

# Archaeological evaluation at The City Learning Quarter, Bilston Street, Wolverhampton

Worcestershire Archaeology  
*for City of Wolverhampton Council*

February 2020



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# CITY LEARNING QUARTER BILSTON STREET WOLVERHAMPTON

Archaeological evaluation report

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## SITE INFORMATION

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Site name: City Learning Quarter, Bilston Street, Wolverhampton

Local planning authority: City of Wolverhampton Council

Planning reference: 19/00931/FUL

Central NGR: SO 9168 9840

Commissioning client: Turner and Townsend

Client: City of Wolverhampton Council

WA project number: P5713

WA report number: 2774

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# Archaeological evaluation at the City Learning Quarter, Bilston Street, Wolverhampton

By Peter Lovett

Illustrations by Carolyn Hunt

## Summary

An archaeological evaluation was undertaken by Worcestershire Archaeology (WA) in November 2019 at the proposed City Learning Quarter, Bilston Street, Wolverhampton (NGR SO 9168 9840). This comprised four evaluation trenches. The project was commissioned by Turner and Townsend on behalf of City of Wolverhampton Council, in advance of a proposed redevelopment of the site. A planning application has been submitted to City of Wolverhampton Council.

The evaluation comprised four trenches (originally there were six trenches proposed. This was altered late into the project and so the original numbering was maintained), targeting the projected location of a moat surrounding the Old Hall, an Elizabethan house, and areas immediately beyond it. Trenches 1 and 5 contained no archaeological deposits, either due to modern truncation or an absence of past activity. Trenches 3 and 4 demonstrated good survival of archaeological deposits.

Trench 3 contained the lower foundations of the curtain wall and corner tower that lay on the inside of the moat, as well as the moat itself. There was also good preservation of walls and floor surfaces relating to the mid-19<sup>th</sup> century St Georges School.

In Trench 4, the archaeology lay directly beneath the thin tarmac surface of the modern carpark. A 20<sup>th</sup> century brick yard surface sealed earlier wall foundations, which in turn truncated a brick-built flue and tanks, associated with the Japanning works that operated on the site until the late 19<sup>th</sup> century. The moat was not located directly in this trench, but the deep foundations of a later construction hint at its location.

The archaeology present has the potential to answer a number of research questions and as such is considered to be of regional significance.

# Report

## 1 Introduction

### 1.1 Background to the project

An archaeological evaluation was undertaken by Worcestershire Archaeology (WA) in November 2019 at the City Learning Quarter, Bilston Street, Wolverhampton (NGR SO 9168 9840). This comprised four evaluation trenches. The project was commissioned by Turner and Townsend on behalf of City of Wolverhampton Council (CWC), in advance of a proposed redevelopment of the site. A planning application has been submitted to CWC (planning reference 19/00931/FUL).

The Archaeology and Historic Environment Officer of CWC considered that the proposed development has the potential to impact upon specific heritage assets; notably the Elizabethan Old Hall (WoHER2557). Previous investigations on the site have identified the remains of the house and associated moat, and later industrial activity related to a Japanning factory.

No brief was provided but a Written Scheme of Investigation (WSI) was prepared by Worcestershire Archaeology (WA 2019) to conform to the generality of briefs (the Brief) which have been previously issued, and to the Trenching Scope provided by the Client (TT 2019). This was approved by the Archaeology and Historic Environment Officer for CWC. The evaluation also conforms to the industry guidelines and standards set out by the Chartered Institute for Archaeologists in *Standard and guidance: for archaeological field evaluation* (CIfA 2014).

### 1.2 Site location, topography and geology

The site is located on the eastern side of Wolverhampton city centre. It is bounded on the north by Bilston Street, on the east and south by St Georges Parade, and on the west by Garrick Street. It comprises a total area of 1.2ha, although part of this area is not intended for redevelopment. The evaluation trenches are in areas that total 0.39ha. The north-west parcel (Trench 1) is covered with crushed building rubble, from the former night club that was recently demolished. The north-east and southern parcels (Trenches 3 and 4 respectively) are currently gravelled/tarmac car parks. The south-easterly parcel (Trench 5) is covered in crushed brick rubble following demolition of the building which formerly occupied the plot. All the areas are relatively flat and lie at between c 155m and 157m AOD (above Ordnance Datum).

The underlying geology comprises bedrock of Clent Formation And Enville Formation (undifferentiated) – Mudstone and Sandstone (BGS 2019).

## 2 Archaeological and historical background

### 2.1 Introduction

An archaeological desk-based assessment (DBA) of the site was undertaken by Delta Simons (DS 2018), on behalf of CWC. The findings of the DBA are presented below.

#### ***Prehistoric and Roman***

*No prehistoric or Roman activity has been recorded within the study area. Previous excavations on the site in 2003 identified a number of small gullies beneath a medieval plough soil, but these remained undated. Find spots in the wider vicinity have been limited to occasional worked flints and a possible Neolithic polished stone axe (White, 1996), as well as antiquarian records of Roman pottery. A hillfort has been suggested following analysis of Taylor's 1750 map, whilst Roman roads are conjectured to pass through the area (Upton, 1998).*



**Early medieval and medieval**

The earliest known reference to Wolverhampton is from a charter in AD 985 when land at Hampton is granted by King Ethelred to a Mercian noblewoman by the name of Wulfruna. The foundation date for the town is taken as AD 995 when Wulfruna granted part of this land to the church at Wolverhampton, although there could have been a church here as early as AD 659 which has led to the suggestion that the town began as a royal estate with attached Minster or monastery.

By the medieval period the estate was divided into a royal manor and the (ecclesiastical) Deanery manor. The Deanery manor is mentioned in Domesday as 'Hantone' in the possession of the canons of St. Mary. The royal manor is identified as Stowheath, a merger of the Royal manors of Bilston and Willenhall. The original town was centred around St. Peter's Church, with a market begun by 1180 AD in the churchyard. The growth of the town probably owed much to its status as a market centre, its establishment as a borough from the second half of the 13th century (Ramsey, 2003), and as an important centre in the wool trade (HER13165).

Bell Street, to the north of the Site, has been suggested to mark the southern limits of the medieval town although there is some evidence that the major routes out of the town would have seen suburbs growing along them (Ramsey, 2003). According to Taylor's map of 1750, the Site was situated outside the developed area, however pits producing 12-13th century pottery and possible bloomery slag were found during excavations just north of Bilston Street (HER2575), outside the traditional boundaries, suggesting this may have been some kind of industrial area during the medieval period (White, 1996).

The archaeological excavations conducted in 2003 revealed a buried medieval ploughsoil beneath the later remains of the Old Hall (HER2557), suggesting that this area was part of the open fields of the town (Cutler et al 2010). When the fields were taken out of cultivation is not known, but there is a probable reference to 'an ancient house' on the Site in John Leland's Itinerary, composed in the 1530s-early 1540s, though the suggestion is that this cannot be the Old Hall as excavated, or depicted on Taylor's map and has led to the conclusion that the Site contained an earlier residence. There is a reference that the hall was built on earlier foundations and the presence of a moat also suggests an origin in the 13th to early 14th century while possible medieval masonry from the excavations in 2003 and residual medieval pottery beneath the hall also adds weight to the presence of an earlier building (ibid.).

