

EXCAVATIONS
AT
STOURPORT CANAL BASINS,
WORCESTERSHIRE

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Illustrations by Carolyn Hunt

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INVESTOR IN PEOPLE

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Excavations at Stourport Canal Basins, Worcestershire

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Part 1 Project summary

The Heritage Lottery Commission has recently granted a funding award to British Waterways to carry out restoration works at Stourport Canal Basins (where the Staffordshire/Worcester Canal meets the River Severn).

British Waterways invited the Historic Environment and Archaeology Service to carry out excavations to assist them with three particular areas of their scheme design. First, to run a community-based field project staffed by local volunteers, and supported by professional archaeologists, with a view to providing training in archaeological excavation. Second, to engage with the local community during fieldwork, and third, to examine specific elements of the Basins, in order to inform a strategy for re-landscaping the Tontine Gardens, and for representing the site of a tollhouse as a historic feature.

The project has given a rare opportunity for members of the public to receive formal training in the discipline of excavation. The investigation aroused a large amount of interest among the residents of Stourport, with many visitors during the course of the week, and 150 came along to an open weekend to observe the fieldwork and archaeological displays. The project also attracted significant local press interest, and was featured, with British Waterways, on the BBC TV Midlands Today programme.

The rediscovery of the tollhouse (which served the canal lock system from the late 1820s until the 1950s), and the identification of three phases of garden design, in front of the Tontine building (constructed by the canal company in 1772), have produced useful information to assist British Waterways with their plans to display authentic features at the Basins. These interpretive features will reflect some of the changes to the physical character of the canal terminus (from the late 18th century to the present day).

The project gave British Waterways Heritage staff, and the Service the opportunity to open a dialogue with Stourport residents, some of whom visited several times, and, more importantly, brought along some of their own written and photographic records, and personal accounts of the site's history. It is intended that this dialogue will continue, and that local artists and landscape architects will collaborate with the next phases of British Waterways' regeneration scheme.

Part 2 Detailed report

1. Background

1.1 Reasons for the project

Archaeological excavations were undertaken at Stourport Canal Basins (NGR SO 8100 7100), parish, Worcestershire (Figure 1), on behalf of British Waterways, who have received a Heritage Lottery Fund award allowing them to carry out restoration works at the site.

1.2 Project parameters

The project conforms to the *Standard and guidance for archaeological excavation* (IFA 1999).

The project also conforms to a tender specification brief prepared by British Waterways (BW 2005) and for which a project proposal was produced (HEAS June 2005).

1.3 Aims

The aims of the project were to carry out field evaluation in specific areas (highlighted in the desk-based assessment, Miller, 2005) with community and volunteer involvement, with the:

“ultimate aim of engaging with community groups, and informing the works of artists and landscape architects who will use the findings to design a scheme for the Tontine building gardens through interpretation of the archaeology of the site” (BW 2005).

The detailed aims were:

- to engage local people, and visitors, with their formal and informal study of Stourport’s unique historic development as a town that owes its heritage, in large part, to the canal company’s construction of a trading centre in the late 18th century.
- to train volunteers in the archaeological processes of: trowelling and the use of hand tools and site equipment; the excavation of identified deposits and features; the recording of all physical remains, by the use of written context sheets and scale drawings; the preliminary stages of finds processing; and the three dimensional plotting of deposits, features and artefacts.
- to define and characterise phases in the layout of gardens serving the Tontine since its construction by the Stourport Canal Company in the 1770s.
- to expose the footings of an octagonal tollhouse known to have served the canal company from the 1820s to the 1950s.
- to examine the site of a “Coal Tunnel” which may have been to load coal, transported along the Staffordshire/Worcester Canal), onto river-borne barges for distribution to industrial and domestic premises further afield.
- to carry out a photographic historic building survey of the Engine House.

2. **Methods**

2.1 **Volunteer and community involvement**

Because engagement with the local community is a high priority for British Waterways, the Archaeology Service were asked to advertise for, and recruit volunteers, to assist with the excavations.

In the event sixteen people signed up for a programme of training in archaeological field techniques. The team were of a variety of ages and backgrounds, including retired, semi-retired, students, journalists and British Waterways staff. The three professional archaeologists taught a range of skills:

- trowelling techniques and use of site tools and equipment
- context recording, ie written descriptions of deposits and features
- scale drawing of features in plan and sections
- three-dimensional location of deposits and features
- the use of a level instrument to establish Ordnance Survey datum records
- the concepts of stratigraphy and phasing
- finds recognition and processing
- retrieving soil samples for environmental analysis

Despite the wintry conditions the Service has received very positive feedback from several volunteers, who have appreciated the new knowledge they have acquired from the training.

During the investigation an estimated 150 visitors observed the activity and attended two open days of archaeological displays. This offered the Service an opportunity to discuss the work of archaeologists, particularly with regard to their recording of artefacts, analysis of plant remains and soil residues, and their graphical illustration of archaeological discoveries in the field.

A number of residents of Stourport added an unanticipated dimension to the project, with oral, personal, written and photographic histories of the Tontine and canal basins. This has made a valuable contribution to the project and to this report, adding much new information relating to the history of the town.

2.2 **Fieldwork strategy**

Fieldwork was undertaken between 14th and 20th November 2005. The site reference number and site code is WSM 34767.

Three trenches were opened. The locations of Trenches 1 and 2 are indicated in Figure 3. Trench 1 was examined to look specifically at earlier phases in the design of the Tontine gardens, and Trench 2 was examined to record the known site of a tollhouse. In the original British Waterways specification brief Trench 3 was located to investigate a 'coal tunnel' which ran from the lower basin, onto the river quayside, and is thought to have been used to ferry coal from canal barges onto trows, for river transportation. However, British Waterways retained some photographs of an earlier investigation for engineering purposes and it was felt that further archaeological investigation would not add materially to the project. The trench

was re-located to test the north-western corner of a mid-19th century dry dock. Recording time was limited in this area, but the contexts are described in (Appendices), and a brief discussion of the existing structure is included in the structural analysis.

The specification also included a photographic survey of the Engine House. At the time of writing this has not taken place because access has not been granted by the leaseholder of the building.

Within the investigated trenches deposits considered not to be significant were removed using a wheeled excavator, employing a toothless bucket and under archaeological supervision. 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 Service practice (CAS 1995).

2.3 **Structural analysis**

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

2.4 **Artefact methodology, by Alan Jacobs**

All artefacts from the areas investigated were retrieved by hand and retained in accordance with the service manual (CAS 1995 as amended).

All hand-retrieved finds were examined and a primary record was made on a Microsoft Access 2000 database. Artefacts were identified, quantified and dated and a *terminus post quem* date produced for each stratified context.

Pottery was examined under x20 magnification and recorded by fabric type and form according to the fabric reference series maintained by the service (Hurst and Rees 1992; Hurst 1992).

2.5 **Environmental analysis, by Katie Head**

The environmental sampling strategy conformed to standard Service practice (CAS 1995; appendix 4). Three bulk samples were sub-sampled for pollen from three garden contexts of 19th century date.

Three pollen samples were selected from three contexts (103, 105, 107), all believed to represent garden soils. Sediment samples of 2cm³ were measured volumetrically. The samples were soaked for 24 hours and then boiled in tetra-Sodium Pyrophosphate for 30mins, sieved through a 120µm mesh, washed onto a 10µm mesh, and the residue collected. 10% Hydrochloric acid was then added in order to remove any calcium carbonate within the samples. Due to the siliceous nature of the sediments, the samples were soaked overnight and then digested using Hydrofluoric Acid in a hot water bath for 30mins. Finally the pollen pellet was stained with safranine, washed in alcohol to dehydrate the sample, and preserved in silicon oil.

Attempts were made to count each sample to a total of 250-300 land pollen grains (TLP) for assessment purposes on a GS binocular polarising microscope at 400x magnification. This was not possible for any of the samples, however, as pollen concentrations were low so counts ranged from 140-190 TLP. Identification was aided by using the pollen reference collection maintained by the Service and the reference manual by Moore *et al* (1991). Nomenclature for pollen follows Stace (1997) and Bennett (1994), and results are listed in taxonomic order.³

3. **Topographical and historical context, by Darren Miller**

Very little archaeological work has been carried out in the town, but Stourport's beginnings, and its expansion from the former village settlement of Lower Mytton, have been the subject of survey reports in the last 10 years or so (Buteux 1996 and Miller 2005). However, to give the excavations a wider context, a summary of chronological developments is useful.

3.1 **Before 1768**

Judging by a map of 1802 (WRO BA 6507, parcel 3), entitled, "A survey...of lands attested to be the situation of the lands prior to the making of the canal", the study area was enclosed farmland before 1768. The area now occupied by the Upper Basin lay in a rhombus-shaped field called The Thorn Bush Piece, while the area of the Lower Basins lay in an irregular field called Lower Lamb Pit. To the east were two fields called Lamb Pit and Wall Field, and to the west was a rectangular field called Severn Piece. Only one building is shown on the map, at the south end of Severn Piece. This building is labelled "Price's Wharf", after its owner, who is known to have bought and sold land elsewhere along the line of the Staffordshire-Worcester canal (Elizabeth Turner, pers comm).

The patterns of enclosure, land-ownership and tenancy shown on the map suggest that most of the study area had once been farmed in an open-field system. In such systems, holdings were divided into strips that were grouped into furlongs, and farmed in common. Although the map shows a fully enclosed landscape, the field boundaries nonetheless reflect the layout of former strips and furlongs. These arrangements were probably of medieval origin, although they are likely to have changed considerably over time. The date of enclosure is uncertain as no surviving maps or documents record the process. However, the field pattern is typical of 18th and 19th century Parliamentary enclosure, and was probably established a generation or two before 1768.

This period in the history of the study area and its archaeological potential, are outside the scope of this report. However, it is worth noting in passing how much the field pattern influenced the development of the canal basins. For example, the Upper Basin was clearly planned to lie centrally within Thorn Bush Piece. It is also striking how far successive housing developments were fitted into the earlier field pattern. This degree of topographical and (perhaps) tenurial continuity has not been commented on before: indeed, most researchers have regarded the development of Stourport as a radical departure from the past. This true in a fundamental sense, but the extent to which this development conformed to the earlier field pattern is nonetheless significant.

3.2 **1768-1776**

The development of the canal basins is well documented and has been considered by several researchers (Bailey and Richardson 2002, 9-12; Langford 1974, 176-188; Porteous 1977, 91-99). However, the changing topography of the area has not been described and mapped in detail, and some important issues are still unresolved.

In the decade after 1768 the study area would have been the focus of intensive engineering and construction activity. This would have involved a large workforce and a good deal of infrastructure, in the form of accommodation, workshops, and store-rooms. Porteous (1977, 95-6) touches on these arrangements, but they remain largely unresearched. Because of the limited amount of land then available (Porteous 1977, 92), all this activity will have been concentrated in space as well as in time. Beyond the site itself, it is likely that farming continued much as before. The growth of the town only began in earnest in the 1780s (Porteous 1977, 98), and as late as 1802 the basins still lay adjacent to agricultural land.

Figure 2 is a drawing of the canal basins made by James Sherriff in 1776. The Upper Basin has changed very little, but the area around the present Lower Basins is very different. The

eastern basin was small, semi-circular, and seemingly less of a basin than a passing-place to allow two-way traffic. It connected the Upper Basin with the river *via* two locks. The western basin was even smaller, triangular, and reached directly from the river. Although the print shows no work in progress, it is clear that this basin was unfinished in 1776, as it would have served little purpose in the form it had then. Between the basins were two docks, both containing boats being repaired.

