ARCHAEOLOGICAL EXCAVATION OF A LATRINE AT CROOME PARK, CROOME D'ABITOT, WORCESTERSHIRE

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with Emma Hancox and Deborah Overton

Illustrated by Dennis Williams

Revised 4th August 2010

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WSM40500

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General information

Client	The National Trust
Site address	Croome Park, Croome D'Abitot, Worcestershire WR8 9DW
National Grid reference	SO 880844981
Sites and Monuments Record reference	WSM40500
Project design	HEAS 2008
Project parameters	IfA 2008a, b and c

Previous archaeological work

In 2002 Oxford Archaeology carried out a building assessment of a number of buildings within the park (Gill 2002). They excavated a small trench outside the latrine at the front. They found compact lime mortar below the grass, but no evidence of paving. They note in their report that in 1788 Robert Newman invoiced for "repairing paving at the privy door in the Shrubbery". This suggests that there was a paved surface at some point, but this has now gone. Gill also partially excavated inside the latrine, but did not go very deep and did not retrieve any finds.

Gill noted that the latrine first appears on the 1765 Broome map and suggested that it was contemporary with the Temple Greenhouse. He believed that the latrine was a flimsy wooden structure on a brick base and that it was crudely built. He suggested that the stone entrance blocks would have been added in 1788 by Robert Newman when the paving was repaired.

In recent years there have been also a number of other archaeological investigations within the park, including excavations (i) of a walled feature to the north west of Croome church, (ii) at the site of the WWII RAF Officers' Mess, (iii) in the Arboretum, and (iv) at the 'carriage splash' at the south end of the Croome River.

Site background

Croome Court was the ancestral home of the Earls of Coventry until 1948, and is situated in a landscape park lying between the rivers Avon and Severn (Figure 1). The park is dominated on its east side by a shallow ridge that runs approximately north-south. To the west of this lies an expanse of flat land, crossed by the artificial Croome River. Here, the solid geology comprises Triassic Mudstones (BGS 2001). The drift geology across the park is variable, and includes local alluvial deposits, while an area of made ground, adjacent to the north-west end of the Croome River, has also been noted (BGS 1993).

According to Dean (1824), Croome Park had once been 'a deep, dead, fetid morass'. This description may have applied to part, but by no means all, of the land now enclosed by the park. Immediately to the north and south of the park, areas of 'ridge and furrow' topography on west-facing slopes of the north-south ridge still provide evidence of medieval ploughing. Aerial photographs taken shortly after World War 2 show clear 'ridge and furrow' patterns along the west-facing slopes within the park, but these were obliterated by post-war ploughing. In 2002 the

parkland was returned to pasture for cattle grazing, as part of the National Trust's restoration programme.

The Croome estate was purchased by Thomas Coventry, the 1st Baron Coventry, in 1592 (Gordon 2000). Included were cultivated fields, meadows, orchards, woodland and two mills, as well as Seggy Meer Common, a marshy area that was to be incorporated into the landscape park. At that time, the manor house was on, or very close to, the site of the present Croome Court, while the medieval church of St James the Apostle was situated near the north-west corner of the house. Although there appears to be no record of its type of construction, the manor house was probably timber-framed, along the lines of other large properties in the district, e.g. Besford Court, Earls Croome Court and Pirton Court.

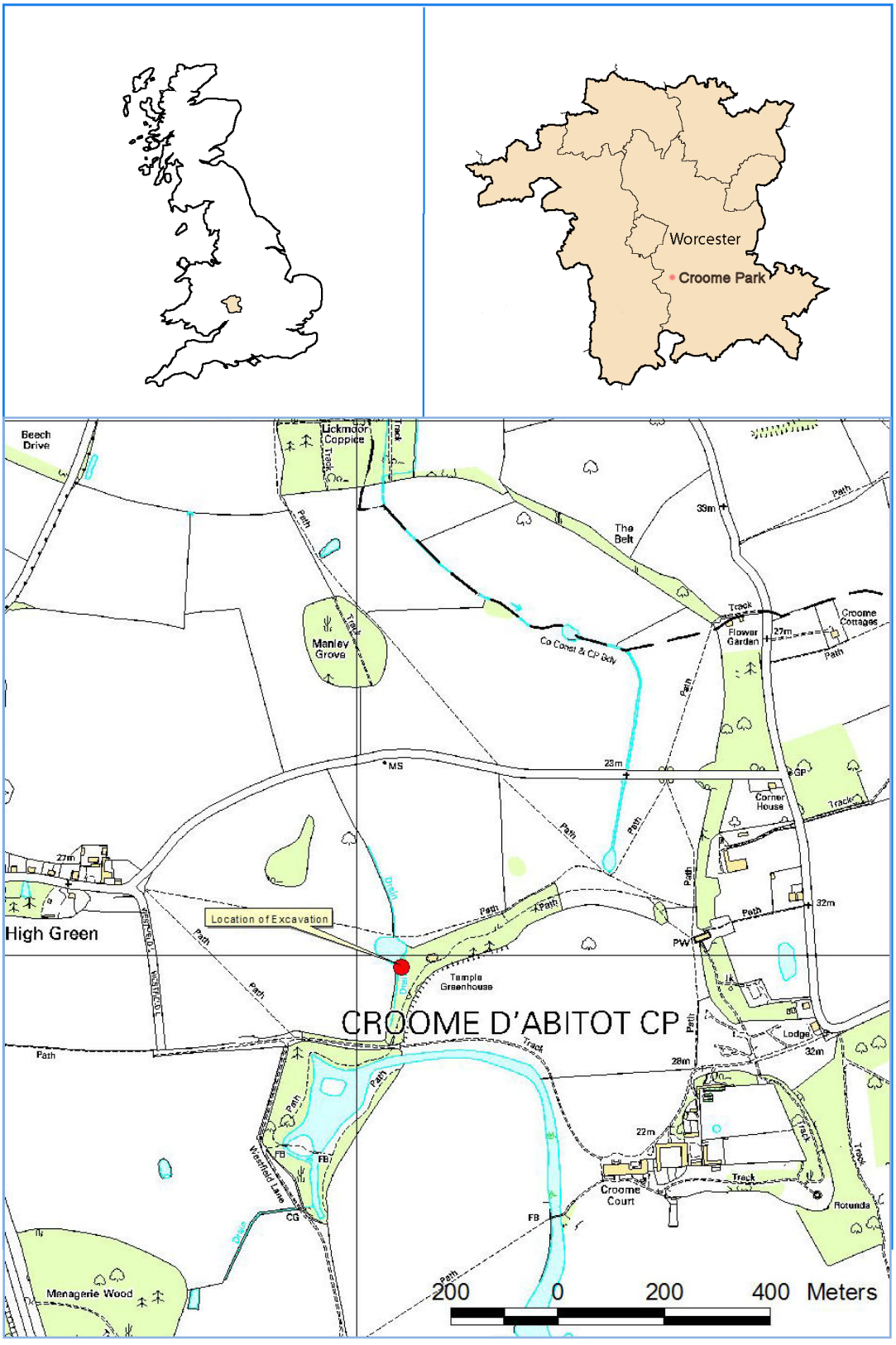

Figure 1. *Site location.*

Following a serious fire, the 2nd Baron Coventry set about building a new house at Croome in 1640. This would be constructed of brick with ashlar facings, to a design that featured a double pile plan, two storeys above a basement, and an attic floor with dormer windows. On the north side, there were nine bays, incorporating wings in the form of shallow, symmetrical projections on each side of the main entrance. The south side had eleven bays, with lower wings extending east and west; each of these wings was divided into five bays by Ionic pillars. This side of the house looked out on a formal parterre with two gazebos. A gatehouse, built a few years earlier, was retained to the north of the new house, as were a number of other outbuildings.