**Post-medieval and modern**

'The Great Hall' (now Old Hall), as depicted on Taylor's map, was a conspicuous red-brick Elizabethan mansion house of the Leveson family, prominent local wool merchants, and probably built around the 1570s (Cutler et al, 2010). Taylor's map and later illustrations show ancillary buildings to the south (HER13474), orchards and gardens, with a reservoir to the south feeding the moat by means of a channel. The moat was surrounded by a curtain wall with turrets at its northeast and southeast corners and an entrance in the northern half of the western arm.

Archaeological evaluation trenches and watching briefs from 2000 have identified all the arms of the moat, save for that in the east, allowing the predicted form of the moat to be mapped while investigations ahead of and during the construction the new Adult Education College building on Bilston Street identified the hall buildings, corresponding to the presumed plan, along with a phase relating to the late 19th century japanning factory (Cutler et al., 2010). The moat was also reportedly recorded during a watching brief on the stripping for the carpark north of the Adult Education Centre in 1982 (HER8631). All recorded profiles of the moat show it had a shallower outer edge while gullies and drains were cut into the base on the southern arm. The lower fills of the moat were typically sands with no artefacts while above were dark organic fills producing abundant post-medieval pottery and glass. The upper fills were more varied; coke,

*brick and metal residues within the northern arm in contrast to the redeposited natural clays in the southern section, the latter possibly indicating rapid backfilling prior to expansion of the japanning factory (Cutler et al, 2010).*

*During the 17th and 18th centuries Wolverhampton had become an important manufacturing centre, from pins to braziers and developed, during the 18th century, into an important centre for the distribution of iron. From the 1720s the enamelling of tinplate to imitate oriental lacquer work, known as japanning became an important industry (WA, 2005), succeeding Pontypool in South Wales, which had been the centre of the industry since its introduction in c.1665 (Cutler et al, 2010)*

*In the early 18th century the Great Hall became the residence of the Turton family (and was known popularly as Turton's Hall well into the 19th century) who may have made considerable changes before leaving in the late 1730s. The hall stood empty for some time before being taken over around 1770/80 by William and Obediah Ryton to become a major japanning factory (HER10771). New buildings were added to the hall and in the vicinity and by 1842 the moat was entirely filled in. The factory closed in 1883 and was demolished, leaving the area open for redevelopment. The site of the former hall remained derelict until the construction of the Adult Education Centre in 1899 (Cutler et al, 2010).*

*During the 19th century this area of the town became increasingly industrialised and densely populated (<http://www.historywebsite.co.uk/lost/OldHall.htm>). The southern Bilston Road frontage (north and west of the Hall) was partially developed by 1750 and by 1842 Rope Walk (later Garrick Street) and St. Georges Parade had been established (HER9948). The northern side of Bilston Road was also partially developed from this time up to Piper Row (HER9949), later to include a brass foundry (HER10672), Conservative Club (HER15044) and the Blue Ball public house (HER15045) shown on the 1888 OS map. Further to the east, around Pipers Row, the area is marked as 'buildings' on Taylor's map and later includes the site of the Old Bush Inn (HER15075) and the Combined Central Courts (HER15123), a late 20th century building.*

*St George's Church (NHL1207884) was constructed in 1830. The first record of burials within the surrounding graveyard (HER15109) is from 1832 when it was used for cholera victims. At around the same time as the church was built Cleveland Road was laid out as a major thoroughfare into the town up to Snow Hill (HER13904). It was a broad road and began to be developed from the 1840s, notably with the Royal Hospital (NHL1201801), Bakers Boot and Shoe Factory (NHL1205559) and the cattle market. Construction of the Ring Road and modern junction realignments have now meant that the section south of the Site has completely lost its significance and has been renamed as part of St. George's Parade. On the south side of St. George's Parade the first edition OS map records development at 8-10 St. George's Parade (HER15083) and a 'tank' factory, the site of the latter recorded as a corn mill in 1902 (HER15084).*

*Snow Hill shows partial development along its frontage from 1750 and was fully developed by 1788 (HER15014 & 15019). To the north, the line of Dudley Street extending north into the town centre from Snow Hill on Taylor's map, has been lost, realigned when the Wulfrun Centre was built in the mid-20th century. Taylor's map depicts development along Dudley Street (HER9945 & 9961). No. 27 Dudley Street (HER6968) is recorded as a building of local interest, considered for listing, but it does not have locally listed status.*

*From the middle of the 19th century, more of the Site became developed around the japanning factory, including the erection of the Town Hall and Police barracks in the northwest corner (which later gave way to the Free Library and later still the Odeon cinema), the Theatre Royal in the southwest corner - which was replaced by the Central Library in 1902 - and the St. George's School, No.1 Hall Street and St. George's Vicarage along the eastern frontage. The Adult Education College was constructed in 1899 and the Alan Garner building in 1902.*

## 2.2 Previous archaeological work on the site

A number of programmes of archaeological work have been undertaken on the site. A watching brief was carried out in 1982 in the north and west of the site. This identified pottery, crucibles and grindstones dating from the post-medieval period (DS 2018, 12). Birmingham Archaeology conducted evaluations in 2000, 2002 and 2003, leading to an open area excavation of the Old Hall and associated moat in 2003. Further watching briefs were undertaken in 2003, 2004 and 2007. These works helped to project the location of the moat across the site, as well as identifying parts of the curtain wall. No evidence for an earlier moat or hall were identified during these works (Hewitson *et al* nd).

## 3 Project aims

The aims and scope of the project are given in the Trenching Scope (TT 2019). In summary they are to undertake sufficient fieldwork to:

- determine the presence or absence of archaeological deposits beyond reasonable doubt;
- identify their location, nature date and preservation;
- assess their significance;
- assess the likely impact of the proposed development and to inform additional archaeological mitigation (where this detail is available and has been provided to WA).

## 4 Project methodology

A Written Scheme of Investigation (WSI) was prepared by Worcestershire Archaeology (WA 2019). Fieldwork was undertaken between 11 and 18 November 2019.

Four trenches, amounting to 97.5m<sup>2</sup> in area, were excavated over the targeted 0.39ha areas of the wider site, representing a sample of 0.025%. It was originally proposed that six trenches be opened, but following discussions between the Client and Archaeology and Historic Environment Officer Trenches 2 and 6 were omitted. To avoid confusion the original numbering of the trenches was maintained. During the fieldwork, the Archaeology and Historic Environment Officer requested a 4m extension to Trench 4, to add further clarity to the course of a wall. The location of the trenches is indicated in Figure 2.

The trenches were positioned to ascertain the position and survival of the moat in Trenches 1, 3, and 4. Trench 5 was positioned to test potential survival of archaeological deposits beyond the Hall and moat.

Deposits considered not to be significant were removed under constant archaeological supervision using a JCB 3CX type wheeled excavator, employing a toothless bucket. Subsequent excavation was undertaken by hand. Clean surfaces were inspected, and selected deposits were excavated to retrieve artefactual material and environmental samples, as well as to determine their nature. Deposits were recorded according to standard Worcestershire Archaeology practice (WA 2012) and trench and feature locations were surveyed using a differential GPS with an accuracy limit set at <0.04m. On completion of excavation, trenches were reinstated by replacing the excavated material.