Only the south and east sides of the Upper Basin seem to have been developed by 1776. The Tontine Hotel, which first opened as The Areley Inn in 1773 (Bradford 2002), dominated the south side. It comprised four houses, two on either side of the central hotel (Jones forthcoming), and overlooked a rectangular formal garden. On the east side of the garden lay the stable block that belonged to the Tontine, and was presumably built at the same time.

To the north of the Tontine, in the angle between the Upper Basin and the canal, was the surviving Chandlery Wharf building, with its distinctive curving wall. There was also a small building projecting from its north-west corner. A little to the east lay an L-shaped single-storey building that was probably a warehouse. Another warehouse, known as the Long Warehouse, lay along the east side of the Upper Basin. The only other building within the study area was a three-storey house that stood a little to the north of the Long Warehouse. However, just outside the study area stood a two-storey building with a flat roof and crenellations. This building has been identified as a lock house and watchtower (Porteous 1977, 94-5).

3.3 1776-1826

Between 1776 and 1826 the study area changed significantly and took on more of its present form. Figure 1 is a conjectural map of the area in 1826, based on another map by Sherriff made in 1802, and two anonymous maps dated *c*1800 and 1826.

The most significant changes were the construction of four new basins, and the enlargement of the Lower Basins. The impression gained from the literature is that the basins were constructed on an *ad hoc* basis, as need arose, and land became available, although the site of Lichfield basin was earmarked several years before its construction, and its design was re-drafted at least twice (Porteous 1977, 97). The new and enlarged basins were associated with major changes in water supply and management. These included the replacement of the old engine and aqueduct that took water from the Stour (Bretherton and Jones 2000) by a new engine and basin that took water from the Severn. The new Engine House was housed in a building at the head of the basin, near the site of a short-lived Lime House and Lime Kilns.

The buildings of the study area also changed significantly in this period. The warehouse next to the Chandlery Wharf building was demolished and replaced on a much larger scale. New warehouses were also built beside the Upper Basin, and behind the Long Warehouse and Tontine stables. A new lock house was attached to the latter building. The map of *c*1800 also shows other canal-related infrastructure, including stacking grounds, coal wharfs, and several small buildings. In addition, this period saw the first residential developments in the study area. Price's House was demolished, but another house was built nearby, and others were built along the newly laid-out Bridge Street, York Street and Lichfield Street. Another new street, Cheapside, was laid out in the south-east of the study area, and fronted by a row of terraced housing with adjacent gardens. Cheapside also saw some industrial development in this period, with the establishment of a vinegar factory in 1798 (Pauline Annis, pers comm).

By the end of the 1770s the central block of the Tontine building was being used as a hotel for traders, and the two wings, for hop merchants' business premises. Their inaugural gathering is recorded in 1777 (Bayliss, 1971).

3.4 **1826-1845**

Although the volume of trade passing through the terminus began to decline after 1815, development continued, as shown by the Lower Mitton Tithe map of 1845 (WRO BA 1572, parcel 428, reproduced as Figure 4). A large number of buildings were added. These included 15 or so small buildings ranged around the basins, an octagonal tollhouse to the south of Chandlery Wharf, and several houses along Bridge Street, York Street, Lichfield Street and Severn Lane. In addition, the warehouses along Mart Lane were replaced by a row of terraced houses on the same footprint, and the Vinegar Factory at Cheapside was greatly enlarged.

The Stourport Canal Company sold the Tontine building in 1842 (Bradford, 2002) and the wings were converted into seven or eight residential cottages (Jones forthcoming).

3.5 **1845-1949**

The volume of traffic using the basins continued to decline in the following century. As a consequence, very little development took place. The only major changes in this period were the construction of several new buildings along Bridge Street (including The Bridge Inn), and the redevelopment of the Cheapside area after the infilling of Cheapside basin in the 1860s (Bailey and Richardson 2002, 5). The gasworks built on the site of the basin and latterly the power station built beside the Stour to the west provided a need for coal shipments by canal, and this helped to keep the basins in use. However, once the “Light Run” to the power station was discontinued in 1949, the basins became largely redundant (Porteous 1977, 181).

The Tontine gardens appear to have been partitioned during the 1840s, presumably as a consequence of the Canal Company’s sale of the property (see discussion below).

3.6 **1949-present**

Many changes took place in the 1950s and 1960s, as a result of limited traffic, resulting over-capacity, and the arrival of new businesses. Most significantly, Lichfield basin was infilled and a timber yard and engineering works were built on the site. Several warehouses were also demolished, as were many smaller buildings, including the tollhouse to the south of Chandlery Wharf. Away from the basins, the main changes took place in the south-west part of the study area. Stourbank House was demolished and the field to the north was made into a car park. To the south, new light industrial units were built on the site of Lichfield basin, and along Cheapside, following the partial demolition of the old gasworks.

Fewer changes seem to have taken place in the 1980s, judging from the relatively minor differences between aerial photographs taken in 1970 and 1991. However, the last 14 years have seen several developments, notably the construction of Severnside Business Park at Cheapside, and a permanent amusement park to the west of Engine Basin. The timber yard on the site of Lichfield basin has also been cleared and the land decontaminated (Miller 2001). The basins themselves and related features have not changed significantly in recent years, although a third dock has been added to the Upper Basin (Richardson and Bailey 2002, 21).

Until 1972 the Tontine had 10 residences (Phillips pers comm). The hotel and public house were closed for business in 1999.

4. **Results**

4.1 **Structural analysis**

The location of the trenches and features recorded are shown in Figure 3. For full context descriptions see Appendices.

4.2 **Trench 1 The Tontine Gardens**



Plate 1, Trench 1, located at the Tontine's south-east corner

Phase 1 Late 18th /early 19th century

Trench 1 measured 6.00m x 6.00m and was excavated by hand to a maximum depth of 1.00m below the existing ground surface. Contexts 122, 123 and 127 represent an earlier horizon contemporary with the building of the Tontine Hotel (which appears on Sheriff's map of 1776). They consisted of silty sand and gravels, and were probably deposited to level a garden frontage, to serve the canal company's Tontine building, then known as the Stourport Inn (Porteous 1977).

The footings and lower courses of a brick wall (context 111, plate 2), which probably enclosed a discrete garden plot, were exposed with a foundation trench (contexts 112 and 128) cutting through layers 122, 123 and 127. The wall was built as a freestanding structure (the brick footings being laid as a header course), with English bonding. On its outer face, part of the original foundation (context 116) had been robbed out, masking the wall's original alignment (Figure 5, showing the right angle turn); ie running north to south and then turning at right angles along the line of cut 112.



Plate 2 Context 111, bedding wall, late 18th /early 19th century

Phase 2 Early to mid-19th century

In the early to mid 19th century the gardens were re-designed at their eastern side. The bedding wall (111) was enlarged and re-aligned to form a curved north-eastern perimeter. This larger wall (context 110, Plate 3) was inserted into a foundation trench (context 109) and was constructed using alternate header and stretcher brick coursing.

Extensive, well drained gravely layers (contexts 101 and 108) were imported at this time, as part of a formal landscaping for the gardens. Several pits and postholes were cut into these soils. The largest of these comprised a posthole (context 118) with a cut for a wooden upright (context 125). This feature was re-cut at a later date to house a larger post (contexts 102 and 118) and two further postholes were identified to the south (contexts 104, 106 and 114) although no clear alignment was indicated (Figure 6).

Soil samples for pollen identification, were taken from the fills of these garden features (contexts 103, 105 and 107), but the pollen grains were de-graded (Head see below). The three postholes were sub-circular in form, with near vertical sides, and convex bases. All were clearly cut to formalise the layout of the gardens.



Plate 3, context 110 showing extension to the garden boundary, mid-19th century

Further silty deposits (contexts 120 and 130), which butted against the boundary wall, sealed the gravely soils and the postholes, marking the end of this second phase of activity.

Phase 3 - 20th century

The eastern boundary for the gardens was extended. The original wall (111) and the enlarged, curving boundary wall (110) were largely removed and sealed, and replaced in the early 20th century by the present boundary. This, existing wall (context 113), was constructed on the same alignment, and is bonded with cement. Its lower brick courses are less thick than the upper courses, where there are several sections which have been repaired and re-built.

Two layers of ash, rubble and mortar (contexts 121 and 131), which were exposed outside the earlier garden perimeter, provided evidence for the demolition of the first boundary wall.

Topsoil (100) for re-designing the Tontine gardens as a lawn was laid in the mid 20th century and the area was terraced, paved and stepped as far as the River Severn, and, since 1946, its appearance has remained largely unchanged.

4.3 Trench 2 The Toll House



Plate 4 Trench 2, located on the lawn, by British Waterways Lock Office

Phase 1 Late 18th century

A culvert access chamber (context 231) was exposed under topsoil (201). Its entrance was covered by two iron plates, and measured 0.58m x 0.48m. The lining of the hatch was laid with a header brick course, and the service chamber for a north-south running storm drain, was 2.6m deep. It was constructed as a service portal for the brick-lined culvert, which runs from the upper basin into the wide lock wall, forming the eastern perimeter of the lower basins (Plates 5 and 6). The drain is also bordered to the east by a brick-arched wall, which lies on a parallel line to the cellar walls of the Tontine. Dating evidence from artefacts was not apparent, but the floor level of the entrance was 0.11m below the later ground level for the tollhouse (see Phase 2 below).

A number of deposits which probably pre-date the tollhouse were not excavated (207, 208, 211, 223, 224, and 226; see Figure 7). They are composed of dark loam soils and a shallow linear cut, but were not relevant to the specification brief.



Plates 5 and 6, culvert structure running for Upper to Lower Basins, late 18th century

Phase 2 c.1825 to c.1950

A tollhouse, serving the lock system between the upper and lower basins at the Stourport terminus for the Staffordshire-Worcester Canal, is known to have been in use from the late 1820s to the early 1950s (Figure 7).

Two courses of the brick footings for the octagonal building were exposed (context 202). At each of the eight turns of the outer structure, a further two courses remained, and provided the building with a firm foundation. The lime mortar bonding and brick fabric used for its footings predate the known use of cement (from c.1850). The archaeological evidence therefore supports the supposed date for the construction of the tollhouse in the late 1820s.

The tollhouse entrance was on the north side, with a tiled footpath leading to it (context 229 and Figure 8). The sandstone doorstep (235) survives in its original position, complete with the remains of an iron boot scraper.

At the eastern perimeter, and interior to the tollhouse, a brick-surround fireplace (context 232) remained intact, with an adjacent stone hearth (233) butting against it (see discussion below which compares the structure with the Stewponey and Bratch tollhouses).

The footings were laid in regular brick coursing, with an English cross bonding, and the original building had a diameter of 3.50m. All of the remains of the building were left *in situ*.



Plate 7, the tollhouse footings

Phase 3 Post-1950

Within the tollhouse structure, the original floor had been removed. The remains of the structure were covered with rubble from its demolition (contexts 214 - 221). Similarly, the exterior was strewn with brick and earth rubble (contexts 221, 222, 225, 227 and 228).

Since 1963, when British Waterways bought the canal basin site (apart from the Tontine Hotel), the layout of land to the south of the basin offices has been restored using turf, tile and stone paving, and iron fencing.