In 1750, the 6th Earl of Coventry commissioned Lancelot Brown to re-model the landscape of Croome Park. The willingness of the Earl to entrust this major design work to Brown was a measure of the reputation the latter had rapidly achieved in his post of head gardener at Stowe, in Buckinghamshire. However, the 6th Earl had initiated significant changes in the Croome landscape some time before his introduction to 'Capability' Brown. The most notable of these was the digging of an artificial lake, which started just west of the house and extended southwards to a dam, close to the park boundary. Looking from the house, towards the south-west, the long, serpentine form of the lake gave the impression of a river bisecting the parkland. This first section of the 'Croome River' had been completed by 1748.

Brown probably started work on designs for rebuilding and decoration of the house at Croome in 1751. This was the beginning of a phase of development that lasted until 1756, and during which some parts of the old house (visible today as disproportionately thick internal walls) were preserved within a larger building with completely new facades, to be known as Croome Court.

From the Court, there were well-trimmed lawns sweeping down to the Croome River. The area immediately around the Court was kept free from shrubs and trees, in order to allow clear lines of sight across the park, but Brown controlled the more distant views by planting peripheral belts of woodland. In addition, his famous 'clumps' were planted in strategic places north of the Court, and along the ridge to the east. These used tree species specially selected to give all year round colour.

From 1760 onwards, Robert Adam also worked at Croome, with his architectural and decorative ideas being implemented inside the Court alongside those of 'Capability' Brown. Although Brown was closely involved with the Gothic-style design of the new church, detailed work on both the building and its internal features appears to have been taken over by Adam in 1761. The new church, dedicated to St Mary Magdalene, was built on the ridge, north-east of the Court, replacing the medieval one next to the house. The bells and Coventry memorials were moved to the new church, which was consecrated in 1763.

During 1762-66, Brown continued to be involved in work on the interior of Croome Court, as well as further landscaping in the park, including the construction of the ha-ha to the north of the house. The Croome River was extended northwards, then to the west, where it was opened out to form an ornamental lake with two islands, one of which was accessible via bridges. Careful planting of trees hid the end of this water feature, when viewed from the Court, thus enhancing the illusion of there being a winding river, rather than a finite lake, within the park. The ornamental lake and its surrounding gardens acted as a focus for various decorative structures put in place during the latter half of the 18th century. These included the Grotto, Dry Arch bridge, Druid statue and Island Temple, which were probably designed by James Wyatt (although the last of these may have alternatively been the work of Adam).

To the north-east of the ornamental lake, a site was chosen for the building of an elaborate conservatory, the Temple Greenhouse. Designed by Adam in 1760, this beautiful building has a central Doric portico, with decorations carved by Alken. The open area beneath the portico was enclosed originally by large sash windows, with painted statues of Ceres and Flora in the flanking niches. The latrine, or privy, which forms the subject of this report, was situated approximately 50m south-west of the Temple Greenhouse, and is marked on the 1st Edition Ordnance Survey map. Examination of the estate maps produced by Doharty (1751) and Snape (1796) gives a clear indication of the changes that took place in the north-west part of Croome Park during the 18th century. Although Doharty's map appears to be much less accurate than Snape's, the former does

provide evidence of a small settlement, comprising at least four buildings, north-west of the present Croome Court. These buildings are absent from Snape's map, which shows the park, in most respects, much as it appears in successive editions of the Ordnance Survey maps. The latrine is not shown on the 1751 map, but Gill (2002) states that it is shown on the 1765 Broome map along with the Temple Greenhouse. The 1765 map was not available at the time of writing this report.

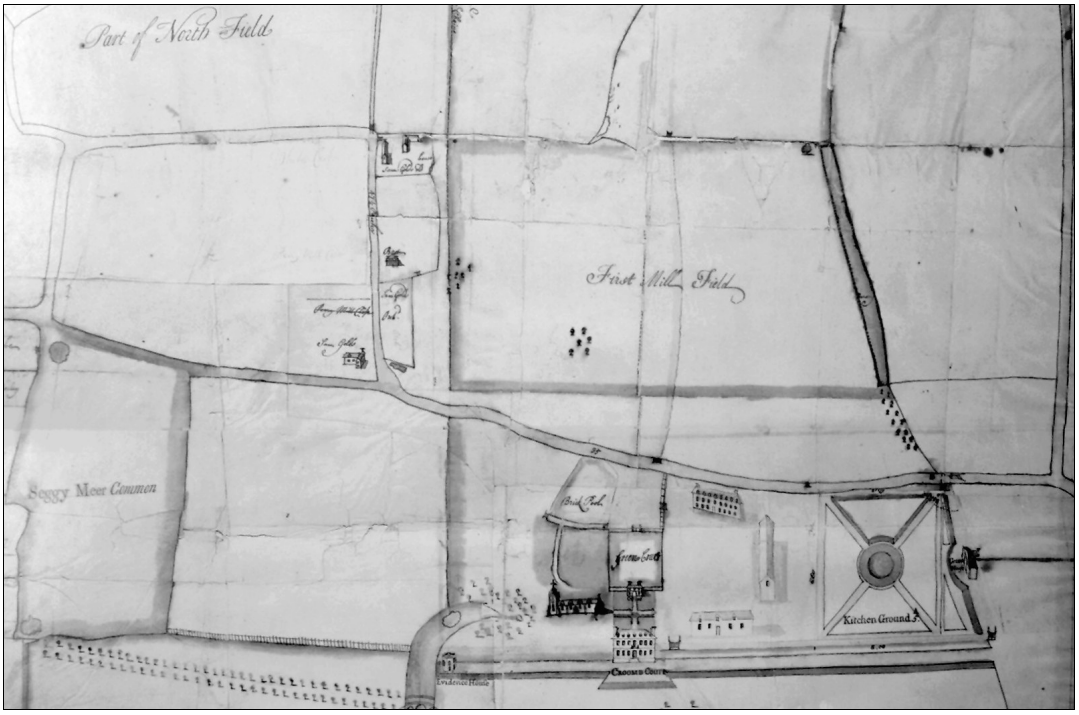

Figure 2. Map by Doharty, 1751, showing settlement NW of Croome Court.