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

The project archive is currently held at the offices of Worcestershire Archaeology. Subject to the agreement of the landowner it is anticipated that it will be deposited at Wolverhampton City Archives.

## 5 Archaeological results

### 5.1 Introduction

The features recorded in the trenches are shown in Figures 2-4 and Plates 1-11. The trench and context inventory is presented in Appendix 1.

### 5.2 Trench descriptions

#### 5.2.1 Natural deposits across the site

The natural geology was a brownish yellow clay with occasional lenses of pink or blue sand. It was observed in all four excavated trenches.

#### 5.2.2 Trench 1

The natural undisturbed geology was identified in the northern half of Trench 1, at a depth of c 1.5m below ground surface (BGS). Above this was a possible remnant of subsoil, c 0.2m thick (c 153.85m AOD). Due to the depth of the trench it was not possible to gain access to more closely inspect this deposit. It lay approximately 1m lower than the depth observed for the natural strata across the site as a whole, so it is probable that it was a weathered horizon of natural geology, rather than subsoil. This was covered by a layer of demolition material 102, that was observed in the southern half of the trench to a depth of at least 2.2m BGS. A large concrete block sat in the middle of the trench, at 1m BGS, with 102 overlying it (Plate 1). Sealing this was recent demolition layer 101, c 0.6m thick.

#### 5.2.3 Trench 3

(Figure 3)

The natural undisturbed geology was identified at between 0.99 and 1.2m below ground surface. Above this was a remnant subsoil (316), in the south and west of the trench. This was a firm greyish brown silty clay, up to 0.47m thick in places. It was truncated by the construction cut, 322, for three sandstone walls; 313, 320 and 321. Where it was present in the south of the trench, it was as an isolated patch away from the wall, but it was seen in the western trench extension being directly truncated by the construction cut. It sat directly above the natural undisturbed clay. A small sondage was excavated through the material to check if it was redeposited, but it appeared to be *in situ* and undisturbed. Wall 313 was aligned north-west to south-east. It measured 0.85m wide and was 2.8m long within the trench. It was built of roughly hewn green sandstone blocks, up to 0.55 x 0.4 x 0.12m in size, with the external face on the eastern side visible and surviving to two courses. It was bonded with a pink sandy mortar. Concrete and brick remnant 314 was bonded to the south-eastern edge of the wall, which may represent a repair or later addition. The north-western end of the wall was finished with two stones effectively "on edge", and the wall returned to the north-east, as wall 320. This was 0.45m wide and 1.1m long and was bonded with the same pink mortar as 313. To the west of this was wall 321, again constructed of green sandstone and pink mortar. This wall was not dug as deep into the ground, but was otherwise similar in construction. The top of this wall was 0.52m below ground surface (Plates 3-5).

Along the eastern, outer, edge of wall 313 was moat cut 324. This was observed only in the base of a small sondage, but is projected to run parallel to the wall (Plate 4). It was unexcavated, but the deposits seen in plan suggested it was intentionally backfilled, with dark silty sand, rich with domestic and industrial waste. Pottery observed (but not retained) in this fill was of 19<sup>th</sup> century date. Overlying the ditch fill was a made ground of probable 19<sup>th</sup> century date, 326. This was also observed in the western extension of the trench (Plate 6).

Layer 326 was cut by construction cuts for walls 319, 306, 309 and 312 at the northern end of the trench (Plate 2). These walls were all constructed of orange machine-made bricks, measuring 240 x 120 x 70mm and bonded with a hard whiteish grey cement. All of the walls with the exception of 309 were laid in stretcher bond, and two bricks wide. Walls 309, 306 and 311 are abutted by floor 310.

This was constructed of a black linoleum bonded to a concrete sub-base. Surrounding these walls were rubble deposits 318, 307 and 308. They were not excavated so it is unknown whether they were demolition deposits associated with the destruction of the aforementioned brick walls or were made ground from the construction phase.

Layer 326 was also truncated by the construction cut (328) for wall 325. This was constructed parallel to and abutting sandstone wall 321, on its northern, outer edge (Plate 5). It was a 20<sup>th</sup> century wall, constructed of orange bricks measuring 235 x 110 x 85mm, and sat on a concrete foundation. The wall survived to six courses on top of the concrete. It was two bricks wide laid in stretcher bond.

At the southern end of the trench was a concrete cap (317) over a probable drain. This led to an inspection chamber in the eastern section. A further drain, 330, ran from this chamber along the outer face of wall 313, and then turned to run under it.

Overlying all of the walls was a deposit of made ground, up to 1m thick (307). In the middle of the trench, where the eastern end of the extension meets the original trench, there was evidence of modern disturbance, which may have truncated the eastern end of wall 321 (Plate 6). It was hypothesised on site that it may be Trench 3 from the evaluation in 2000 (Hewitson et al nd). A tag numbered 3003 was recovered from the backfill of this cut, which corresponds with a context number from that trench, which was located 5m to the west according to the site report figures. The description and figures for the walls corresponds with walls 313 and 320, so it is presumed that the original trench location was inaccurate. The 2000 evaluation found a large ditch to the north of the walls, which is likely to be a continuation of ditch 324. The report also described a wall running roughly east to west at the southern end of the trench, possibly associated with wall 313. This was described as being constructed of ironstone and capped with concrete. This must be concrete capping 317, which is presumed to seal a modern drain pipe. It is possible that this has been misinterpreted during this more recent evaluation, but no stone was seen underneath the concrete.

#### 5.2.4 Trench 4

(Figure 4)

The natural undisturbed geology, 440, was identified at 156.37m AOD, 0.28m below the ground surface at the southern end of the trench. It was not observed elsewhere. A remnant of subsoil, 439, was also observed in the southern half of the trench, through a small machine-dug sondage. Overlying this was a deposit of crushed brick, associated with the demolition of a previous building phase (438). This was extant only in the southern 7m of the trench. A small pit, 433, truncated the subsoil, itself truncated by later wall 435. This pit was not excavated. Also stratigraphically above the subsoil were stones 430 and 431. These were approximately 0.45m x 0.3m across, and of sandstone, with small patches of mortar attached to their upper surfaces. These were seen in a small sondage, so it was not possible to determine their form, but the mortar present indicates they formed a structure at some point. Whether these stones are *in situ* remnants of that structure is not clear. They were at c 156.38m AOD.

Overlying the stones was a red sand deposit, 0.1m thick. This layer, 432, was again only seen in the small sondage, so its extent is unknown. It was covered by a light grey silty clay made ground 427. This layer was up to 0.38m thick, and was seen in the sondage that revealed sand 432 and in a section for the trench cut for a later water pipe.

At the northern end of the trench were a series of structures constructed in brick. They formed a series of tanks, but were effectively one structure, 422 (Plate 10). They measured around 1.2m in length and 0.5-0.7m wide. None were excavated, but were backfilled with cinder, clinker and sand, or brick rubble. One of the tanks had two iron spikes, one in the north-west corner, one in the south-west. These appeared to be *in situ*. They were at c 156.38m AOD.