4.4 Trench 3 The dry dock

A dry dock warehouse was built in the mid-19th century to repair canal barges and steam tugs. The extant wall (opposite) formed the south face of the structure serving the lower basins. The arch and the brick air holes were part of a deliberate design to ventilate the maintenance area, where out of service vessels would be stored (Carter, 2000). The limited time for archaeological work meant that no new information came to light (see Appendices).



Plate 8, the existing dry dock wall

4.5 Artefact analysis, by Alan Jacobs

The artefactual assemblage recovered is summarised in Table 1.

The pottery assemblage retrieved from the excavated area consisted of 555 sherds of pottery weighing 4.119kg. In addition fragments of tile, brick, plastic, glass and clay pipe stems were recovered. The pottery groups came from eighteen stratified, and three unstratified contexts, containing forms dateable from the post-medieval period onwards. The level of preservation was generally fair, with the majority of sherds displaying only moderate levels of abrasion.

Material	Total	Weight (g)
Post-medieval pottery	310	2446
Modern pottery	245	1531
Brick	44	40634
Tile	42	11366
Cement	12	350
Burnt stone	3	211
Stone	1	204
Slate tile	49	1371
Plaster	6	47
Slag	34	1939
Iron objects	45	2054
Glass	38	284
Tobacco pipe	11	12
Coal	7	45
Flint	2	14
Plastic	1	2
Bone	20	151
Seed	1	2
Aluminium chain	2	3
Total	772	63072

Table 1: Quantification of the assemblage

Discussion of the pottery

All sherds recovered from stratified contexts have been grouped and quantified according to fabric type (see Table 5). Material from unstratified contexts is also included. A total of five diagnostic form sherds were present and could be dated accordingly, and the remaining sherds were dateable, by fabric type, to their general period or production span.

The discussion below is a summary of the finds and associated location of contexts by period. Where possible, *terminus post quem* dates have been allocated (Table 6), and the importance of individual finds commented upon as necessary.

Fabric number	Fabric name	Total sherds	Weight (g)
78	Post-medieval red sandy ware	12	98
81.3	Nottingham stoneware	4	9
81.5	White salt glazed stoneware	2	3
81.7	Staffordshire stoneware	1	6
84	Creamware	218	935
91	Post-medieval buffware	7	24
Unstratified	Various	66	1371
Total		310	2446

Table 2: Quantification of the post-medieval pottery by fabric*Post-medieval pottery*

The post-medieval pottery consisted of 56% of the assemblage by count and 63% by weight. A total of three fabrics were present in stratified contexts. The assemblage consisted primarily of post-medieval red sandy ware (fabric 78), and was recovered from 19th century contexts (105, 203, 207 and 304). Additional material was present in topsoil or unstratified contexts (100, 200 and 201) containing creamware (fabric 84) post-medieval buff ware (fabric 91), and four sherds of Nottingham stoneware (fabric 81.3). Only two sherds of white salt glazed stoneware (fabric 81.5) were recovered (contexts 101 and 103), and the lack of this fabric, which was in circulation from c.1720-1770, in comparison with the presence of creamware (fabric 84), would indicate a late 18th century date for the post-medieval assemblage. Creamware (fabric 84) dating generally from c.1750-1795, was present in late 18th-19th century contexts (101 and 103), in the form of a plate with a scalloped rim.

Considerable amounts of additional material were recovered in topsoil or unstratified contexts (100, 200 and 201), and consisted of small bowls and plates. The overall assemblage was distinctly late 18th century in date, and of domestic function.

Fabric number	Fabric name	Total sherds	Weight (g)
81.4	Miscellaneous modern stoneware	6	119
83	Porcelain	16	33
85	Modern stone china	223	1379
Total		245	1531

Table 3: Quantification of the modern pottery by fabric*Modern pottery*

The modern pottery consisted of 44% of the assemblage by count and 37% by weight. The only fabrics present were two sherds of miscellaneous late stoneware (fabric 81.4), and the only form represented consisted of base sherds of bottles (contexts 203 and 225). Little additional material was present in topsoil or unstratified contexts (100, 200 and 201), though a large cider jar was recovered from the cellar of the Tontine (Plate 8), produced by Powell of Bristol in the late 19th to early 20th century. Porcelain, (fabric 83) dating from the early 19th-20th centuries, was present in two stratified contexts (203 and 225), and the only definable form was that of a teacup, with little additional material being present in topsoil or unstratified contexts (100, 200 and 201). Modern stone china (fabric 85) comprised the largest element of the assemblage, and was present in a number of contexts (103, 131, 203, 206, 225 and 304).

Forms represented included a variety of plates, saucers and teacups. A variety of blue-white and brown-white transfer patterns were evident and most of this material dated from the early 19th century. A number of fragments of willow pattern plates, and an oval dish were recovered (context 100). This design on tablewares became common from the early 1800s. ea wares dating from the mid 19th century were present in topsoil or unstratified contexts (100, 200 and 201)The modern assemblage is unusual, and clearly predominantly of early 19th century date. Willow pattern flat wares, pearl ware, mocha ware, flow blue and basalt ware (contexts 100, 201 and 301) were present indicating a late 18th- mid 19th century date range for their deposition. The lack of modern stoneware may be clear indication of the sites use as an area of consumption rather than food preparation, with an assemblage dominated by higher status tea and tableware.



Plate 8 cider jar

Ceramic building material

A number of fragments of post-medieval roof tile (fabric 2a and 2c) were recovered (contexts 101, 103, 107, 119, 203 and 225), and the lack of any definably earlier material from this site would indicate an 18th century date for all of this material. In addition fragments of modern tile (fabric 1) were recovered from early 19th-20th contexts (229, 303 and 304). These appear to be coarse flat nibbed roof tiles, but signs of surface water erosion and mortar on their undersides, would indicate that they were used for wall cladding/facing, rather than as conventional material for roofing. In addition a number of thicker *pavier* fragments (context 229) were recovered. A number of fragments of slate roofing tile were recovered (contexts 101, 103, 203, 207 and 225). These have traditionally been defined as distributing to the area from the 1840s, following the spread of the railways. The presence of this material in earlier contexts (101 and 103) would indicate the use of canals for distribution to Stourport from the quarries of Denbighshire or Montgomeryshire. In addition a single fragment of marble was recovered (context 203), its thickness indicating its domestic use as a kitchen-cutting slab.

A number of bricks were recovered as samples, and dated from the post-medieval period onwards. Samples which dated from 1740-1780 were recovered from (contexts 101, 103, 110 and 111), were between 2.25 and 2.5 inches thick (fabric 2a) with large amounts of lime mortar still attached, and represented the earliest construction phases. A number of thicker bricks between 2.75 and 3.25 inches in thickness (119 and 202), dating from between 1780 and 1850 with a poorly mixed distinctive grog fabric (2c) and lime mortar, were recovered. Finally a number of mottled red bricks of between 2.5 and 2.75 inches thick (fabric 2a), dating from c.1760-1850, were recovered (103, 111, 202 and 203). No Victorian railway bricks were present within the assemblage indicating activity, which predates the 1850s. Although small fragments of cement are present within the assemblage (202, 203 and 225), they may be intrusive within the early 19th century contexts, representing re-pointing in the mid 19th century.

Other finds

A number of fragments of tobacco pipe stem were recovered (contexts 101, 103, 105, 119, 131, 203, 205 and 303); none of these were diagnostic and could only be broadly dated to the 17th-19th centuries. In addition two fragments of post-medieval glass bottles were recovered (context 101 and 103), and a number of modern glass vessels from 19th-20th century contexts

(203, 207, 225 and 304). These include examples of beer bottles, milk bottles, a fragment of frosted window glass, and a fragment of a mirror. A small plastic valve from an early to mid 20th century radio or television was recovered (225), as well as a peach stone (context 203). A number of fragments of bone were recovered (103, 203, 204, 207 and 225).

The artefacts made of metal included a variety of iron nails and screws, the blade of a pair of scissors, a drainpipe fitting, and an aluminium chain (contexts 103, 203, 206, 225 and 304). Slag was present in trenches two and three (contexts 203, 204, 205, 206, 207 and 304). This is clear indication of local industrial activity, with examples of glass slag, fragments of burnt shale (context 203) and coal (contexts 101 and 225). Two fragments of residual worked flint were recovered from contexts 101 and 225. The former is a late Mesolithic burin tool, the latter, a flake (or reworked debitage) of indefinable prehistoric date. These were the only finds earlier than the post-medieval period.

4.6 **Pollen remains, Trench 1 (Tontine Gardens), by Katie Head**

Context 103, sample 1

Pollen counts were very low and the grains had deteriorated somewhat for all three contexts, but particularly 103 (Table 4). This context was dominated by Poaceae indet (grasses), with other herbs in low amounts. These comprised Rosaceae such as *Filipendula* (meadow sweet) and *Potentilla* (tormentil/cinquefoil), as well as *Plantago lanceolata* (ribwort plantain), (Lact.) *cichorium intybus*-type (e.g. dandelion), Chenopodiaceae (e.g. fat hen), Caryophyllaceae, and *Cerealia* (cereals). Trees and shrubs were only occasionally present but included *Corylus* (hazel), *Alnus* (alder), *Pinus* (pine), *Betula* (birch), and *Salix* (willow), while heathland plants were represented by just *Calluna vulgaris* (heather). These taxa most probably reflect the more regional pollen rain rather than plants that were growing in the garden itself. Spores were also in low numbers consisting of ferns such as *Polypodium* (polypody fern), as well as *Pteridium* (bracken). Also present was the aquatic taxon, *Typha latifolia* (bulrush), which interestingly, is found growing in slow moving water such as canals.

Context 105, sample 2

Pollen from context 105 was slightly better preserved, although counts were still low (Table 4). Again the assemblage was dominated by Poaceae indet (grasses), although (Lact.) *cichorium intybus*-type (e.g. dandelion) were in higher numbers than context 103. Other herbs were similar to 103, with the addition of taxa such as Apiaceae, *Anthemis*-type (corn chamomile), *Centaurea scabiosa* (greater knapweed), and *Polygonum persicaria* (persicaria). The presence of arable weeds such as corn chamomile and persicaria may suggest that these plants derived from cultivated land nearby rather than having grown in the garden itself. Trees and shrubs had just one addition, that of *Tilia* (lime), while spores were as in context 103.

Context 107, sample 3

This final context (Table 4) was similarly preserved to 105, again with a domination of Poaceae indet (grasses). Other herbs were as before with just the addition of Brassicaceae. Trees and shrubs included just two additions: *Quercus* (oak) and *Viburnum opulus* (guelder rose) grains, most probably reflecting the regional pollen rain.

Overall, a grass and dandelion flora dominated the three assemblages, with little evidence found for the cultivation of herbaceous ornamental plants. This pollen suite tends to suggest that these samples represent a phase when the garden was abandoned and allowed to become overgrown. There are occasional arable weeds and cereal pollen, which may have derived from surrounding arable fields or imported within straw-laden manure. These weeds however, could equally have been growing on the site itself following abandonment. The low

numbers of tree and shrub pollen recorded seem to suggest that they came from the surrounding countryside as regional pollen rain.



Plate 9, Tontine garden features, 18th and 19th century

Discussion of pollen results

In general, few pollen investigations have been undertaken from historical garden contexts (although see Greig 1971). There is a reluctance to sample these types of contexts because of preservation difficulties such as oxidising environments due to well-aerated soils, or soil mixing by earthworms leading to the rapid destruction of pollen by the highly alkaline nature of many garden soils (Murphy and Scaife 1991). Although there are a number of potential problems associated with analysing garden soils, in some circumstances, environmental conditions are favourable; for example in acid soils, in buried soils where the ground surface is preserved, and in waterlogged garden features (Murphy and Scaife 1991).