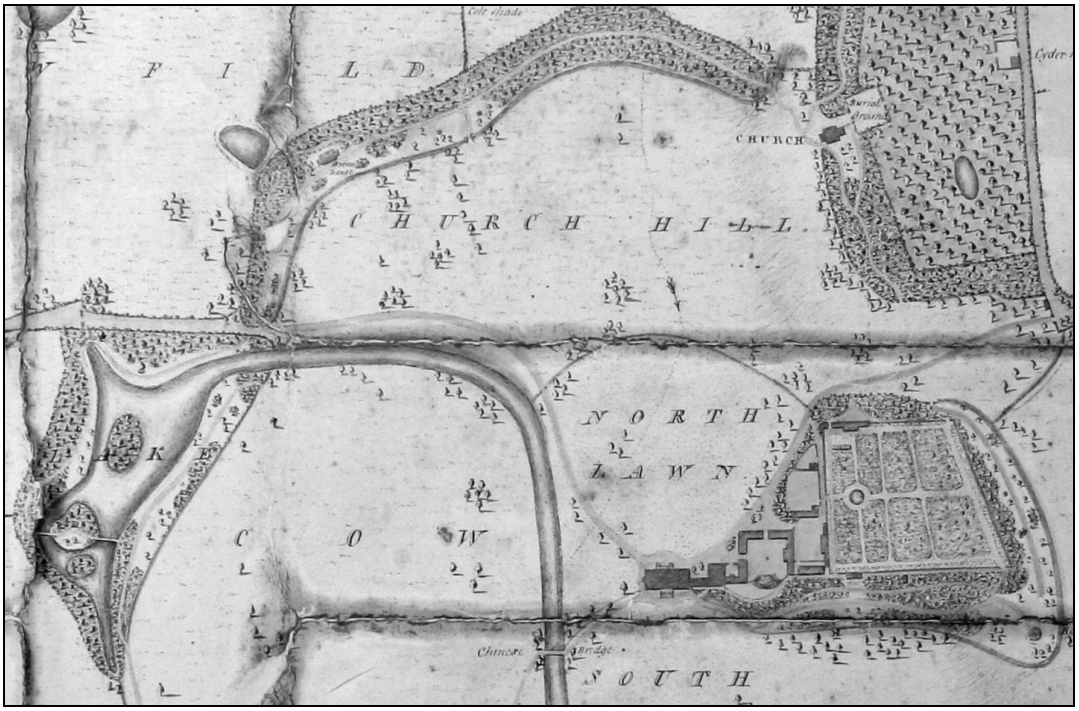

Figure 3. Map by Snape, 1796, showing landscape park.

Figure 4. Modern landscape park features superimposed on Doharty's map:
Outlines of Croome River, lake, lagoons and watercourses in blue;
Park boundary, paths and shrubberies in green;
Latrine and Temple Greenhouse in red.

Figure 5. Croome landscape park, looking south. Temple Greenhouse is visible in shrubbery; to the right of this is overgrown lagoon, then field with cropmarks in ripening wheat (© D Williams).

In Figure 4, Doharty's map has been georeferenced to a modern map using points on unchanged features, e.g. the 'New Road' to High Green, and the road running northwards from the main park entrance at the London Arch. This comparison suggests that the demolished settlement would have been located within the confines of the present parkland, no more than 200m east of the latrine site.

The land outside the park, to the north and west of the latrine site, corresponds to 'Part of North Field' on Doharty's map. A trackway ran westwards from the northernmost buildings of the settlement; this may survive in part as a short section of holloway just north of the Temple Greenhouse, as recorded by Gill (1997). According to Doharty's map, this route then divided, going south to join the route that became the West Drive, and north towards the present High Green houses and estate offices. Cropmarks photographed in the same area (Williams 2005) are well matched to this junction, as represented by Doharty (Figure 5).

The 18th century park landscaping required sources of water for the fountains and waterfalls around the ornamental lake, which occupies the area marked on Doharty's map as Seggy Meer Common. Snape's map shows an irregular-shaped lagoon was dug in 'Part of North Field', and a smaller one on the boundary between this field and the park. These are currently filled with water, but very overgrown. The smaller lagoon was linked by the park boundary ditch to a watercourse that entered the ornamental lake via the Grotto. The latrine was situated just south of the smaller lagoon, on the east bank of the boundary ditch.

Aims

The project had the following specific aims:

- To excavate and identify the remains of a building, believed to be an 18th century latrine, in the shrubbery south-west of the Temple Greenhouse.
- To excavate a section of the ditch, into which the latrine is thought to have drained, and to investigate its date, extent and survival.
- To take environmental samples of any suitable deposits.
- To enable members of the public to participate in the excavation where appropriate.

Methods

Documentary search

Prior to the commencement of fieldwork, a search was made of the Historic Environment Record (HER). In addition to the cartographic sources already described, the Ordnance Survey, 1st edition map, 1885, was consulted.

Fieldwork strategy

A detailed specification was prepared by the Service (HEAS 2008). Fieldwork was undertaken on 19th and 20th July 2008, and 25th and 26th July 2009. The site location is shown in Figure 1. The Worcestershire HER code for the activity is WSM 40500.

Excavation was undertaken by hand. All deposits were examined to determine their stratification, and sorted to retrieve artefactual material and environmental samples. Deposits were recorded according to standard Service practice (CAS 1995).

Structural analysis

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

Figure 6. One of the specific aims of the project was to involve members of the public. This was achieved through an exhibition, by having staff and volunteers on site to explain what we were doing, and by allowing visitors to join in and learn how to excavate if they wished.

Figure 7. The exhibition 'Latrines through the Ages', which accompanied the excavation.

Artefact recovery policy

The artefact recovery policy conformed to standard Service practice (CAS 1995, Appendix 4).

Artefactual analysis

All hand-retrieved finds were examined and a primary record made on a Microsoft Access 2000 database. Finds were identified, quantified and dated to period, and a *terminus post quem* date produced for each stratified context. These dates were used as a means of determining the broad chronology of the site. Pottery was examined under ×20 magnification and recorded by fabric type according to the reference series maintained by the service (Hurst and Rees 1992; WHEAS 2009).

Narrative – excavation

During the first phase of the work, in July 2008, a single trench covering an area of approximately 12m^2 was excavated. This included 50% of the latrine building and part of the adjacent ditch. The second phase, in July 2009, enabled the excavation of the latrine cess chamber to be completed, a full section to be cut through the deepest part of the ditch, the footings of the latrine wall to be reached on the north-east side, and the possibility of a path leading to the latrine investigated. The contexts recorded during the two phases of excavation are described in Table 1, with site drawings being presented as Appendix 1.

The excavation confirmed that the foundations visible behind the Temple Greenhouse were those of a latrine. This was almost square in plan, 2.1 × 2.5m, and constructed of brick. At the front, there were two large stone doorsteps, which had inset hinge sockets for double doors. Between the back wall and an internal wall there was a cess chamber, its brick base lying approximately 1.2m below the estimated level of the main floor. The cess drained, via an arched aperture, into the ditch running behind the latrine. There would probably have been a wooden bench above the cess chamber, with room for up to three openings, although no trace of this survived.

The standard of bricklaying was generally poor, giving the impression that unskilled labour had been employed for this task. Many misshapen and over-fired bricks were observed, with the worst quality bricks having been used at the back of the latrine, where they would not be seen. There was no consistent pattern of bonding, nor any attempt to widen the lower courses to form footings. The first course of bricks was laid directly onto an orange-brown silty clay containing brick and mortar fragments (context 100), which appeared to overlie the natural clay (context 113). To start with, context 100 was thought to be the localised backfill of a large trench excavated specifically for the construction of the latrine, but further investigation suggested that it may have been a more extensive deposit, possibly the result of earthmoving during the landscaping of the park.

Alongside the base of the north-east wall of the latrine, the transition from the natural (context 113) to made ground (context 100) was very diffuse. The section excavated through the ditch showed that its lower part was steep-sided, with a V-shaped profile. This had been cut directly into the natural clay, reaching a depth of more than 2m. Lack of time prevented further excavation of the section into the north-west bank of the ditch. However, this side appeared to have been built up to form an embankment that accentuated the park boundary, and was comparable in height with the ground surrounding the latrine on the other side.