Approximately 3m to the north of this structure was a flue (418) constructed of yellow fire bricks, vitrified on their inner faces to a purplish finish (Plates 8-9). It had an internal opening of 0.35m and a

visible length of 2.1m. It was 0.45m deep and was filled with a series of dumped deposits of sand, demolition material and coal (420). These deposits were seen in section following the removal of a later wall that truncated the flue. The flue itself was not excavated during this evaluation. The flue bricks on the southern side were built up against a wall constructed of orange brick (419), which measured 225 x 115 x 95mm. This wall was encountered at 156.43m AOD whilst the bottom of the flue was seen at 155.85m. The flue bricks were 230 x 120 x 70mm, and both walls were bonded with a light pinkish white mortar. Both structures, and the brick tanks, were sealed by mixed demolition layer 421.

The construction cut for wall 429 truncated demolition layer 421 and made ground layer 427. This wall ran east-north-east to west-south-west and was constructed of red bricks in a stretcher bond. The bricks were 235 x 120 x 85mm in size and were bonded with a pinkish white mortar. A dark deposit of clay with brick fragments (428) sealed the construction cut on the southern side and was built up against the wall.

Wall 435 ran north-west to south-east and was constructed of orange bricks measuring 210 x 95 x 65mm. It was built of both headers and stretchers. Both walls 435 and 429 were truncated at their eastern ends by the cut for a water pipe. This truncated made ground layer, 428, and ran for 18m along the eastern edge of the trench. This in turn was sealed by a mixed layer of made ground, 442, which was the bedding material for a brick surface 404 (Plate 7). This surface encompassed all but the 2m at the northern end of the trench and was probably 20<sup>th</sup> century in date, based on cartographic evidence. It was built from a range of different bricks, some frogged, some handmade, all placed on edge. There were also bits of coping brick and air bricks included, suggesting the surface was constructed using materials salvaged from the previous structures following their demolition. The orientation of the bricks changed across the trench, but this didn't seem to be due to any specific reason or use of the space. There were various areas of damage to the surface, with the bricks disturbed and broken, but these didn't seem to be truncations for any discernible purpose, so were probably just wear and tear on an already poorly constructed surface. It was at 156.72m AOD at the northern end and 156.58m at the southern end. During the excavation, the brick surface was divided up into component parts and possible truncations and numbered accordingly, but during the post-excavation process, these numbers were amalgamated into context 404 for ease of discussion. The component numbers are listed in Appendix 1.

At the northern end of the trench, a 20<sup>th</sup> century building, 402, truncated brick surface 404. It was formed by a west-north-west to east-south-east aligned wall, built of red bricks measuring 230 x 110 x 70mm. It was bonded with a mid yellow sandy cement, and had a slate damp proof course. It sat on a concrete slab that was ten courses down from the top of the wall. The associated floor surface (403) was level with the ninth brick course from the base. The building is located above the projected course of the moat, so it is considered likely that the deeper foundations were to counteract the soft fills of the moat.

Directly above wall 402 and surface 404 was a thin layer of tarmac, 0.06m thick, which comprised the current ground surface.

### 5.2.5 Trench 5

The natural ground was encountered at 156.26m AOD at the north end of the trench (0.63m below ground surface) and 156.44m AOD in the south (0.44m below ground surface). A thin remnant of subsoil was identified, up to 0.15m thick. Above that was a dark grey clay silt with frequent brick and charcoal fragments, measuring 0.28m thick. This was a 19<sup>th</sup>-20<sup>th</sup> century made ground. Sealing it was a modern crush layer, derived from the recent demolition of the former building on site (Plate 11).

## 6 Artefactual evidence

Recovery of artefacts was undertaken according to standard Worcestershire Archaeology practice (WA 2012). In the event all artefacts were identified on site to be of 19<sup>th</sup> and 20<sup>th</sup> century date. None were considered to be suitable for further analysis.

## 7 Environmental evidence

Environmental sampling was undertaken according to standard Worcestershire Archaeology practice (WA 2012). In the event no deposits were excavated which were considered to be suitable for environmental analysis.

## 8 Discussion

The results of the trial trenching demonstrate that, where archaeological deposits survive, they do so just below the current ground surface. It has also revealed that the natural geology is generally very shallow too.

Any potential archaeological remains in Trenches 1 and 5 have either been truncated completely by modern activity or were not present to begin with.

The evidence in Trench 3 demonstrates good survival of the moat and the curtain wall associated with it. Later development on the site seems to have respected the curtain wall, as was seen by the 20<sup>th</sup> century wall built against the outer face of the western arm, and with the placement of a water pipe alongside and underneath the eastern return. Patches of cement and brick on the eastern stretch of curtain wall suggests later use. The moat is likely to have survived pretty much intact too, as the upper deposits that were identified were clearly 19<sup>th</sup> century infill. This is known to be the final period of infilling, through both documentary evidence (DS 2018), and archaeological investigation (Hewiston *et al*, nd). The top of the moat deposits lie at 154.63m AOD, 0.96m below the current ground surface. The highest point of the curtain wall is 155.35m AOD, 0.48m below the ground surface. No evidence for a moat platform was observed, as had been postulated following the results of excavations to the west (Hewiston *et al*, nd).

The northern part of Trench 3 revealed the remains of what must be the south-west corner of St George's School for Boys, Girls and Infants, at 155.20m AOD, 0.35m below the ground. This was built between 1842 and 1852 and was demolished by 1956.

The re-excavation of the 2000 evaluation trench allows for a more accurate positioning of the maps, the reinterpretation of some of the data collected, and provides a wider view of the moat deposits in this part of the site.

Trench 4 has revealed a number of structures and associated features. The flue structure and brick tanks correlate well with the 1852 Board of Health Map, where the adjacent building is labelled as "Furnace for Enamelling". These are the earliest known deposits in the northern half of the trench, whilst to the south are the two stones sitting above the subsoil that may represent earlier activity. If so, they are probably part of the wider Old Hall, associated with the long range building that existed outside the moat, referred to as a barn by historical sources (Hewitson *et al*, nd, 12).

Walls 435 and 429 may have formed a structure, although not one that can easily be matched on the historic mapping. The Japanning factory was closed in 1883 and demolished (DS 2018), suggesting that these walls postdate that period, presuming no further reconfiguration of the Japanning works took place between 1852 and 1883. It is more likely that wall 435 formed the boundary wall associated with the Timber Yard that is marked on the Ordnance Survey 1<sup>st</sup> edition map of 1888, and wall 429 was the southern boundary to the edge of the recently cleared central area.

By 1938 the Timber Yard had gone, and new buildings had been constructed, although these did not last long, for by 1947 the plot was cleared. It is probable that the brick surface 404 was in place by



then, and acted as a yard surface until the whole area was turned over to parking and was tarmacked. The building that truncated the brick surface at the northern end does not match well up to any historic maps, but may have been a small structure that did not last for long, and therefore might have existed between map editions. It is likely that this building was sited on top of the backfilled moat, hence why it had such deep foundations. However, due to the presence of the furnace flue below this building, it was not possible to reach any moat deposits during this evaluation.