There is, however, one important site in the Midlands region, Castle Bromwich Hall, where both plant macrofossil and pollen analysis was undertaken on 18th and 19th century deposits (Currie *et al*). Like the Stourport Basins site, grasses and dandelion vegetation dominated the flora, and in some of these areas this was interpreted as later abandonment. However, a number of areas at Castle Bromwich Hall representing different garden types were detected. This included a holly garden, as well as evidence of the cultivation of beans as a crop, with pollen from the Fabaceae family being recorded. There were also notable quantities of cereal pollen (believed to derive from straw), which might indicate manuring of the garden enabling it to be maintained as a rose garden. This does not appear to have been the case at Stourport, as only occasional grains were found, most probably indicating the regional pollen rain. Although there was some interesting information yielded in the form of garden practices such as manuring at Castle Bromwich Hall, very little information, like Stourport Basins, was found on herbaceous plants partly due to preservation problems and the fact that it is often difficult to identify pollen to species level.

Significance of the pollen

The pollen remains from these garden contexts were poorly preserved and so are of little significance. In general terms, however, the results are of some importance in that pollen analysis of gardens needs to be increased to add to our understanding of the preservation problems associated with these soils.

5. Discussion

5.1 The Tontine Gardens



Plate 10, reproduced by kind permission of Mr M Beavers

At present, the only source of information for the original form of the Tontine Gardens is the drawing of the canal basins made by Sherriff (Figure 2). Assuming that the print is essentially accurate (and comparison with later maps supports this assumption), then the gardens, in 1776, consisted of a rectangular plot enclosed by a lattice wood or iron fence. The plot was divided into rectangular beds separated by uncultivated strips or paths. Curiously, although the drawing was apparently made in the summer (the trees are in full leaf), the beds seem to have been totally bare, as if they had recently been levelled or turned over. This seems unlikely in view of the form and context of the gardens, but it is more likely than assuming that the beds were planted evenly and uniformly with low herbaceous plants, or that other plants were present, but were not depicted. If this reasoning is correct, then it follows that, at the time the drawing was made, the gardens were being re-dug or laid out for the first time.

From the archaeological evidence, it would appear that shortly after Sherriff's drawn record (ie by the early 19th century) the east end of the garden was altered by the insertion of a brick wall (context 111). A foundation trench was also recorded (context 116), indicating that the perimeter turned at right angles to run parallel to the south facing wall of the Hotel.



Plate 11, wall foundation trench in section (context 116)

It is worth noting that a re-construction drawing (P Dunn, in Crowe 1994) depicts four strips, enclosed by what appear to be low walls. It is feasible that contexts 116 (east-west wall foundation) and 111 (north-south running brick wall) represent the physical remains of this design. However, relevant historic sources have not, to date, been recovered to confirm this interpretation.

The gardens are not documented in any further detail until 1845. Maps of c1800, 1802, and 1826 show the outline of the gardens but leave the interior blank. All that can be said is that the boundaries of the garden did not change significantly over this period, if at all. From the tithe map of 1845 (Figure 4), however, it is clear that the original gardens had been divided into five smaller parcels, and that a sixth parcel had been formed by taking in a small amount of land to the west.

The new west and south sides of the garden had also been built upon, in such a way as to change the original shape of the garden even further. This parcelling up of the gardens undoubtedly mirrors the leasing of parts of the Tontine Hotel. This is documented at a later date but properly coincides with the 1842 sale. The documents in question are drafts of leases dating between 1891 and 1917. The gardens are included in each of these leases, and are described without variation as "...the piece of land or pleasure ground being in front of the hotel". This description plainly does not reflect the situation of the drawn surveys, or of the fieldwork results described, and therefore, probably derives from earlier leases made when the gardens were a single unit. However, the Canal Company's sale of the property in 1842, may well have brought changes to the layout of the frontage, when the buildings were converted into private residences.

The brick coursing used for a curving eastern boundary wall (context 110) is bonded with lime mortar, confirming that the gardens were altered before c 1850, when cement begins to be commonly used instead.

The gardens are shown in similar detail on the first edition Ordnance Survey map of 1884. Unfortunately, however, only their outline is shown on this and later records, and thereafter the only sources of information are aerial photographs. An oblique photograph taken in 1926 shows the garden very much in its present form, ie an irregular-shaped lawn on two levels surrounded by a wall. Evidently the garden had been completely transformed at some point in

the previous 42 years, with the removal of the internal boundaries, demolition of the buildings along the west and south sides, and terracing of the original slope. Apart from the surrounding wall, the new layout included two flights of steps to connect the terraces, and a path around the lawn. A vertical photograph taken in 1962 shows that this path had been removed, and that another path had been added across the lower terrace. This path has since been removed, and the flight of steps between the terraces has been broadened considerably, but, in spite of these details, it is clear that, apart from an extension to the eastern boundary, ie the current curving wall (context 113, Plate 1) the garden has remained essentially unchanged since the very late 19th or early 20th century.

5.2 Tollhouse



Plate 12, reproduced by kind permission of R Phillips

As noted above, an octagonal tollhouse was built to the south of the Chandlery Wharf building between 1826 and 1845. According to the maps and photographs it was demolished between 1955 and 1962, although Langford dates it to “a few years” before his publication (Langford 1974, 183).

In his brief survey of Stourport basins, Langford states that the tollhouse “...was identical to those at Bratch and Stewponey (on the Staffordshire and Worcester canal), with iron-framed casement windows, and a central stone chimney”. Prior to the fieldwork the only recorded evidence for the tollhouse site was a rather blurred oblique photograph taken in 1950. Both suggest that it was more like the one at Stewponey than the one at Bratch, which has two storeys, and is incorporated into the canal bridge. Two further photographs have come to light during the course of this community project (Plates 12 and 14), confirming that the tollhouse was still standing in 1948 (R Phillips pers comm).

As the name makes explicit, canal side tollhouses were generally used to collect payments from trading barges. However, the structure investigated here was in a unique location, in that it was set back from the canal’s terminal lock, but more importantly, was close to the hub of trading activity between the canal and the river. It was built as a permanent feature (ie it was standing for at least 130 years), with a fireplace, so that it could be manned night and day, and in winter.

It probably collected tolls from barges and trows, and it may well have been used to keep detailed records of all boat traffic. The surviving footprint is well preserved, and will lend itself to accurate, on-site reinterpretation.

6. **Publication summary**

The archaeological investigation fulfilled a number of objectives. Chief amongst these was the assistance given to British Waterways in the first phase of its heritage lottery scheme. In focussing on two small areas in the vicinity of the Tontine, the public event attracted significant local interest, and illuminated much about the early development of Stourport as a canal-based trading centre. The desk-based work, and excavations, have combined to provide British waterways with advice on the interpretive phases of their regeneration of the canal basins.

Although Sheriff's print of 1776 only shows the gardens in outline detail, there is clearly a formal perimeter. A robbed wall was located during the excavations, and its alignment respects the fencing structure of Sheriff's drawn record, including a right-angled turn where the lower courses of a bedding wall have survived.

Sheriff's drawing, Dunn's reconstruction depicting Stourport in c.1809, and the Tithe map of 1845, illustrate the general changes to the gardens serving the listed building. These indicate that they had been divided into at least six parcels, perhaps leased to individual tenants. The archaeological evidence for the establishment of a formal boundary could well be associated with the leasing of properties after 1842, when the canal company sold the Hotel. Terminus post quem for the brickwork certainly establish a pre-1850 date for these changes.

The brickwork for the extant east boundary wall indicates that the gardens were re-laid and terraced in the early 20th century, and the map evidence discussed, suggests that they have remained unchanged for the best part of the last 100 years.

Unfortunately, the environmental samples did not shed any clear light on the planting designs within the gardens. Herbaceous (bordered) gardens are common in the Georgian and Victorian periods, but from the evidence in Stourport, the Tontine frontage was probably only maintained at a low level in terms of ornamentation.

The west and east wings of the actual building have provided ten private dwellings, and a public house, from the early 20th century to the early 1970s, and the central hotel complex housed a ballroom for much of this period. The properties were condemned in 1972, and the Public House (the Stourport Inn) was closed for business in 1999.

7. Recommendations



Plate 13, reproduced by kind permission of Mr M Beavers

7.1 Options for on-site reinterpretation of the Tontine gardens

There are a number of options with regard to British Waterways' intention to restore elements of the former garden frontage.

1. **Reinstatement of the original garden design.** This would require substantial re-landscaping in order to reflect the garden design implied in Sherriff's Perspective of 1776 (including the removal of the two existing terraces to re-create the original footprint). Although the drawing shows no detail of garden features, the overall plot is formally enclosed by a latticed fence structure and divided internally by paths surrounding eight discrete, rectangular beds, which approach the river quay on a gentle downward slope from the front of the Tontine.
2. **Earlier 19th century.** The documentary and archaeological information described in this report have highlighted some clear changes in the layout of the gardens, particularly in the 19th century. From the 1770s to the 1840s the Tontine property was used for commercial purposes, providing facilities for employees of the canal company and local merchants. The new archaeological data suggest that, in the early 19th century, the east end of the gardens were re-laid with a low rectangular wall, defining one of four discrete plots. This option would require some re-landscaping and the construction of four, brick 'bedding' walls, with a central path leading to the main entrance (the current, stepped pathway appears to follow the same course).

3. **Later 19th and earlier 20th century.** From about 1842, when the canal company appears to have sold the building, it was converted into private dwellings, and the gardens were further partitioned into five, and then six 'parcels'. The gardens were terraced in the early 20th century, when the Tontine comprised ten dwellings, with a hotel and function room, and public house. One of the family of residents occupied premises for the better part of 70 years. This option would require little in the way of re-landscaping, but domestic features could be incorporated into a re-laid garden frontage.
4. **Last function.** The garden may be left essentially as it is, with its brick walls, central path and terraces facilitating uses requiring level ground.
5. **Interpretive panel** An on-site information point could provide reference to the historical development and importance of the Tontine and its garden.

7.2 Options for the Tollhouse

The new archaeological information suggests that the physical character of the tollhouse, which lay beyond the south-west corner of the Tontine, has a close parallel with the Stewponey toll station at Stourton wharf, on the Staffordshire-Worcester Canal. The intact brick footings supported a single storey structure with eight sides, housing casement windows, facing the lower lock, and with an entrance on its north side. The building probably had a pitched slate roof with a central open chimney.

1. **Re-marking the footprint.** This option could involve the setting of a low brick wall marking out the position of the former building. However, it is likely that this design may have maintenance issues, and that it would have limited visual impact. As essentially a two-dimensional representation of a standing building, such an approach can be difficult to interpret.



Plate 14, reproduced by kind permission of R Phillips

2. **A kiosk structure.** To restore the presence of the tollhouse this option could entail the erection of a simple fabricated building with similar dimensions to the original building, though without attempting to replicate it beyond its characteristic eight sides. It could then perhaps be used as a seasonal information centre for the many

residents and tourists who currently use the Basins area as a leisure amenity, or potentially as a commercial outlet (ice cream kiosk).