The fills inside the building (101, 102, 104, 105, 106) and the upper fill of the ditch (103) contained a large number of bricks, along with mortar, plaster, slate and tile. Some of these materials could have been initially deposited if the building had collapsed of its own accord, but in any case, much of the superstructure seemed to have been used for backfilling, following final demolition of the building. Only one piece of carved stone was found in the cess chamber, suggesting that decorative stonework, if present as secondary structure, had mostly been salvaged before the site was levelled.

Context	Colour Texture Type	Description	Interpretation	Depth (below local ground level)
100	Orange-brown silty clay	Containing moderate brick, mortar and tile fragments near top (probably intrusive). Not fully excavated.	Layer (possibly from park landscaping)	0.05 to >1.2m
101	Greyish-brown silty clay	Containing loose bricks, and moderate mortar and tile fragments.	Tertiary (top) fill of cess chamber	0.0 to 0.2m
102	Greyish-brown silty clay	Containing loose bricks, abundant mortar and plaster, moderate tile fragments, and some small mammal and bird bones.	Secondary fill of cess chamber	0.2 to 0.75m
103	Orange- brown silty clay	Containing substantial brick and mortar rubble, and moderate tile fragments.	Tertiary fill of ditch	0.05 to 1.1m
104	Greyish-brown silty clay	Containing loose bricks, abundant mortar, moderate tile, and large number of small mammal and bird bones.	Top fill of latrine	0.0 to 0.1m
105	Orange-brown silty clay.	Containing moderate brick, mortar and tile fragments. Not fully excavated. Equivalent to 100 ?	Layer (possibly from park landscaping)	0.05 to >0.2m
106	Greyish- brown silty clay	Slightly sandier and more friable than 102. Containing abundant mortar, plaster and tile fragments.	Primary fill of cess chamber	0.75 to 1.15m
107	Brick	NW wall of latrine	Wall	-
108	Brick	SE wall of latrine	Wall	-
109	Brick	NE wall of latrine	Wall	-
110	Brick	SW wall of latrine	Wall	-
111	Brick	Internal wall (forming SE side of cess chamber)	Wall	-
112	Brick	Floor of cess chamber	Floor	1.15m
113	Reddish-brown clay	Compact, cohesive natural clay deposit.	Natural	-
114	Brown silty clay	Topsoil, outside NE wall of latrine.	Topsoil	0.0 to 0.05m
115	-	Cut of ditch	Boundary/drain	-
116	-	*Number not used*	-	-
117	Brown silty clay	Topsoil, over ditch fill	Topsoil	0.0 to 0.05m
118	Greyish-brown silty clay	Wash, down NW side of ditch	Thin subsoil layer	0.05 to 0.1m
119	Reddish-brown clay	Containing moderate brick, mortar, plaster and tile fragments.	Secondary fill of ditch	0.6 to 1.3m
120	Reddish-brown clay	Containing black, waterlogged leaves.	Primary fill of ditch	1.3 to 1.4m
121	Brown silty clay	Topsoil, outside SE side of the latrine. Equivalent to 114.	Topsoil.	0.0 to 0.05m
122	Orange-brown silty clay	Subsoil, outside front of latrine. Equivalent to 100.	Layer (possibly from park landscaping)	0.05 to >0.15m

Table 1. Context descriptions.

Figure 8. General view of latrine structure, looking W. Trench on right-hand side is excavated down to the first course of bricks.

Figure 9. Latrine, looking NE. Cess chamber is on left-hand side, with drainage ditch next to it.

Figure 10. Cess chamber, looking NE.

Figure 11. Vertical view of latrine structure (NW at top). *(© Aerial-Cam)*

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Figure 12. NW wall, with arched discharge from cess chamber above the ditch.

Figure 13. Brickwork around discharge from cess chamber.

Figure 14. NE facing section through bank of ditch, containing demolition rubble.

Figure 15. NE facing section through deepest part of ditch.

The artefact assemblage

The finds from the excavation are summarised in Table 2. Except for one small body sherd of Roman pottery (local Severn Valley ware), all of the finds dated from the post-medieval or modern periods. The standard of preservation was generally good.

Most of the finds were from fill within the cess chamber, or which had tumbled out of the rear of this chamber, into the ditch below. There were numerous fragments of building materials, including brick, glass, mortar, plaster, stone and tile. Any items that gave indications of the latrine's detailed appearance, such as pieces of worked stone, were retained. Representative samples of general building materials were also taken, in order to derive information on the latrine's likely date and general mode of construction. Whole bricks from the excavated fills were examined, measured, and compared with those remaining *in situ*, but were not included in the quantification of the assemblage (though small samples of brick were kept for fabric reference purposes). Other finds consisted of domestic and sporting items, including pottery, glass bottles, clay pipe fragments and shotgun cartridges.

A large number of small mammal and bird bones were recovered from the top and secondary fills of the cess chamber (contexts 101 and 102, respectively), and the top layer within the main part of the latrine building (context 104). These bones were not analysed in detail, though it was noted that they were consistent with the type of remains found in owl pellets. It was hoped that the cess pit would contain significant environmental deposits, but the material recovered was relatively dry and free from organic matter, so no useful samples could be extracted.

Material	Type	Total	Weight(g)
Bone	Undated	91	325
Brick	Post-medieval	19	1114
Brick/tile	Post-medieval	5	200
Cinder	Undated	1	1
Clay pipe	Post-medieval	7	25
Glass	Modern	6	28
Glass	Post-medieval	188	2273
Glass	Post-medieval/modern	44	4029
Metal	Modern	15	93
Metal	Post-medieval	2	58
Metal	Post-medieval/modern	3	42
Plastic	Modern	2	12
Mortar	Post-medieval	39	894
Plaster	Post-medieval	208	5858
Pottery	Post-medieval	121	3633
Pottery	Post-medieval/modern	3	96
Pottery	Roman	1	4
Stone	Post-medieval	33	5566
Tile	Post-medieval	30	4308
Tile	Post-medieval/modern	87	14161
Wood	Undated	2	4
Totals:		935	42861

Table 2. Quantification of the assemblage.

Pottery

The pottery was grouped and quantified according to fabric type (Table 3). All sherds were identifiable by their fabric types to general production spans, and where possible, dated by form.

Period	Fabric code	Fabric name	Count	Weight(g)
Roman	12	Severn Valley ware	1	4
Post-medieval	78	Post-medieval red wares	26	439
Post-medieval	85	Bone china	89	2836
Post-medieval	91	Post-medieval buff wares	1	26
Post-medieval/modern	100	Miscellaneous post-med./ modern wares	8	428
		Totals:	125	3733

Table 3. Quantification of the pottery by period and fabric-type.

Earthenware pottery, consisting mainly of post-medieval red wares (fabric 78), was found in contexts 102 (secondary fill of cess chamber), 103 (ditch fill, butting against the north-west wall), 104 (top layer in main part of the latrine) and 106 (primary fill of cess chamber). The red wares from context 103 included three distinct sets of material:

The first comprised a beaded rim sherd, from a large, shallow bowl. This had been a rather crudely fashioned, functional vessel with no glaze to seal its coarse, pale reddish-brown fabric. Second, there were sherds with finer fabrics, coated with a matt red slips. These included two thickened and everted rims from gently flared bowls. Third, there were a number of sherds that also had matt red slips, but were over-coated with glossy black glazes, on both internal and external surfaces. In terms of exact dating, these fabrics, with or without glazes, are of limited use, since they enjoyed long production spans. These stretched through the 17th -18th centuries (and probably later than this for some generic forms such as bowls and pancheons).