## 9 Significance

The site has the potential to inform a number of research questions, as outlined in Watt (2011). An investigation of the archaeology of the Japanning factory can contribute to the wider understanding of the changes wrought by the industrial revolution on the existing landscape and buildings, as evidenced by the repurposing of the Elizabethan Old Hall in to a 19<sup>th</sup> century factory. Further, the processes of the industry itself can be better investigated, as well as how the manufactory was used by the workforce. The use of space within the design of factories was often intended to limit the workers from anything other than labour (Belford, 2011, 221). As such, the archaeology identified in this evaluation has the potential to be of regional significance.

## 10 Summary and Conclusions

The evaluation comprised the opening of four trenches, targeting the projected location of a moat surrounding the Elizabethan Old Hall, and areas immediately beyond it. Trenches 1 and 5 contained no deposits of any archaeological significance, either due to modern truncation or an absence of past activity. Trenches 3 and 4 demonstrated good survival of archaeological deposits.

Trench 3 contained the lower foundations of the curtain wall and corner tower that lay on the inside of the moat, as well as the moat itself. There was also good preservation of walls and floor surfaces relating to the mid-19<sup>th</sup> century St Georges School.

In Trench 4, the archaeology lay directly beneath the thin tarmac surface of the modern carpark. A 20<sup>th</sup> century brick yard surface sealed earlier wall foundations, which in turn truncated a brick-built flue and tanks, associated with the Japanning works that operated on the site until the late 19<sup>th</sup> century. The moat was not located directly in this trench, but the deep foundations of a later construction hint at its location here.

The archaeology present has the potential to answer a number of research questions and as such is considered to be of regional significance.

The methods adopted allow a high degree of confidence that the aims of the project have been achieved. Conditions were suitable in all of the trenches to identify the presence or absence of archaeological features. It is considered that the nature, density and distribution of archaeological features provides an accurate characterisation of the development site as a whole.

## 11 Project personnel

The fieldwork was led by Peter Lovett, ACIfA, assisted by Jem Brewer, PCIfA.

The project was managed by Tom Vaughan, MCIfA. The report was produced and collated by Peter Lovett. The illustrations were prepared by Carolyn Hunt, MCIfA.

## 12 Acknowledgements

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Council), Denise Sanders (Project Officer, City of Wolverhampton Council), Samantha Butler (Income and Development Manager, City of Wolverhampton Council), Simon Pons (Category Manager, City of Wolverhampton Council), and Ellie Ramsey (Archaeology and Historic Environment Officer, City of Wolverhampton Council).

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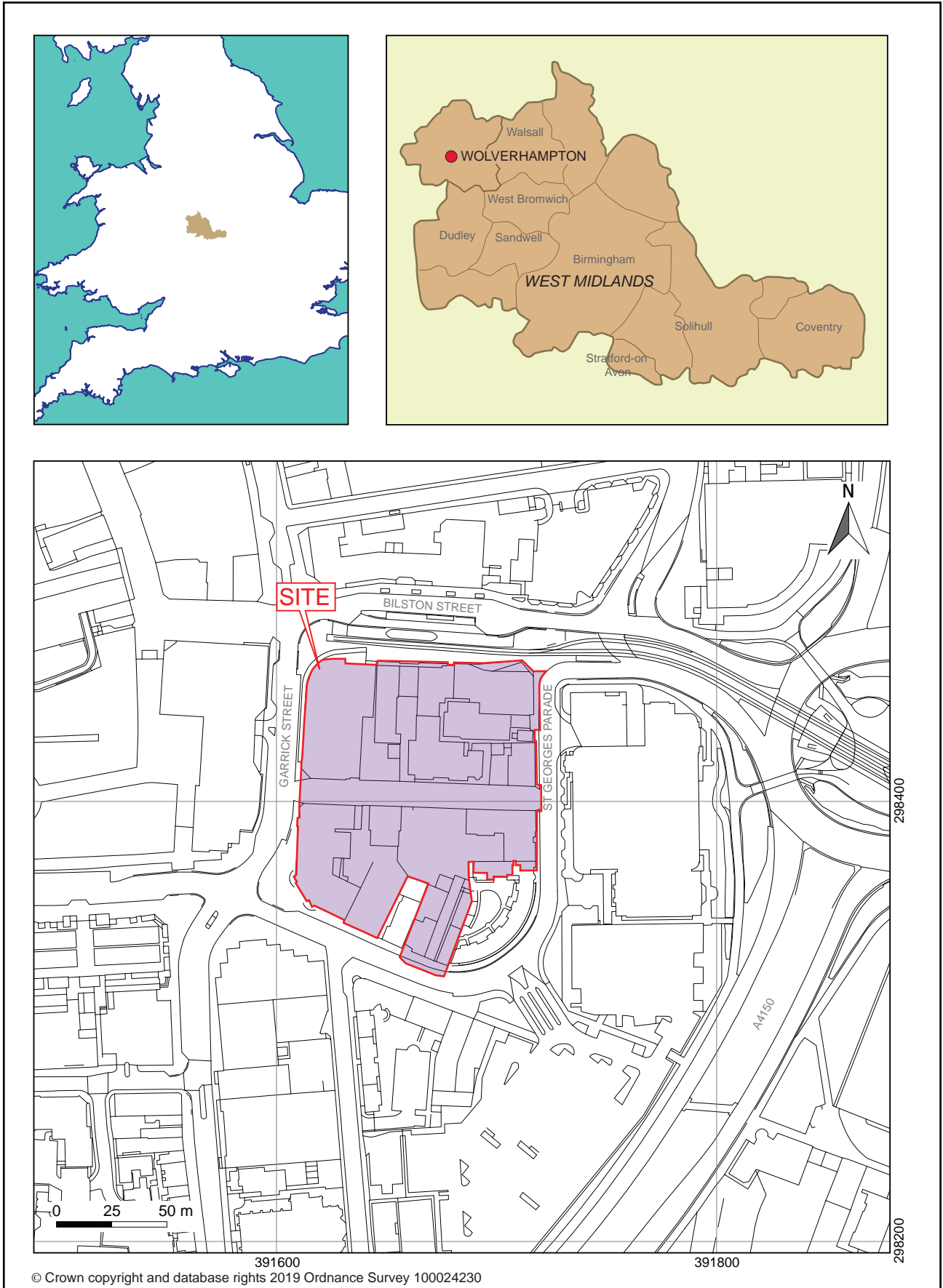
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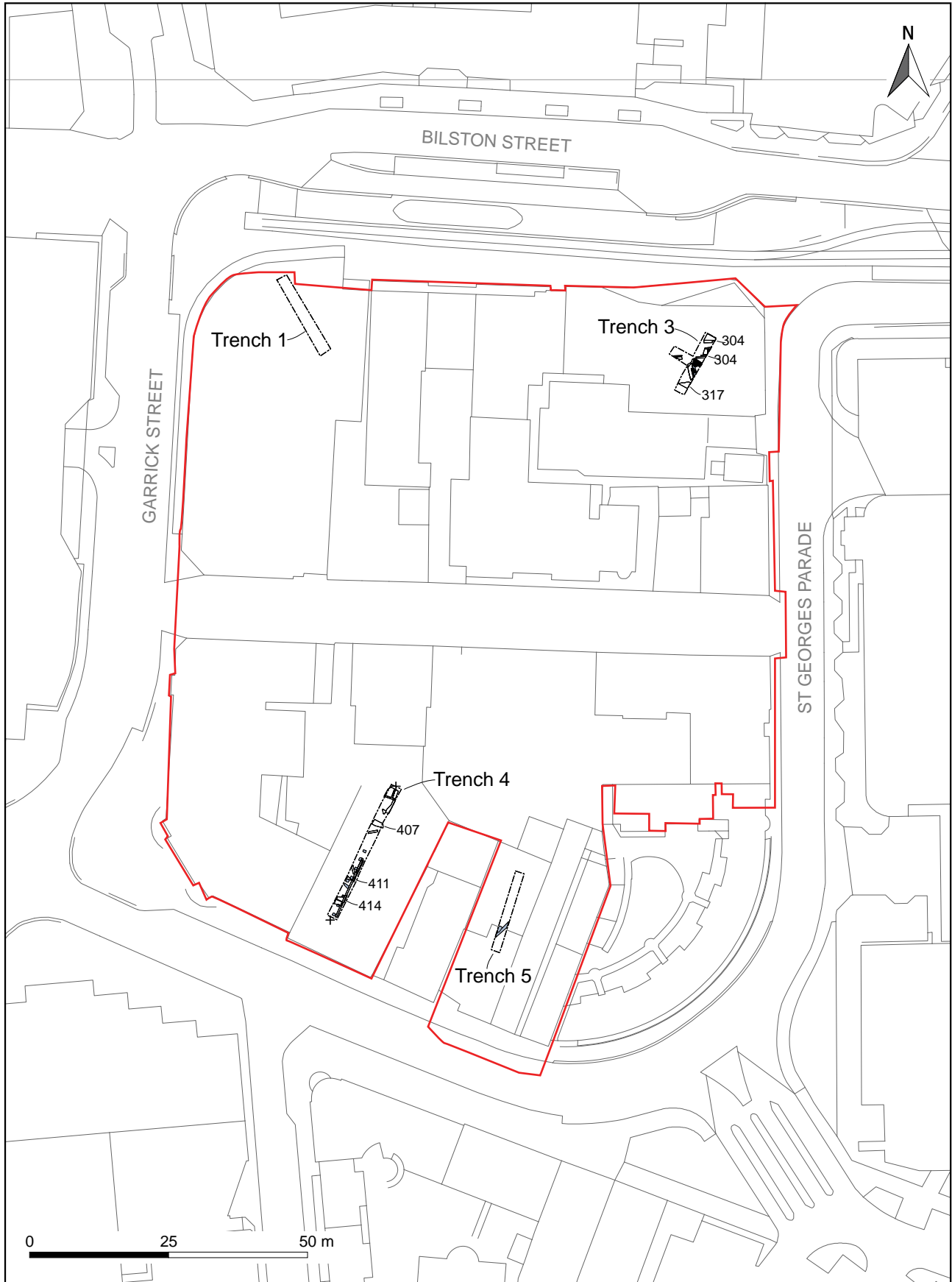