3. **A brick-built reconstruction.** If the restoration works permit a third option could be to reinstate the original feature which appears to be unique to Stourport, though only photographic records remain to illuminate its specific character.
4. **An interpretive panel.** An information board similar to the one recommended for the Tontine gardens, would provide useful visual and historic context to the lower lock area, adjacent to the original position of the tollhouse. The panel could include brief text and a three-dimensional representation of the former feature.
5. **Retain as a grassed area.**

8. **Conclusions**

The excavations carried out for British Waterways have shed new light on Stourport and its unique position in the pioneering days of the Canal Age.

The work has also demonstrated that the local community desire future opportunities to explore the town's rich heritage. The community involvement has been welcome, and has inspired private research, and creative responses, from many members of the public. It is intended that further collaborative projects will assist British Waterways in their continuing heritage programme.

9. **Archive**

The archive consists of:

219	Photographic records AS3
1	Matrix sheet AS7
4	Sample records AS17
75	Abbreviated context records AS40
13	Scale drawings
1	Computer database with finds analysis

The project archive is intended to be placed at:

Worcestershire County Museum

Hartlebury Castle

Hartlebury

Near Kidderminster

Worcestershire DY11 7XZ

Tel Hartlebury (01299) 250416

10. **Acknowledgements**

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11. **Personnel**

Justin Hughes led the fieldwork. The project manager responsible for the quality of the project was Simon Woodiwiss. The fieldwork, and on-site archaeological training, were undertaken by Christine Elgy, Shona Robson-Glyde and Adam Lee, and the author would like to thank them in particular, for their work with the volunteers, and with on-site archaeological interpretation. Finds analysis was undertaken by Alan Jacobs, pollen analysis by Katie Head, and illustration by Carolyn Hunt. Additional Service staff who kindly attended the open weekend and otherwise assisted the project were Laura Templeton, Liz Pearson, Angus Crawford, Jon Millward, Tom Vaughan and Stephen Potten.

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Documentary sources

Prior to fieldwork commencing a search was made of the Historic Environment Record (HER) In addition the following sources were also consulted:

[Lower Mitton tithe map, 1845]

Plan of Stourport canal basins and part of the Staffordshire and Worcestershire Canal. Drawn by William Stephens, 1826

[Plan of the lower canal and canal basin, 1826. Scale half an inch to one chain]

Ordnance Survey maps

Ordnance Survey, 1884 and 1903 *Worcestershire, sheet 14, 14.10, and 14.14* (1:2, 500)

Ordnance Survey 1929, 1938, and 1947 *Worcestershire, sheet 14 SW* (1:10,560)

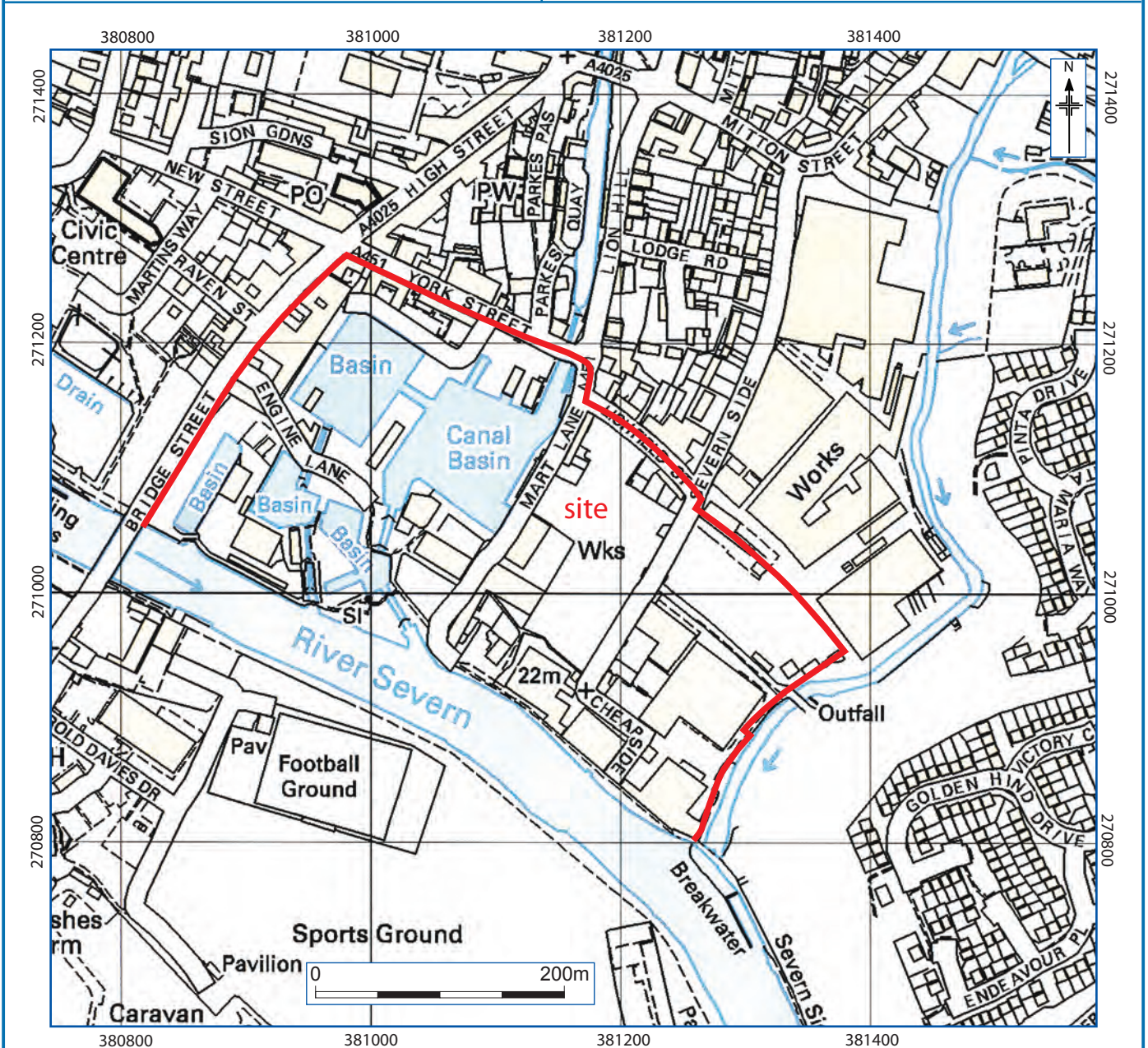
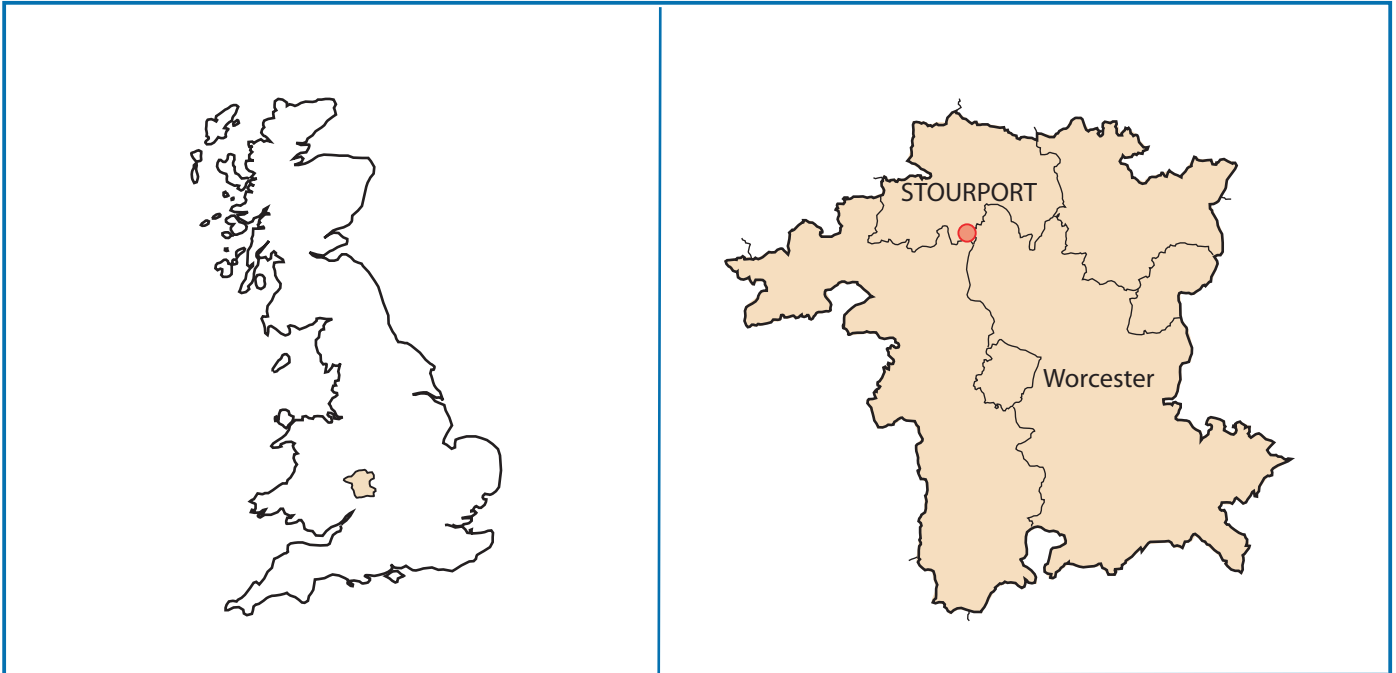
Ordnance Survey, 1955 *Sheet SO 87SW* (1:10,560)

Ordnance Survey, 1984, *Sheet SO 87SW* (1:10,000)

Ordnance Survey 1964/5 *Plans SO 70 NW, 71 SW, and 71SE* (1:1,250) Aerial photographs