A single sherd of a post-medieval buff ware (fabric 91) was also recovered from context 103. This took the form of a slightly everted, unthickened rim from a thin-walled, large jar (or possibly a small chamberpot). Black-glazed, inside and out, this dated from the 18th century. Small sherds of orange earthenwares (fabric 100) were found in contexts 103 and 106. These were probably from 19th-20th century plant pots. A small, black-glazed drop or side handle, with a red ware fabric (78), was found in context 100, the made ground on the north-east side of the latrine. No other pottery finds were recovered beyond the confines of the building and the ditch adjoining it.

The most conspicuous pottery sherds were of a white bone china (fabric 85). Most of these came from the primary cess chamber fill, context 106, with a substantial number from context 102 as well. They belonged to a single dinner service, with an oval platter and a pair of identical pedestal vegetable bowls being represented in the group. Parts of a domed lid with a top handle matched the bowls, which themselves had pairs of twig handles finished in gold. These items were decorated with green and red posie designs, and twisted gold borders. An impressed maker's mark was observed on the underside of one of the bowls; although this had partly flowed out during firing, it was still recognisable as the circular design used by Kerr and Binns in Worcester from 1852 to 1862. It was also noted that successive Earls of Coventry were loyal customers of the Royal Worcester company and its predecessors, which included Kerr and Binns (H Frost, *pers. comm*.).

In spite of its ignominious place of disposal, the value this bone china must have once had as a possession was evident from the trouble that had been taken to repair the oval platter, after a large rim segment had broken away. Blind holes had been carefully drilled either side of the break, to accept metal rivets or staples, though none of these small fasteners was recovered during the excavation (Figure 16).

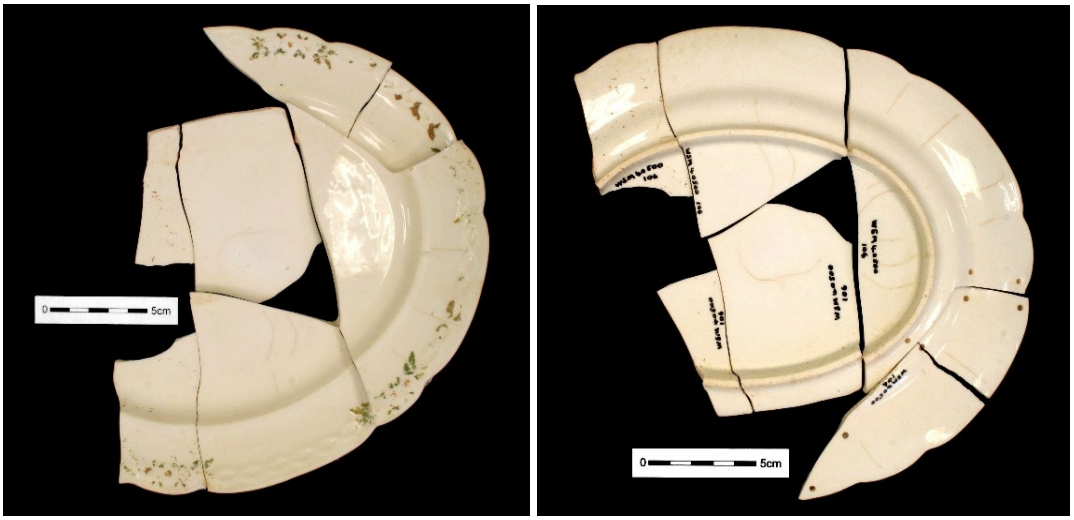

Figure 16. (a) (b)
Bone china platter, with repair holes (bottom right) drilled on underside.

Other artefacts

Clay pipes

Fragments of clay pipe stems were found in contexts 102 and 106. Two, from 106, were stamped by C Hardwick, a Worcester manufacturer known to have been trading in 1850 (Oswald 1975).

Bottles

One complete glass beverage bottle and parts of at least seven similar ones were found in context 106. All had been produced from pale greenish-blue 'Aqua' glass by three-piece moulding, a manufacturing technique employed from approximately 1820 onwards. However, the intact bottle was marked 'CS & Co' on its base, showing that it was produced by Cannington, Shaw and Co Ltd of St Helens. This firm traded from 1875 until 1913, when it became part of United Glass. Another of these bottles bore the remains of a label, with the letters '...OTCH WH...' being legible, although the distiller's name had been lost. A round bottle from context 106 was also three-piece moulded, but much smaller (60mm high × 29mm diameter). This had probably contained a medicine.

Shotgun cartridges

Various bases of centrefire shotgun cartridges were recovered, all of which had been discharged. Apart from one near the surface in context 104 (which retained its modern plastic case), they would have had paper cases.

The very corroded steel base of a 12 bore cartridge was found in context 101, the top fill of the cess chamber. Twelve bases, also 12 gauge, were retrieved from context 102, below this. Some were brass, and others plated steel, but all exhibited legible makers' stamps, including those of Eley, Joyce, Kynoch, and Kynoch Nobel. The last of these was used following the takeover of G Kynoch and Co by Nobel Industries in 1919. It was noted, however, that none of the bases had the Eley Kynoch stamp that was used for a long period after Eley Brothers merged with Kynoch in 1926.

Two bases, one 12 gauge, the other 16, were found in context 106, near the bottom of the cess chamber. Both were stamped 'Eley London, Gastight', indicating their dates of manufacture were possibly earlier than World War I.

Miscellaneous metal

Other metal finds were unremarkable, consisting of a pressed-steel button, two hand-made nails, a small section of steel bar (possibly from a window latch) and a piece of lead roofing sheet.

Ceramic building materials

The bricks excavated from within the cess chamber and the top of the ditch were similar to the ones that remained in the latrine walls. They were solid (i.e. without frogs) and hand-made, no doubt using local clay that was fired in makeshift kilns. Their mean size was 9⅛ × 4⅜ × 2¾ in (232 × 110 × 71mm), which was the same as for those in the nearby Temple Greenhouse. The fabrics of the bricks in the two buildings were also well matched.

Roof tile fragments were also found in the latrine and ditch. The lapped surfaces of the tiles often bore traces of mortar. There were two main types of tile. The first had a hard, orange-brown fabric, with thicknesses in the range 16-20mm. Fragments of this were taken from contexts 101, 102, 103, 104, 105, 106 and 121. Although no intact examples were recovered, one complete edge was measured as 7in (177mm). Where nibs had survived, these appeared to have been hand-formed by denting and lifting the tile edge. This type of tile could be expected from the 18th century onwards.

The second type of tile had a very hard, greyish-brown fabric. One complete example, measuring 11 × 6½ × ½ in (280 × 165 × 12.5mm), was recovered from context 102. This was machine-formed with applied nibs. The fabric, size and manufacturing method of this tile suggested it was made no earlier than the mid-19th century. Broken tiles with this fabric had thicknesses in the range 11-13mm, and were recovered from the same range of contexts (apart from 105) as the thicker, orange-brown tile fragments.