## Figures



Location of the site

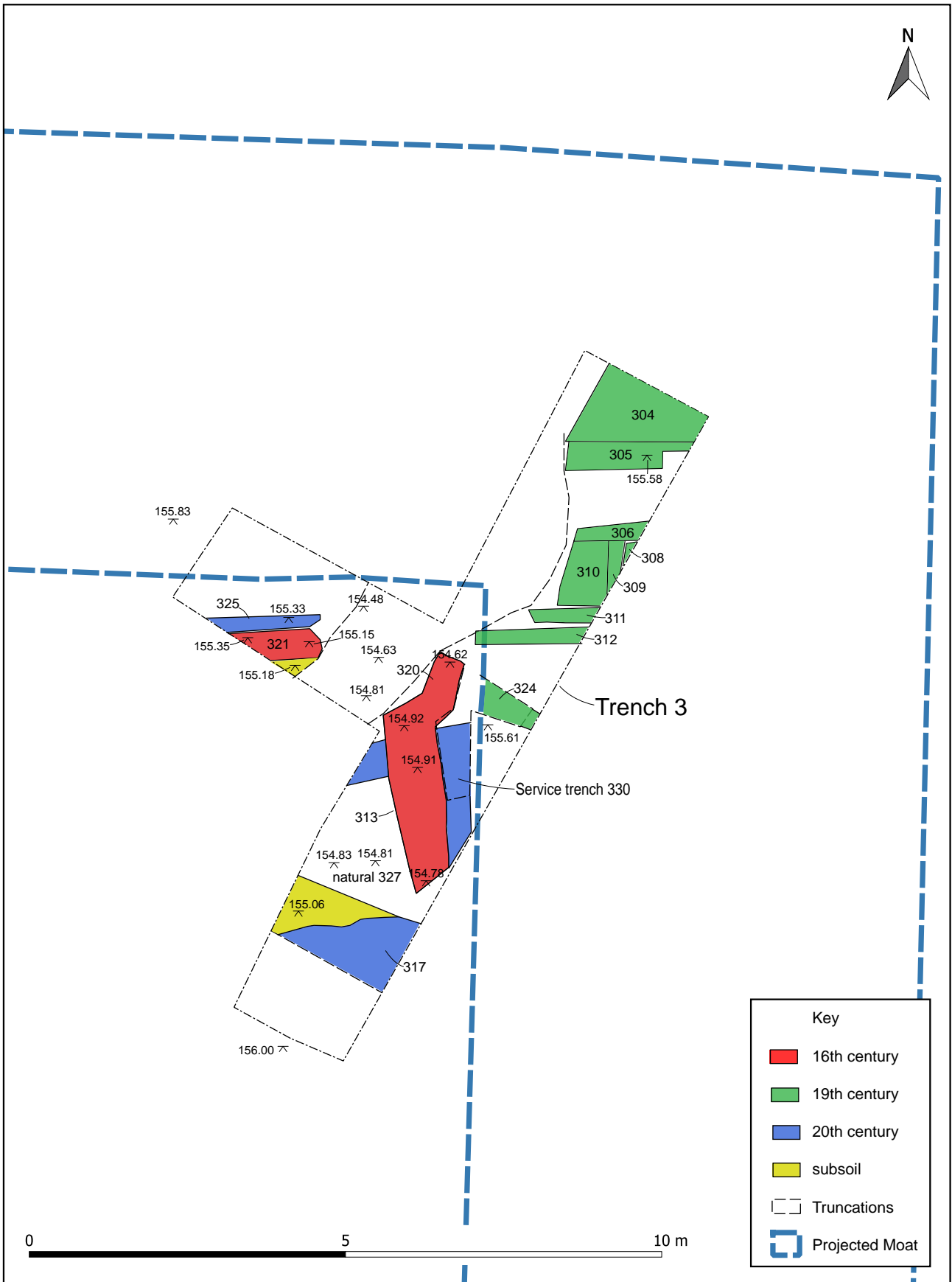
Figure 1



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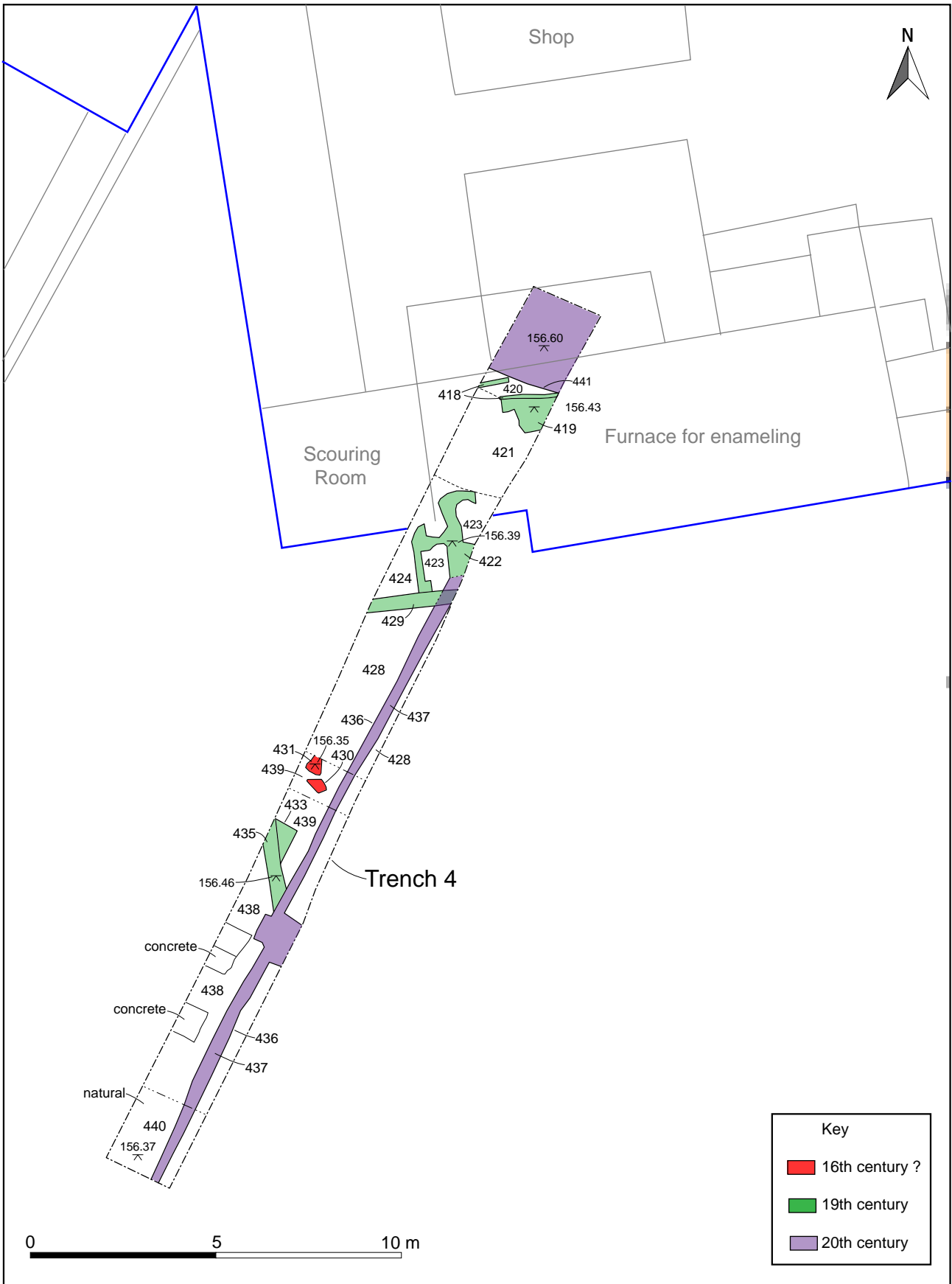
Trench location plan

Figure 2



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Trench 3, showing archaeological features overlaid on 2000 evaluation trench and projected line of moat Figure 3



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Trench 4, showing structures by phase overlaid on map of Japanning Works

Figure 4



## Plates



*Plate 1: Sondage in Trench 1 showing demolition material; 1m scale, view north*



*Plate 2: Trench 3, brick walls and surfaces relating to St Georges School, 1m scales, view south-west*





*Plate 3: Trench 3, curtain walls 313, 320 and 321, 1m scales, view north-west*



*Plate 4: Trench 3, curtain walls 313 and 320; edge of moat in sondage in foreground, 1m scales, view south-west*





*Plate 5: Trench 3, curtain wall 321, with brick wall 325 built against it, 1m scales, view north-west*



*Plate 6: Trench 3 extension, with cut for 2000 evaluation trench, and made ground deposits over subsoil, 1m scales, view south-west*





Plate 7: Trench 4, brick surface 404, no scales, view north-east



Plate 8: Trench 4, flue 418 and associated deposits, 1m scales, view south-west





*Plate 9: Trench 4, flue 418 and associated deposits, 1m scales, looking west*



*Plate 10: Trench 4, brick tanks (422) associated with Japanning works, 1m scales, view north-east*





*Plate 11: Trench 5 general shot, 1m scales, view north-east*