Oblique photographs taken 1926, 1950, and 1991

Vertical photographs taken in 1948, 1962, 1970, 1977, and 200



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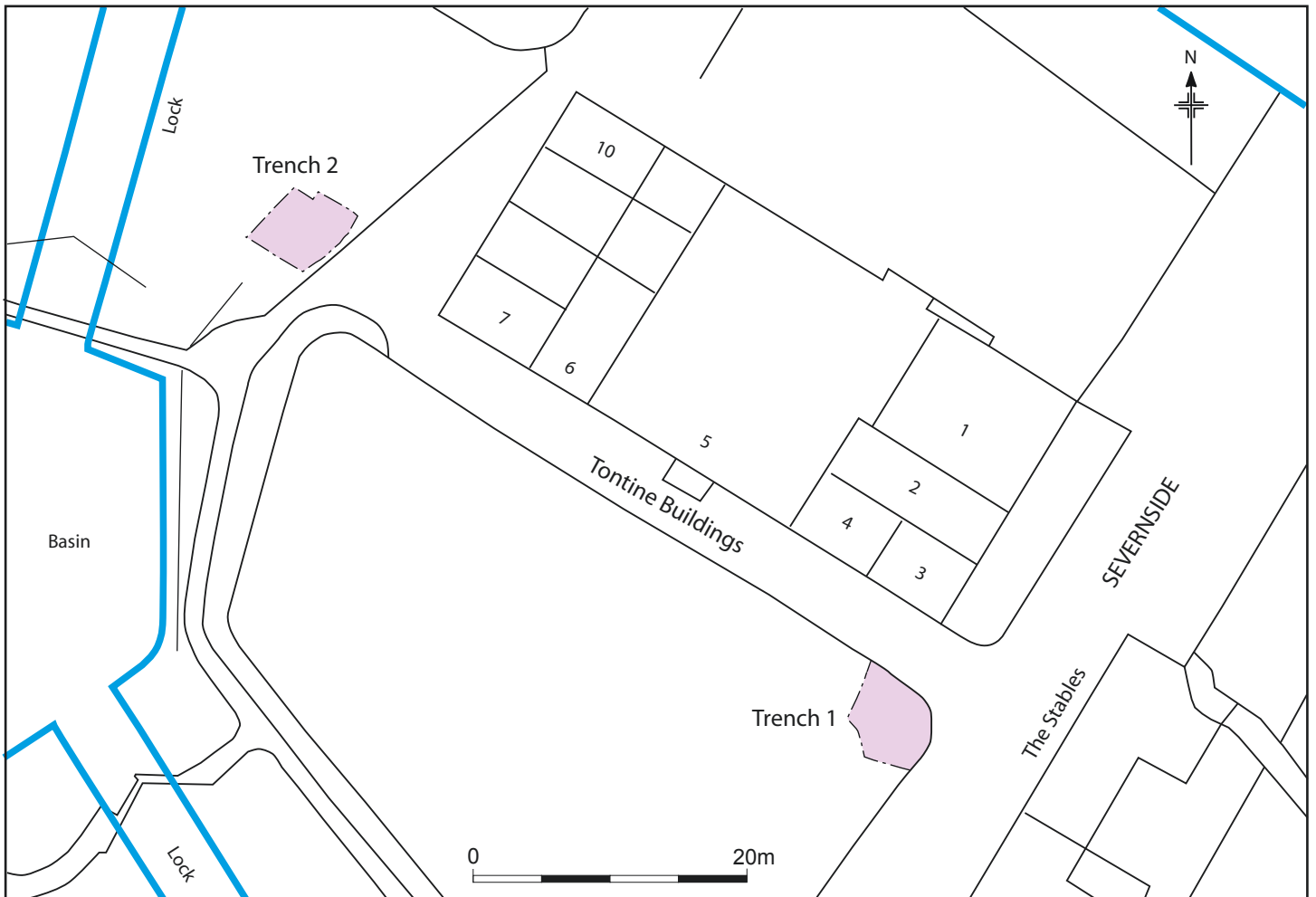
Location of the site.

Figure 1



Detail from Sherriff's print of Stourport Basins

Figure 2



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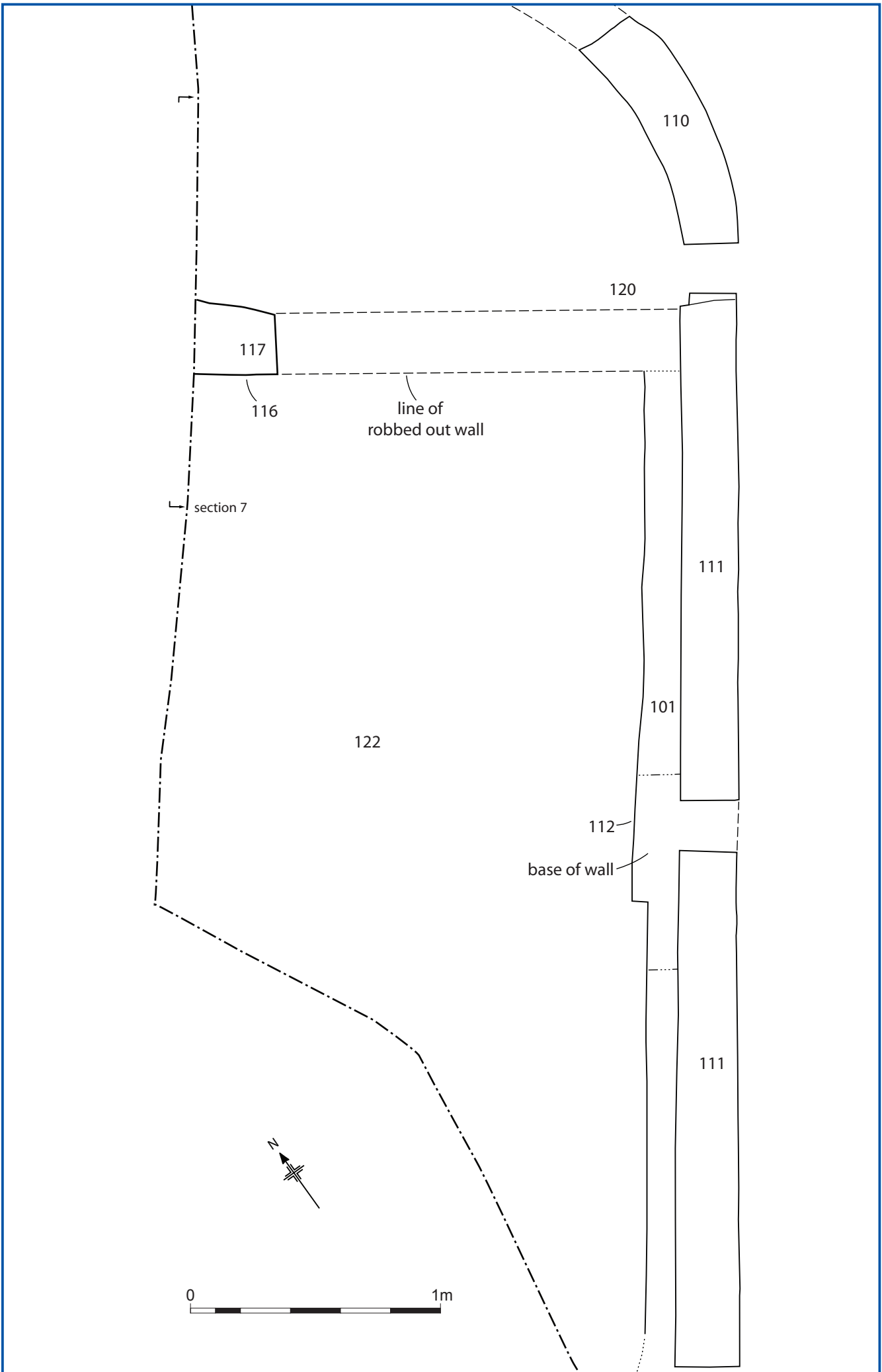
Location of Trenches 1 and 2

Figure 3



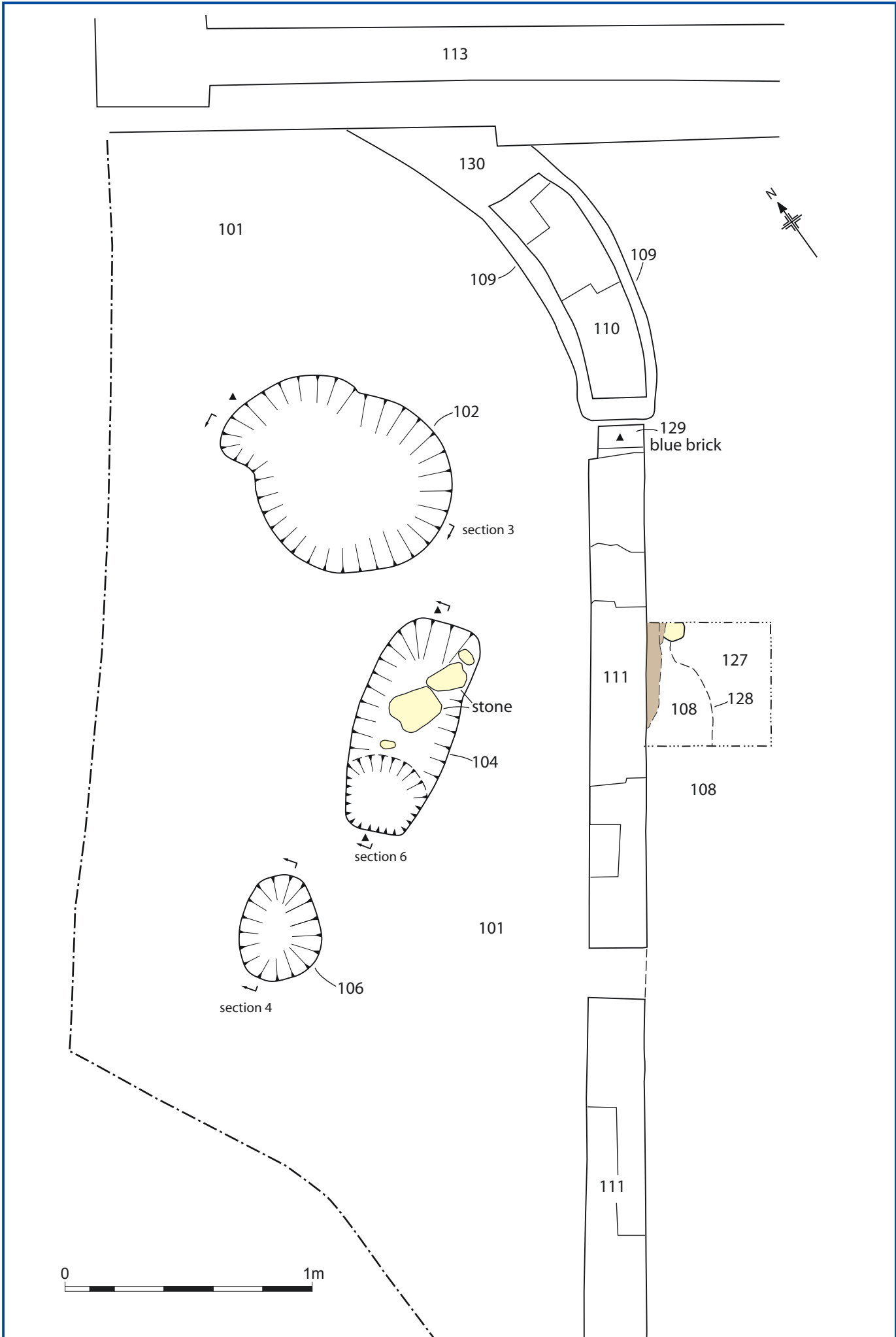
Figure 4

Part of Lower Mitton Tithe map (1845)