Stone

Fragments of roofing slate, in both greenish-grey and dark grey colours, were found in the same contexts as the ceramic tiles (apart from 121). Some slates were pierced by nail-holes, and most had mortar adhering to them.

Two pieces of worked stone were recovered. One, found in context 103, was broken from a slab of oolitic limestone. This had tool marks on its two surviving flat faces. The other piece, found in context 102, was also fragmentary, but more substantial, with a maximum width of 165mm and a projecting, flat front face, 100mm across. This was carved from a pinkish-brown, calcareous sandstone to form a classic moulding, based on an ovulo section.

Mortar and plaster

Numerous fragments of mortar and plaster were present in the latrine and ditch fills. All were lime-based (there was no evidence of modern Portland cement at the site). The mixes used for bricklaying and plastering appeared to be basically similar, but with less aggregate being used in the latter process. There was no sign of render on the external surfaces of the latrine brickwork; it was observed that the lean-to quarters at the rear of the Temple Greenhouse were also left as bare brick.

There was ample evidence of plaster on the inside of the latrine walls, but nothing to indicate there had been a lath and plaster ceiling. The wall plaster thickness was typically 20mm, but could be as much as 40mm. A fine plaster finishing coat, approximately 3mm thick, had then been applied on top of this, in order to provide a smooth base for an opaque, ochre-coloured paint. The surviving patches of paint were insoluble in water or dilute hydrochloric acid, suggesting this was a casein or oil bound distemper (rather than an earlier 'soft' distemper).

Glass

Fragments of post-medieval window glass were evident throughout most of the excavation. This material was pale bluish-green and had flaking, iridescent surfaces, typical of a decaying potash glass. Its thickness was in the range 1.4-2.4mm, with marked tapering across many of the fragments, characteristic of small sheets produced by spinning using the 'crown glass' process. Two sherds of modern window glass (found near the top of context 103) were probably the result of recent disposal in the area of the ditch. No putty or remains of window frames were found.

Overview of artefactual evidence

Context *terminus post quem* dates, based on the finds, are given in Table 4. Owing to the nature of the excavation, in which finds were found predominantly in backfilled contexts, application of accurate dating evidence has been confined to the disuse and demolition of the latrine building. In this respect, the whisky bottles recovered from context 106 provided a *terminus post quem* range of 1875-1913 for the initial backfill of the cess chamber. The maker's stamps on the shotgun cartridges suggested a *terminus post quem* range of 1919-25 for 102, the context above this. Whereas the red ware pottery was of limited value in providing dating evidence, the distinctive bone china had a very narrow, mid-19th century production span. Nevertheless, the latter pottery would seem to have been deposited at a time not far removed from that of the whisky bottles.

Context	Material class	Object specific type	Fabric code	Count	Weight(g)	Start date	End date	*Terminus post quem* range
100	Ceramic	Pottery	78	1	12	1750	1850	1750-1850
	Ceramic	Tile (roof)	-	1	156	1850	1925	
	Glass	Window	-	1	2	1750	1800	
	Plaster	Wall	-	4	75	1750	1800	
	Stone	Slate (roof)	-	2	42	1800	1900	
101	Ceramic	Brick (fab. samples)	-	16	660	1750	1800	1919-1925
	Ceramic	Tile (roof)	-	2	190	1750	1800	
	Ceramic	Tile (roof)	-	4	686	1850	1925	
	Glass	Bottle	-	1	16	1875	1913	
	Glass	Window	-	1	2	1750	1800	
	Metal	Cartridge	-	1	6	*c.*1900	1970	
	Mortar	Wall	-	30	476	1750	1800	
	Plaster	Wall	-	12	154	1750	1800	
	Stone	Slate (roof)	-	2	68	1800	1900	
102	Ceramic	Clay pipe	-	1	2	1600	1900	1919-1925
	Ceramic	Pottery	78	5	24	1700	1900	
	Ceramic	Pottery	85	8	196	1852	1862	
	Ceramic	Pottery	100	2	32	1800	1925	
	Ceramic	Tile (roof)	-	3	892	1750	1800	
	Ceramic	Tile (roof)	-	11	2336	1850	1925	
	Glass	Bottle	-	28	137	1875	1913	
	Glass	Window	-	23	122	1750	1800	
	Metal	Button	-	1	2	1850	1925	
	Metal	Cartridge	-	12	73	1919	1925	
	Plaster	Wall	-	54	1766	1750	1800	
	Stone	Building (carved)	-	1	2538	1750	1800	
	Stone	Slate (roof)	-	2	320	1800	1900	
103	Ceramic	Pottery	78	13	2214	1700	1900	1900-1925
	Ceramic	Pottery	85	1	14	1852	1862	
	Ceramic	Pottery	91	1	26	1700	1800	
	Ceramic	Pottery	100	2	298	1800	1925	
	Ceramic	Tile (roof)	-	5	854	1750	1800	
	Ceramic	Tile (roof)	-	16	2193	1850	1925	
103	Glass	Window	-	2	10	1900	1950	

Context	Material class	Object specific type	Fabric code	Count	Weight(g)	Start date	End date	*Terminus post quem* range
(cont.)	Stone	Building	-	1	508	1750	1800	1900-1925
	Stone	Slate (roof)	-	6	514	1800	1900	
104	Ceramic	Pottery	78	3	36	1700	1900	1970-2000
	Ceramic	Pottery	85	2	2	1852	1862	
	Ceramic	Tile (roof)	-	2	192	1750	1800	
	Ceramic	Tile (roof)	-	4	308	1850	1925	
	Glass	Window	-	3	2	1750	1800	
	Plastic	Cartridge	-	2	12	1970	2000	
	Stone	Slate (roof)	-	5	80	1800	1900	
105	Ceramic	Pottery	12	1	4	43	400	1800-1900
	Ceramic	Tile (roof)	-	7	1074	1750	1800	
	Mortar	Wall	-	3	216	1750	1800	
	Plaster	Wall	-	10	144	1750	1800	
	Stone	Slate (roof)	-	6	210	1800	1900	
106	Ceramic	Clay pipe	-	2	5	1600	1900	1875-1913
	Ceramic	Clay pipe (dated)	-	2	14	*c*.1850	*c*.1850	
	Ceramic	Pottery	78	4	98	1750	1850	
	Ceramic	Pottery	85	30	2624	1852	1880	
	Ceramic	Pottery	100	4	98	1800	1925	
	Ceramic	Tile (roof)	-	11	2320	1750	1800	
	Ceramic	Tile (roof)	-	41	4670	1850	1925	
	Glass	Bottle	-	1	22	*c*.1875	*c*.1920	
	Glass	Bottle	-	20	3890	1875	1913	
	Glass	Window	-	182	2264	1750	1800	
	Metal	Cartridge	-	2	14	c.1900	1925	
	Metal	Nail	-	2	10	1750	1900	
	Metal	Window latch?	-	1	52	1750	1900	
	Mortar	Wall	-	6	202	1750	1800	
	Plaster	Wall	-	128	3719	1750	1800	
	Stone	Slate (roof)	-	6	268	1800	1900	
121	Ceramic	Tile (roof)	-	1	284	1750	1800	1850-1925
	Ceramic	Tile (roof)	-	2	128	1850	1925	

Table 4. Summary of context dating based on artefacts.