## Appendix 1: Trench and context descriptions

### Trench 1

Length: 15m		Width: 15m		Orientation: North-west to south-east	
Context	Feature	Context	Description	Height/ depth	Deposit description
101	Modern Layer	Layer	Demolition layer compacted		
102	Modern Layer	Layer	20th century demolition		
103	Unknown	Layer	Concrete block within 102		
104	Subsoil	Layer	Possible subsoil - same as 316		
105	Natural	Layer	Same as 327		

### Trench 3

Length: 16m		Width: 16m		Orientation: North-east to south-west	
Context	Feature	Context	Description	Height/ depth	Deposit description
301	Modern Layer	Layer	Modern brick rubble		
306	Wall	Structure	2 lines orange bricks, laid as stretchers mostly. Possible headers at eastern end. 200 x 120 x 70mm.		
307	Layer	Layer	Demolition layer infill		
308	Layer	Layer	Brick rubble orange		
309	Floor	Structure	Stone / cement block, partially covered in bitumen? 0.97 x 0.24m.		
310	Floor	Structure	Cement slab covered by black + multi-coloured dotted linoleum? Surface, 1.04 x 0.74m max		
311	Wall	Structure	3 courses of large pinkish bricks with pink cement mortar 230 x 110 x 70mm. Possibly laid on top of reused earlier orange bricks 330 x 110 x 170mm set on their side.		
312	Wall	Structure	3 lines, of 2 courses orange bricks 270 x 120 x 110mm. Hard white cement mortar. Gap between 311 and 312 filled by red bricks on their sides.		
313	Wall	Structure	Line of four large stones, two courses deep. Large green sandstone covered by both pinkish and white mortar 540 x 350 x 120mm stones, wall 0.8m wide, 0.60m deep.		