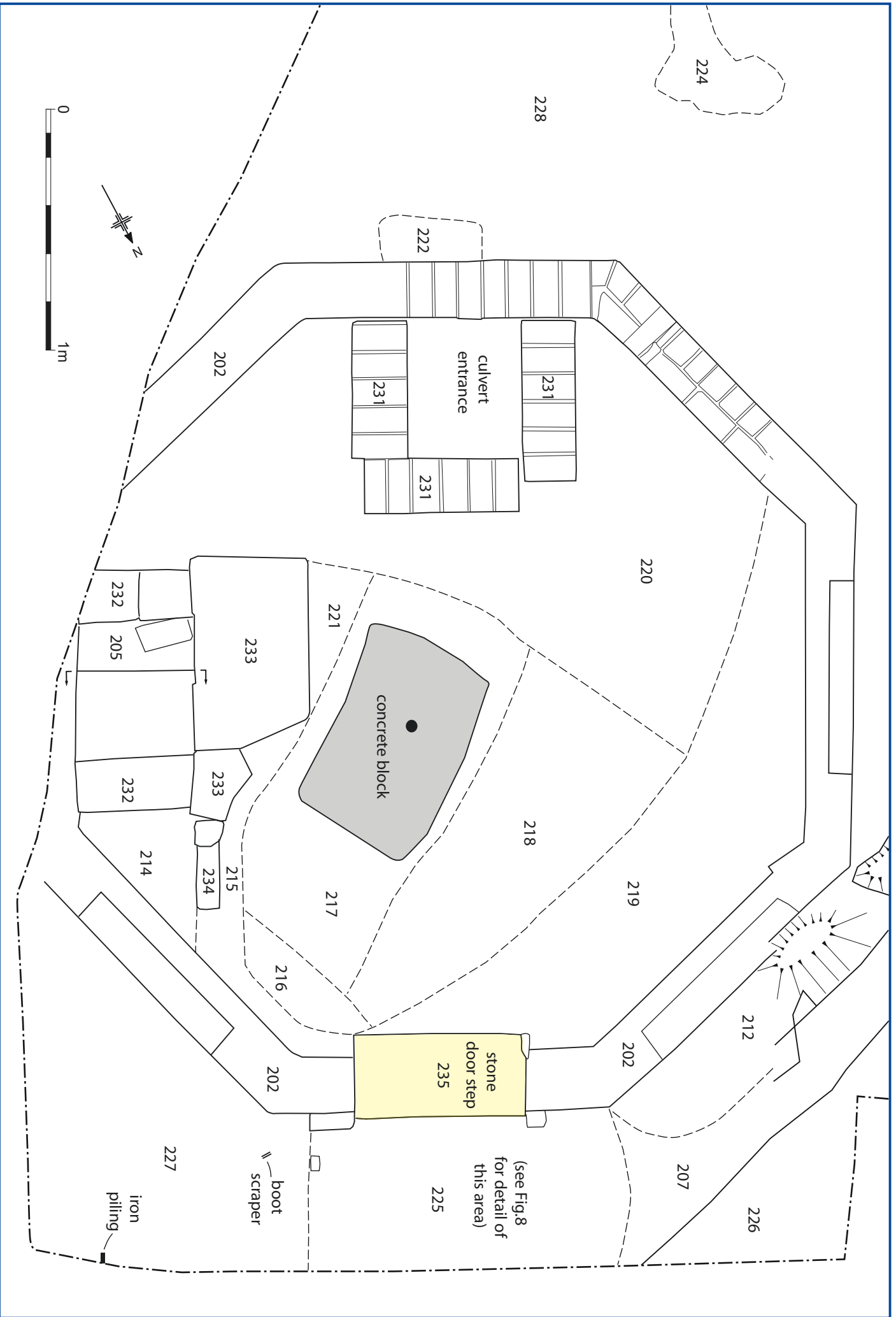
Trench I. Phase I; Context III, bedding wall

Figure 5



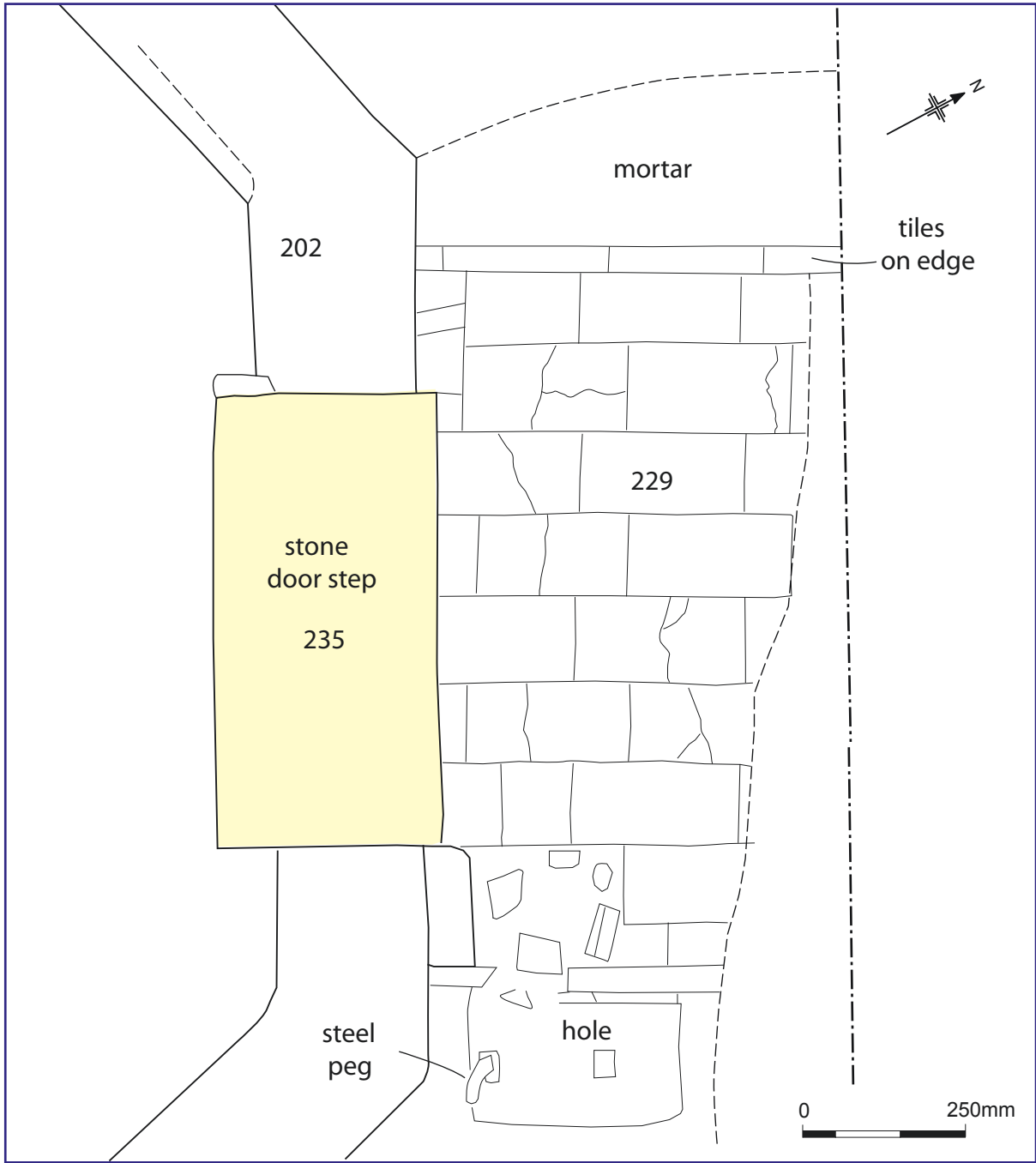
Trench I, Phase I; Plan of eastern boundary wall and garden features

Figure 6



Trench 1, Plan of Tollhouse footings

Figure 7



Trench 2; Detail of Tollhouse entrance

Figure 8

13. **Appendices****Trench descriptions****Trench 1**

Maximum dimensions: Length: 6.00m Width: 6.00m Depth: 0.86m (max)

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
0100	Topsoil	Firm dark black/brown sandy silt with frequent small and large sub-rounded stones. Moderate small and large angular lumps of CBM and occasional charcoal and manganese flecks. High level of root disturbance. Machine-excavated and cleaned by hand.	Up to 0.28m
0101	Make-up layer	Loose mid-orange brown silty sands and gravels with occasional lumps of brick and tile and pottery (same as context 108).	0.23-0.63m
0102	Cut	Cut of pit/posthole sub-oval in plan with elongated 'U' shape profile concave sides and base. Longest axis of pit runs NW-SE (same as context 118).	0.21m deep, 1.03m wide
0103	Upper pit fill	Firm dark brown sandy silt with frequent small-medium rounded stones containing moderate charcoal flecks and occasional small lumps of coal fuel ash and CBM. High level of root disturbance and worm action. Upper fill of 102.	0.21m deep, 1.03m wide
0104	Cut	Cut of pit/posthole sub-oval/elongated oval in plan irregular elongated 'U' shape in profile. SW side is near vertical NE side is concave. Irregular base with large sandstone blocks. (same as context 114)	0.26m deep, 0.90m wide
0105	Pit fill	Firm dark orange brown sandy silt with frequent sub to well-rounded fine and medium pebbles, medium charcoal flecks. Root disturbance. Fill of 104.	0.26m deep, 0.90m wide
0106	Cut	Cut of pit sub-circular in plan slightly irregular 'U' shape in profile. SW side concave NE side convex with concave base.	0.14m deep, 0.44m wide
0107	Pit fill	Dark orange brown sandy silt with frequent fine and medium pebble inclusions and charcoal flecks. Fill of 106	0.14m deep, 0.44m wide
0108	Same as 101	Separated from 101 by Structure 111.	
0109	Cut	Cut for wall 110 curving NE-N	1.45m by 0.37m
0110	Structure	Brick wall – red with no 'frog', lime mortar bonding, freestanding.	1.00m by 0.26m

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
0111	Structure	Brick wall – red with no frog (English bonding) lime mortar, freestanding.	4.30m by 0.26m
0112	Cut	Cut for wall 111 running NE-SW (same as context 128)	4.26m by 0.38m
0113	Structure	Extant redbrick wall, curving N-S and becoming linear on NE-SW alignment	
0114	Cut	Pit/posthole (same as context 104)	
0115	Pit fill	See 105 (same as context 119)	
0116	Cut	Cut for robbed wall 111 originally aligned W-E	0.32m by 0.30m
0117	Trench fill	Loose dark brown sandy silt with frequent small medium rounded stones and occasional charcoal flecks. Root disturbance Fill of robber trench 126	0.57m deep, 0.85m wide
0118	Cut	Post pit sub circular in plan with an irregular ‘U’ shape in profile. NE side concave, SW side near vertical, slightly convex. Convex base	0.26m deep, 0.68m wide
0119	Pit fill	Loose friable dark brown sandy silt with moderate small medium sub-rounded pebble inclusions and occasional flecks of charcoal and brick pieces Fill of pit 118	0.26m deep, 0.68m wide
0120	Layer (?fill)	Medium compaction, mid brown sandy silt containing medium sub-rounded and elongated pebbles, common charcoal fragments, patches of red sand, mortar and sandstone fragments	0.51m by 0.44m
0121	Layer	Loose and friable dark brown sandy silt with frequent ash inclusions, coal, mortar, and brick fragments	4.26 x 2.73 x 0.12m
0122	Layer	Sandy deposit with areas of red, loose sand and finer green sand. Occasional inclusions of large angular stones and medium sub-rounded pebbles	6.00 x 2.00 x 0.08m
0123	Layer	Mid brown silty sand and gravels consolidated and compact. Common inclusions of small, flattened pebbles and rounded stones. Only small area excavated below context 122	
0124	Cut fill	Dark brown sandy silt, loose and friable with moderate sub-rounded small medium pebble inclusions and rare small brick fragments. Moderate root disturbance. Back fill of post pipe 125	0.29m deep, 0.31m wide

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
0125	Cut	Post pipe circular in plan with ‘U’ shape profile, steep sided with concave base	0.29m deep, 0.31m wide
0126	Cut	Robber trench, to NE of wall cut 116	
0127	Layer	Equivalent to context 122	
0128	Cut	Wall cut equivalent to context 112, filled by 108	
0129	Brick	Single blue brick associated with wall 111	
0130	Cut fill	Firm dark orange brown sandy silt with frequent small medium rounded stones, flecks and small lumps of mortar. Back fill of wall cut 109	1.40m by 0.36m
0131	Layer	Firm light/white grey mortar with patches of orange grey lime, occasional charcoal flecks	3.92m by 0.86m

Trench 2 context descriptions

Maximum dimensions: Length: 5.50m Width: 5.00m Depth: 0.53m (max)