The building materials recovered during the excavation revealed that the latrine would have had a decorated interior, probably with a single colour, but a plain brick exterior. As well as the two large stones still in place at the threshold, there may have been carved stone mouldings, possibly around the door. There would have been a window (or windows), although there was no indication of the method of retaining the small panes in the frames. Not surprisingly, no wood from the doors, window frames, latrine furniture or roof structure had survived.

The brick size and fabric suggested the latrine may have been contemporary with the Temple Greenhouse. Hand-made tiles could have been the original choice of roofing material for the latrine. It is possible that these tiles were replaced by slate, when the latter material became more readily available from the early 19th century onwards. However, the profusion of later roof tile fragments, probably manufactured during the late 19th century, was somewhat anomalous. It may have been

that these tiles were brought from elsewhere, as extra rubble for backfilling, when the latrine was finally demolished and the site levelled.

Floor tiles and flagstones were noticeable by their absence during the excavation, and there was no obvious means of supporting floorboards within the latrine. Therefore, unless an earth floor was considered adequate, any flooring material must have been salvaged from the site.

Conclusions

The excavation confirmed that the building foundations visible behind the Temple Greenhouse were the remains of a latrine. This has been interpreted as a brick structure that probably had stone detailing, and which may have borne some similarity in design to the Temple Greenhouse, but on a much smaller scale. The presence of a piece of carved stone within the fill and the stone threshold suggest that the building may have been quite smart, with the stonework removed for reuse as the building collapsed. This is speculative but a substantial amount of good quality painted plaster was recovered from the fill of the cess chamber, giving the impression that the inside of the latrine was plainly but carefully decorated.

A large number of bricks were inspected during the excavation. Their fabric and size were similar to those exposed on the rear walls of the Temple Greenhouse, so it seems likely that the latrine was contemporary with this nearby building. Dating and structural evidence from roofing material was less conclusive, but it is quite possible that the latrine may have been roofed using clay tiles, later replaced by slate. The large number of bricks in the ditch fill and the cess chamber suggests both that the latrine collapsed rather than being dismantled and that the entire structure was made of brick rather than being a wooden structure on a brick base.

The finds recovered from the lowest fill of the cess chamber indicated that the latrine was probably standing until the early 20th century. However, the large number of small mammal and bird bones recovered from the upper contexts suggested that the building may have been ruinous and used by owls for some time before it eventually collapsed.

The ditch that acted as a drain for the latrine was over 2m deep and V-shaped. No dating evidence was recovered from its lower fills, but comparison of the Doharty and Snape estate maps shows that it was not present as a boundary before the creation of the landscape park. Though heavily silted up now, it would have also provided a passage for water between a small lagoon and a watercourse leading to the ornamental lake. The surprising depth and V-shape of the ditch could indicate that it also acted as a deer-leap at some point.

Publication summary

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

An excavation was undertaken on behalf of The National Trust at Croome Park, Croome D'Abitot, Worcestershire (NGR ref. SO88084498; HER ref 40500) on the 19th and 20th July 2008 and the 25th and 26th July 2009. The excavation was carried out to determine whether the foundations of a small building behind the Temple Greenhouse were those of a latrine known to have existed in this area. The excavation confirmed that the small building was the latrine. This comprised a brick structure with stone detailing, possibly emulating the design of the Temple Greenhouse. A large quantity of painted plaster was recovered, indicating that the interior of the latrine was carefully decorated. Other finds suggested that the latrine building survived until the early 20th century and may have spent some time as a ruin before it collapsed. Excavation of the adjacent ditch, into

which the latrine drained, failed to reveal any firm evidence for its date of digging, but did establish its depth and profile.

Acknowledgements

The Service would like to thank the following for their kind assistance towards the successful conclusion of this project: Katherine Alker, Wendy Carter, Jeremy Milln and Michael Smith of The National Trust, Adam Stanford of Aerial-Cam, and members of the South Worcestershire Archaeological Group who took part in the excavation and finds processing.