314	Wall	Structure	Remains of line of bricks in grey mortar running on top of structure 313.	
315	Wall	Structure	Inspection chamber associated with drain cut 330. Corner of brickwork in trench section, 7 courses of orange bricks 230 x 110 x	
316	Subsoil	Layer	Subsoil	greyish pink clay
317	Modern Layer	Layer	Layer of concrete with orange brick fragments on top	
318	Layer	Layer	Brick rubble / tumble . Mix of >90% orange bricks (in fragments) whole 240 x 120 x 72mm, rest are fragments of dark red brick (with a black outer layer) with a criss-cross pattern 310 x 154 x 45	
319	Wall	Structure	3 lines of orange bricks - set as stretchers 240 x 120 x 70 mm. Hard white cement ? Mortar, slight gap to northernmost line filled with mortar. Bricks are offset to those in the neighbouring line.	
320	Wall	Structure	Turret wall, where it joins the moat wall [structure 313]. Single large stone, with pinkish sand mortar. Green sandstones 740 mm L x 430 mm W 1.2m below ground surface	
321	Wall	Structure	Return of moat wall, North side. 0.70m wide, 0.45m height, 0.60m below ground surface. Two courses remain; same pink mortar as structure 320. Roughly hewn green sandstone blocks with stone rubble, not as deep as structure 320 and 313. Subsoil still present around it, cuts subsoil, and sits on it.	
322	Wall	Cut	Construction cut for walls. 313, 320 and 321 trench built walls.	
323	Ditch	Fill	Fill of moat cut 324. Mixed dumping in 19th century?	
324	Ditch	Cut	Cut of moat	
325	Wall	Structure	20th century wall 235 x 110 x 85mm bricks with cement bond. Sat on concrete footing 0.74m high, 2 bricks wide in stretcher bond.	
326	Modern Layer	Layer	19th century made ground - contains frequent brick fragments and coal, clinker	blueish grey silty clay

			etc.
327	Natural	Layer	Pinkish clay with light grey sand lenses
328	Construction Cut	Cut	Con cut for wall 325
329	Drain	Fill	Fill of modern pipe cut
330	Drain	Cut	Modern pipe trench

#### Trench 4

Length: 25m

Width: 25m

Orientation: North-east to south-west

Context	Feature	Context	Description	Height/ depth	Deposit description
401	Modern Layer	Layer	Tarmac		
402	Wall	Structure	Red brick wall. 2 bricks wide 230 x 110 x 70mm. Mid yellow sandy cement, slate damp proof.		
403	Floor	Structure	Cement base for floor within structure 402		
404	Floor	Structure	Red brick floor, on edge, frogged, 230 x 110 x 80mm. Truncated in the middle and backfilled with (405)		
405	Layer	Layer	Brick rubble, backfilled 402 following truncation. Now part of 404		
406	Layer	Layer	Layer of bricks, laid on their sides, mix of reddish bricks 225 x 116 x 76mm and orange 'crumbly' bricks 214 x 114 x 85mm. Now part of 404		
407	Floor	Layer	Brick layer, laid as stretchers, at right angles to 406. Laid on side, red brick 227 x 116 x 82mm. Now part of 404		
408	Layer	Layer	Brick layer, laid on side. Continuation of (406)? Mix of red brick 228 x 111 x 85mm and orange bricks 260 x 120 x 85mm. Also incorporates tiles and pieces of ceramic fowl drain being reused in this surface. Now part of 404		
409	Pit	Cut	Sub linear cut . N-S orientation 2.25m L, Now part of 404		
410	Pit	Fill	Contained large lumps of concrete and brick rubble in sandy silt matrix. Occasional charcoal flakes. Now part of 404		greyish brown sandy silt
411	Unknown	Cut	Irregular shaped truncation cut. 0/90m wide at maximum. Now part of 404		
412	Unknown	Fill	Fill of cut 411. Medium sized pieces of brick rubble in dark		greyish brown sandy silt



			grey brown sandy silt. Now part of 404	
413	Floor	Structure	Layer of bricks laid on their sides. Pinkish brick 232 x ? X 94mm. Now part of 404	
414	Pit	Cut	Sub triangular cut 1.39 x 1.10 x 1.80 m. Now part of 404	
415	Pit	Fill	Contained small pieces brick rubble, glass and sub rounded stones. Now part of 404	blackish brown sandy silt
416	Floor	Layer	Brick layer - laid on side, all at right angles to 413. Mix of red and orange bricks 232 x ? X 84mm red / 200 x ? X 78mm orange. Now part of 404	
417	Floor	Layer	Brick layer - laid on side, comprises whole and partial orange bricks 195 x ? X 72mm. Now part of 404	
418	Oven	Structure	Yellow flue fire bricks, vitrified on inside. 230 x 120 x 70mm. Bonded to structure 419 by light pinkish white mortar. Flue width interval =	
419	Oven	Structure	Red bricks 225 x 115 x 95mm pinkish mortar	
420	Oven	Fill	Backfill of flue, clinker and flue rubble.	
421	Modern Layer	Layer	Rubble infill	
422	Building (group)	Structure	Heavily truncated brick tanks, pink orange mortar 235 x 110mm	
423	Building (group)	Fill	3 tank fills all with cindery fills with some metal spikes in situ?	
424	Building (group)	Fill	Brick rubble fill of tank?	
425	Wall	Fill	Red orange sand backfill of construction cut 426 for wall 429	
426	Wall	Cut	Construction cut of wall 429	
427	Layer	Layer	Made ground	Firm grey silty clay
428	Layer	Layer	Made ground	Firm grey
429	Wall	Structure	Red bricks 235 x 120 x 85mm. Pinkish white mortar. 3 bricks wide stretcher bond.	
430	Unknown	Structure	Dark grey hard stone	grey
431	Unknown	Structure	Dark yellow sandstone	yellow
432	Layer	Layer	Occasional sub angular and sub rounded stones.	0.10m max orangey brown sand
433	Pit	Cut	Triangular cut 1.0 x 0.70 x	

			1.2m	
434	Pit	Fill	Mix of demolition rubble / bricks. Red clay blobs, mortar flakes.	
435	Wall	Structure	3 deep run of headers and stretchers in orangey bricks 210 x 95 x 65mm.	
436	Drain	Cut	Linear cut of drainage gully, containing water pipe (?lead) 8cm diameter.	
437	Drain	Fill	Loose demolition rubble. Brick and tile fragments in dark grey sandy silt. Capped by square frogged brick tiles -210 x 210 x 37mm.	Loose
438	Layer	Layer	Compact demolition rubble bricks / plaster / mortar in grey brown silt	Compact greyish brown silt
439	Subsoil	Layer	{Pale greenish grey silty clay containing rare charcoal flakes and flecks	greenish grey silty clay
440	Natural	Layer	Moderately compact pale reddish brown sandy clay containing occasional sub rounded pebbles and veins of light brown sand	Moderately Compact reddish brown sandy clay
441	Construction Cut	Cut	Cut for wall 402	
442	Layer	Layer	Levelling layer under brick surface 406 etc	
443	Construction Cut	Cut	Con cut for wall 435	

## Trench 5

Length: 15m		Width: 15m		Orientation: North-east to south-west	
Context	Feature	Context	Description	Height/ depth	Deposit description
501	Modern Layer	Layer	Modern demolition crush	0.18	
502	Layer	Layer	Victorian ? Made ground	0.28	
503	Subsoil	Layer	Subsoil	0.15	
504	Natural	Layer	Mid pinkish brown clay natural 0.3m below ground surface at south end, 0.7m below ground surface at north end.		

## Appendix 2: Summary of project archive (EBL1009)

TYPE	DETAILS*
Paper	Context sheet, Diary (Field progress form), Drawing, Matrices, Plan, Report, Section
Digital	Database, GIS, Images raster/digital photography, Spreadsheets, Survey, Text

\*OASIS terminology