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
0201	Topsoil	Dark blackish brown silt, loosely packed, friable, with occasional oval and sub-oval, small and medium sized pebbles. Brick, tile, glass, metalwork and small amount of animal bone and pottery fragments	5.50 x 5.00 x 0.10m
0202	Structure	Brick wall octagonal, with regular coursing, English cross bonding pattern, mortared. Not excavated. 3 brick samples taken	3.52 by 0.22m
0203	Layer	Dark blackish brown silt, loose packed and friable with occasional oval and sub-oval small and medium pebbles. Contained brick, tile, glass, and small amounts of bone, pottery, slag and domestic late 20c refuse. Back fill deposit over context 202	3.56m diameter
0204	Layer	Firm, dark brownish red sandy silt. Frequent medium pebbles.	2.60m x 1.80m
0205	Primary fill	Brownish red coarse sand, loosely packed and friable with high concentration of small sub-oval pebbles and occasional medium rounded stones. Large inclusions of metallic slag. Fireplace deposit (see context 232)	0.78m by 0.48m
0206	Cut fill	Dark greyish brown sandy silt, compact and friable. No natural inclusions but high coal and coke content with occasional metal fragments. Fill of pit 213	0.41 x 0.24 x 0.08m
0207	Cut fill	Firm, dark blackish brown sandy silt with moderate small pebble content. Not excavated. Fill of ditch 236	0.46m by 0.42m
0208	Layer	Firm, dark blackish brown sandy silt with frequent medium pebbles and slag. Not excavated	1.72m by 0.94m
0209	Layer	Firm dark brown and red sandy silt with frequent medium pebbles	2.00m by 1.10m
0210	Layer	Hard greyish brown sandy silt with mortar spread and frequent mortar inclusions and occasional small pebbles.	1.44m by 0.76m
0211	Layer	Hard greyish brown sandy silt with mortar spread and frequent mortar inclusions, occasional small stones. Not excavated	0.74m by 0.26m
0212	Layer	Hard greyish brown sandy silt with mortar spread and frequent mortar inclusions, occasional small stones.	0.76m by 0.34m
0213	Cut	Circular (truncated) pit with clean break of slope, steep sides, curving to flat base. SE side walls are steeper	0.41m x 0.24m x 0.08m

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
0214	Layer	Dark reddish brown sand and mortar spread with frequent mortar and medium stones	0.52m by 0.50m
0215	Fill	Layer of dark greyish brown mortar, butts wall 202 and context 233; equivalent to 221 and 234	1.40m by 0.20m
0216	Layer	Firm dark blackish brown silt with a spread of ash, containing moderate small lumps of mortar and burnt fuel ash	0.76m by 0.22m
0217	Layer	Firm dark brown silt with moderate small stone inclusions, obscured by concrete block (with post socket)	1.58m by 0.72m
0218	Layer	Same as context 216	1.64m by 0.80m
0219	Layer	Firm reddish brown sandy silt with frequent medium mortar fragments and CBM	2.34m by 0.58m
0220	Layer	Loose orange brown sand containing CBM and stone Not excavated	2.80m by 1.40m
0221	Layer	Ashy spread. Not excavated	0.60m by 0.30m
0222	Layer	Mortar spread. Not excavated	0.40m by 0.20m
0223	Layer	Deposit of sand and gravel. Not excavated	0.27m by 0.12m
0224	Layer	Blackish brown stain	0.60m by 0.48m
0225	Layer	Mortar spread within yellow brown silt, light and friable. Rare small to medium sub-rounded pebbles and common mortar inclusions and frequent glass, brick, tile and slate. Less frequent pottery, coal, metal and bone. Residual flint	1.34m x 0.64m x 0.06m
0226	Layer	Sandy blackish brown deposit. (same as 208). Not excavated	0.88m by 0.66m
0227	Layer	Sandy black deposit. Equivalent to context 228. Not excavated	1.50m by 1.16m
0228	Layer	See context 227. Not excavated	3.70m by 2.28m
0229	Structure	Red tiled pathway. Tiles 0.25m x 0.12m x 0.03m	1.35m by 0.60m
0230	Layer	Gravel deposit – equivalent to context 228	0.60m by 0.34m
0231	Structure	Brick culvert entrance with interior shaft measuring 0.58m by 0.47m	1.00m by 0.80m
0232	Structure	Brick base for fire surround	1.00m by 0.50m

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
0233	Structure	Stone hearth	1.06m by 0.48m
0234	Layer	Mortar and brick deposit	0.38m by 0.12m
0235	Structure	Sandstone doorstep, worn with saddle dip	0.70m by 0.35m
0236	Cut	Ditch aligned NE-SW, truncated	4.60m by 0.36m
0237	Structure	Brick footings. Not fully exposed – see context 202	Not known
0238	Structure	Concrete post with socket	0.86m by 0.56m

Trench 3 context descriptions

301	Layer	Friable, mid-grey brown sandy loam (topsoil), containing occasional small and large fragments of CBM and frequent small and medium sub-rounded stones	2.30m x 2.25m x 0.23m
302	Layer	Loose buff coloured sandy loam with abundant small fragments of mortar and sandstone, partially sealing context 301	1.50m x 0.50m x 0.03m
303	Layer	Friable mixed demolition deposit, consists of grey sand, patches of topsoil, grey clay and mortar, with abundant CBM and industrial/household waste. Also contained abundant slate roof tile fragments.	0.30m x 0.30m x 0.10m
304	Layer	Loose dark brown loam with frequent fragments of CBM. Only partially excavated.	0.80m x 0.80m x >0.15m

Table 4: Pollen counts from selected contexts

Latin name	Family	Common Name	Habitat	103	105	107
<i>Pteropsida</i> (monolete) indet	Pteropsida	ferns	BCDE	9	7	14
<i>Polypodium</i>	Polypodiaceae	polypody	CD	1	1	1
<i>Pteridium aquilinum</i>	Dennstaedtiaceae	bracken	CD	1	4	7
<i>Pinus sylvestris</i>	Pinaceae	pine	C	3	3	4
<i>Quercus</i>	Fagaceae	oak	C			1
<i>Betula</i>	Betulaceae	birch	C	2	1	
<i>Alnus glutinosa</i>	Betulaceae	alder	C	3	5	1
<i>Corylus avellana</i> -type	Betulaceae	hazel	C	8	5	5
Chenopodiaceae sp	Chenopodiaceae		ABCDE	1	2	
Caryophyllaceae sp	Caryophyllaceae			1	3	1
<i>Polygonum persicaria</i>	Polygonaceae	persicaria	AB		3	
<i>Tilia cordata</i>	Tiliaceae	small-leaved lime	C		1	1
<i>Salix</i>	Salicaceae	willow	C	1	1	1
Brassicaceae sp	Brassicaceae	cabbage family	ABCDE			2
<i>Calluna vulgaris</i>	Ericaceae	heather	CD	2	1	1
Rosaceae sp	Rosaceae		ABCDE	6	3	4
<i>Filipendula</i>	Rosaceae	meadow sweet	CDE	3	1	1
<i>Potentilla</i> -type	Rosaceae	cinquefoil	BCD	1	1	1
Apiaceae sp	Apiaceae		ABCDE		3	
<i>Plantago lanceolata</i>	Plantaginaceae	ribwort plantain	D	3	2	3
<i>Viburnum opulus</i>	Caprifoliaceae	guelder-rose	C			1
<i>Centaurea scabiosa</i>	Asteraceae	greater knapweed	BD		1	1
<i>Cichorium intybus</i> -type	Asteraceae	chicory, wild succory	BD	8	22	18
<i>Anthemis</i> -type	Asteraceae	corn chamomile	AB		1	
Poaceae undiff.	Poaceae	grass	ABCD	99	129	125
<i>Cerealia</i>	Poaceae	cereal	F	1	2	3
<i>Typha latifolia</i>	Typhaceae	bulrush	E	2	3	8
<i>Sphagnum</i>	Sphagnum	moss	E		2	

Key: A = cultivated ground; B = disturbed ground; C = woodlands, hedgerows, scrub, etc; D = grasslands, meadows, heathland; E = aquatic/wet habitats; F = cultivar.

Table 5: Quantification of the assemblage by context

Context	Material	Type	Total	Weight
101	Cbm	Brick	8	229
101	Cbm	Tile	2	180
101	Coal	Modern	1	3
101	Glass	Vessel	1	2
101	Pottery	Post-medieval	6	24
101	Slate	Tile	1	195
101	Tobacco pipe	Stem	1	1
103	Bone	Mammal	2	5
103	Cbm	Brick	3	2308
103	Cbm	Tile	1	7
103	Glass	Vessel	1	2
103	Pottery	Modern	3	3
103	Pottery	Post-medieval	2	3
103	Slate	Tile	1	347
103	Tobacco pipe	Stem	2	1
105	Cbm	Brick	1	195
105	Pottery	Modern	1	13
105	Tobacco pipe	Stem	1	1
107	Cbm	Tile	1	6
110	Cbm	Brick	4	13240
111	Cbm	Brick	7	17114
119	Cbm	Brick	4	1082
119	Cbm	Tile	1	89
119	Tobacco pipe	Stem	1	1
131	Plaster	Modern	1	2
131	Pottery	Modern	7	8
131	Tobacco pipe	Stem	1	2
202	Cbm	Brick	5	5389
202	Cement	Modern	1	5600
203	Bone	Mammal	9	98
203	Burnt	Stone	3	211
203	Cbm	Brick	4	642
203	Cbm	Tile	14	1527
203	Cement	Modern	5	146
203	Glass	Vessel	14	170
203	Pottery	Modern	20	99
203	Pottery	Post-medieval	9	71
203	Seed	Peach	1	2
203	Slag	Modern	8	555
203	Slate	Tile	3	88
203	Stone	Marble	1	204
203	Tobacco pipe	Stem	2	1
204	Bone	Mammal	1	7
204	Slag	Modern	9	232
205	Slag	Modern	8	1114
205	Tobacco pipe	Stem	1	1

Context	Material	Type	Total	Weight
206	Pottery	Modern	3	5
206	Slag	Modern	5	22
207	Bone	Mammal	2	2
207	Glass	Vessel	1	6
207	Pottery	Post-medieval	1	5
207	Slag	Modern	2	7
207	Slate	Tile	8	170
225	Aluminium	Chain	2	3
225	Bone	Mammal	6	39
225	Cbm	Brick	8	435
225	Cbm	Tile	2	32
225	Cement	Modern	6	148
225	Coal	Modern	6	42
225	Flint	Worked	1	10
225	Glass	Bottle	18	69
225	Nails	Iron	8	59
225	Plaster	Modern	5	45
225	Plastic	Valve base	1	2
225	Pottery	Modern	3	3
225	Slate	Tile	36	571
229	Cbm	Tile	2	3400
303	Cbm	Tile	11	1650
303	Tobacco pipe	Stem	2	4
304	Cbm	Tile	8	4475
304	Glass	Bottle	1	4
304	Glass	Mirror	1	20
304	Glass	Window	1	7
304	Pottery	Modern	4	24
304	Slag	Furnace	2	19

Table 6: Context terminus post quem dates

Context	Ceramic TPQ
101	1780-1840
103	1780-1840
105	19 th century
107	19 th century
110	1760-1850
111	1760-1850
119	1760-1800
131	late 19 th - 20 th century
202	early 19 th century

Context	Ceramic TPQ
203	early 19 th century
204	19 th -20 th century
205	19 th -20 th century
206	19 th century
207	19 th -20 th century
225	19 th -20 th century
225	20 th century
229	19 th century
303	early 19 th century
304	early 19 th century