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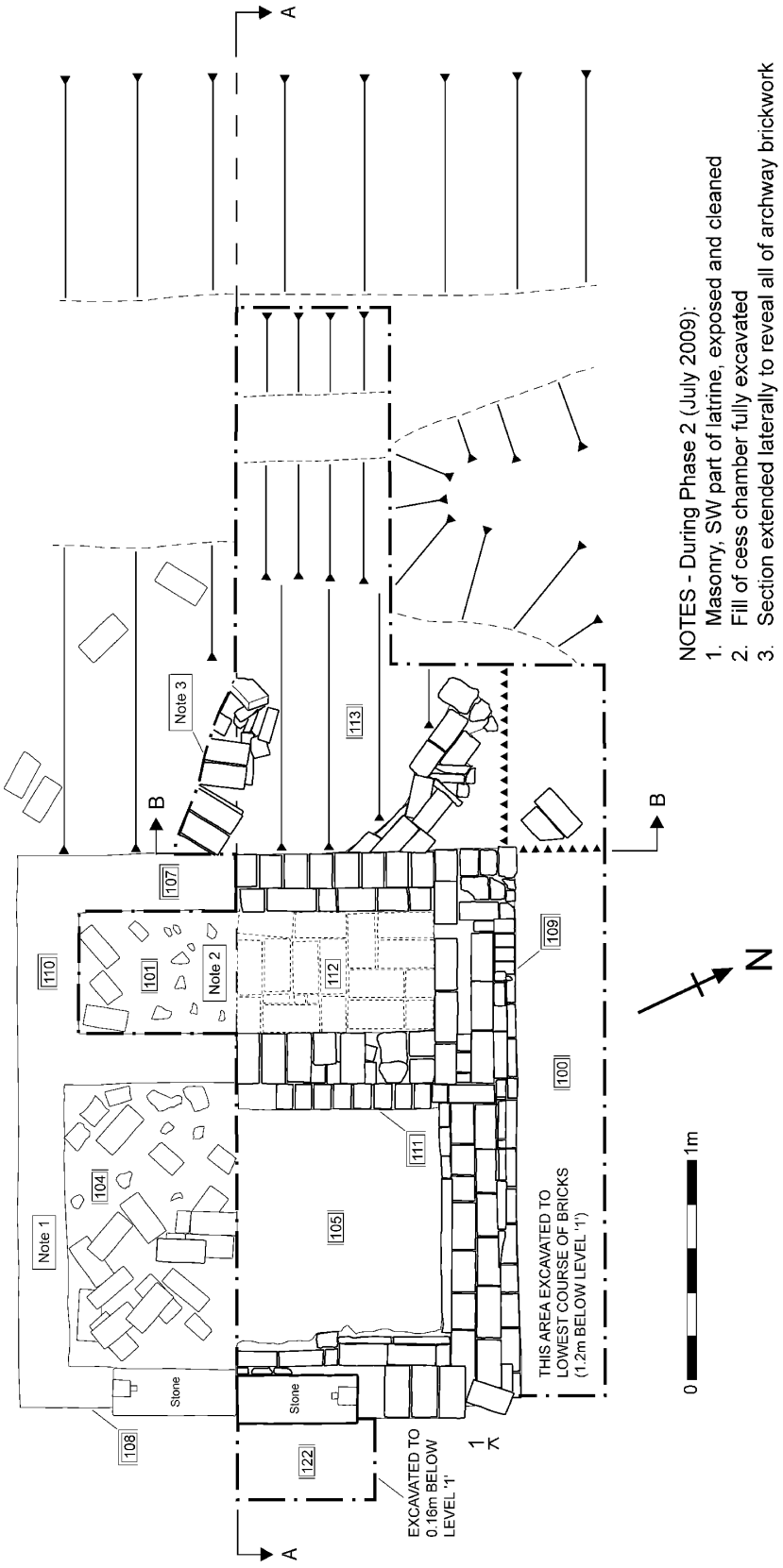
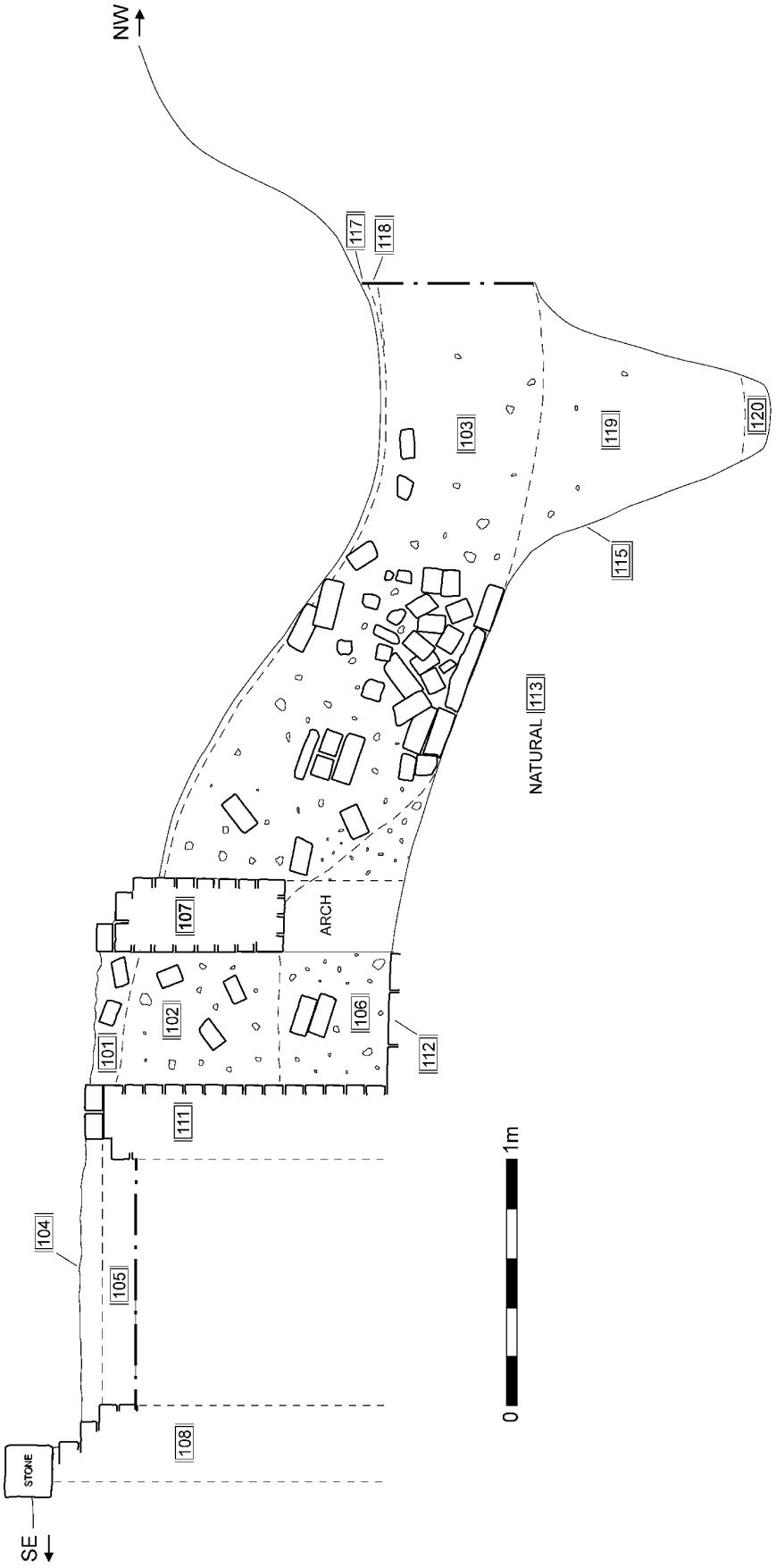
Appendix 1 Excavation drawings

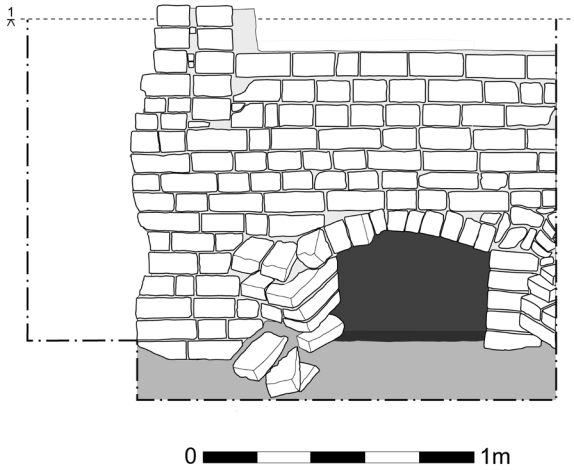
PLAN



Append ix 1 (continued) **SECTION A**



Appendix 1 (continued) **ELEVATION B**



Appendix 2 Summary of data for Worcestershire HER

WSM40500 Artefacts

Type	Count	Weight(g)	Date	Specialist report?	Key assemblage?
Pottery	1	4	Roman	Y	N
Pottery	27	465	18th-19th century	Y	Y
Pottery	89	2836	19th century	Y	Y
Pottery	8	428	19th-20th century	Y	Y
Brick (sample)	19	1114	18th century	Y	Y
Clay pipe	7	25	19th century	Y	Y
Clay tile - roof	30	4308	18th-19th century	Y	Y
Clay tile - roof	87	14161	19th-20th century	Y	N
Glass - vessel	44	4029	19th-20th century	Y	Y
Glass - window	188	2273	18th-19th century	Y	Y
Glass - window	6	28	20th century	Y	N
Iron - button	1	2	19th-20th century	Y	N
Iron - nail	2	10	Post-medieval	Y	N
Iron - object	1	52	Post-medieval	Y	N
Lead - flashing	1	36	Post-med./modern	Y	N
Metal - cartridge	15	93	20th century	Y	Y
Mineral - mortar	39	894	18th century	Y	Y
Mineral - plaster	208	5858	18th century	Y	Y
Plastic - cartridge	2	12	20th century	Y	N
Stone - building	1	508	Post-medieval	Y	N
Stone - moulding	1	2538	Post-medieval	Y	Y
Stone - roof slate	30	1516	19th century	Y	Y

Appendix 3

Archive

Fieldwork progress record AS2	7
Photographic record AS3	5
Drawing number catalogue AS4	1
Context number catalogue AS5	1
Sample record AS17	1
Sample number catalogue AS18	1
Abbreviated context record AS40	22
Digital photographs	380
Drawings	3
Boxes of finds	5
Computer disks	2

The project archive is intended to be placed at:

Worcestershire County Museum
Hartlebury Castle,
Hartlebury,
Kidderminster.
Worcestershire
DY11 7XZ

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