4m


Abbey Foregate (Shrewsbury) WS 104
4-5m


Abbey Foregate (Shrewsbury) WS 104
4-5m


Abbey Foregate (Shrewsbury) WS 104
5-6m


Abbey Foregate (Shrewsbury) WS 105
0-1m


Abbey Foregate (Shrewsbury) WS 105
0-1m


Abbey Foregate (Shrewsbury) WS 105
1-2m


Abbey Foregate (Shrewsbury) WS 105
1-2m


Abbey Foregate (Shrewsbury) WS 105
2-3m


Abbey Foregate (Shrewsbury) WS 105
2-3m


Abbey Foregate (Shrewsbury) WS 105
3-4m