Stowe House Stowe Buckinghamshire



Archaeological Excavation and Watching Brief Report



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Stowe House, Stowe, Buckinghamshire

ARCHAEOLOGICAL EXCAVATION AND WATCHING BRIEF REPORT

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SUMMARY

Between the 3rd and 17th July 2003, Oxford Archaeology (OA) carried out a combined excavation, watching brief and geophysical survey at Stowe House, Stowe, Buckinghamshire (NGR SP 6700 3750). This work was commissioned by Purcell Miller Tritton acting on behalf of the Stowe House Preservation Trust in advance of the excavation of ten scaffolding anchor pits located immediately south and north of the school building.

The excavations in the North Front revealed an alignment of three stone plinths on either side of the North Portico roughly respecting the present arcade. These structures may have been built during or after the construction of the North Front by the first Lord Cobham in the mid to late 17th century, or later under the direction of Earl Temple in the 18th century, and represent a possible colonnade or arched arcade. A modern and earlier 19th century system of brick and stone culverts was found under the cobbled walkway behind the arcade.

In the South Front the excavations revealed a clay lined tank possibly associated with the construction of Stowe House. This structure was built over and within substantial deposits of made ground forming the South Front terrace constructed in the late 18th century by Earl Temple. Garden features in the form of paths and possible hedge trenches were also identified, though these were recent modern additions to the South Front.

1 Introduction

1.1 Location and scope of work

- 1.1.1 An application was made to Aylesbury Vale District Council for the erection of scaffolding over the Central Pavilion at Stowe House, Stowe, Buckinghamshire (Fig. 1) including excavation of trenches to support and anchor scaffolding rigs (Planning ref. 02/2972). Due to the potential for disturbing below ground archaeological features, Aylesbury Vale District Council in line with PPG16 and local planning policy, requested an archaeological excavation and watching brief to be carried out on the trenches.
- 1.1.2 Oxford Archaeology undertook the combined excavation and watching brief at Stowe House in July 2003 (Fig. 2). This included an archaeological hand excavation of trenches to the south of the school building, in conjunction with a watching brief placed on all further excavations undertaken by the scaffolding contractors.

Geophysical survey

1.1.3 As part of the archaeological mitigation, a geophysical survey was undertaken in the areas under impact in advance of trench excavation. The full results of this survey are detailed in Appendix 2 and Figure 14.

1.2 Geology and topography

1.2.1 Stowe House is set within expansive grassed and wooded gardens to the south and playing fields to the north. The main house is surrounded by further school buildings

- to the east and west and stands within a generally level area on the crest of a low hill, at approximately 130 m OD (NGR SP 6700 3750).
- 1.2.2 Stowe lies on Boulder Clay with discrete outcrops of glacial sands and gravels away from the stream courses. Alluvial silts overlie the clay across the river flood plain.

1.3 Archaeological and historical background

- 1.3.1 The background to the site has previously been researched by OA and covered a study area of 0.5 km radius encompassing the school (OA 2002a).
- 1.3.2 The earliest known human activity within the study area dates to the Roman period. A Roman villa dated to the early 4th century lies c 500 m to the north-west of the site. The main Towcester to Alchester Roman road runs south-west by north-east c 200 m to the west and the Fenny Stratford to Buckingham road lies immediately to the north of the site on a south-east by north-west alignment.
- 1.3.3 Roman pottery kilns were discovered nearby in the 1990s (Marshall 1999; Booth 1999). Part of one of these pottery kilns was salvaged recorded in 1990, and further indications of a kiln were noted in 1995. Among the artefacts recovered was a quantity of pink-grogged ware from both kiln locations. This material is dated to between the 2nd and 4th centuries (Booth and Green 1989), and similar material has been found by the National Trust's archaeologists during ground works within the gardens of Stowe Park.
- 1.3.4 The Domesday book records four manors within the estate of Stowe School, which are likely to have represented the pre-conquest settlements of the area. In the early medieval period these settlements became nucleated around a church and manor house. The four manors recorded in Domesday comprise Stowe, Boycott, Lamport and Dadford (of which the latter two were divided into two holdings each).
- 1.3.5 Recorded as *Stov* in Domesday, the manor of Stowe was leased from the Bishop of Bayeux by Robert d'Oilly and Roger of Ivry in 1086. In the 13th century it was granted to Osney Abbey in Oxfordshire, who held it until the dissolution. It was eventually granted to Queen Elizabeth, who proceeded to grant it to Thomas Wright in 1590. In 1591 the manor of Stowe was sold to the Temple family.
- 1.3.6 The original manor house of Sir Peter Temple, dating to the 16th and 17th centuries, was probably situated west of the Church before it was demolished and used to build the first Stowe mansion in 1677 by his son, Sir Richard Temple. This was subsequently remodelled in the 18th century, although a small part of the 1677 mansion still exists within the North Front of Stowe House, which is set within the Grade I listed registered park (Bevington 2002).
- 1.3.7 Sir Richard Temple's son, the first Lord Cobham, later rebuilt the front and added the wings. The house was further enlarged by Earl Temple, who died in 1779 and afterwards by the Marquis of Buckinghamshire. During this time, the Temple family had begun to invest heavily in the gardens. The first Lord Cobham, who died in 1749, had started to extend the area of parkland which had been a deer park since the 13th century. By the end of the 1720s, due to the ever expanding Stowe Park, the

- village of Stowe, which in 1712 had 31 houses, had been largely cleared, leaving only the 13th century church of the Assumption of St. Mary the Virgin.
- 1.3.8 The land within Stowe manor became a more extensive, complex leisure garden, surrounding the country mansion, probably one of the finest examples of a later Renaissance house in England. Worked on by a number of famous landscape designers including Charles Bridgeman and Capability Brown, it was supremely influential to English landscape gardening by the 18th century. At its largest the designed landscape and woodlands covered some 250 hectares.
- 1.3.9 Notable post-medieval structures in the grounds include Conduit House and the Bourbon Tower, both of which are probably of 18th century date.
- 1.3.10 Recent works undertaken by OA include a watching brief at Drayson Hall, a watching brief on Stowe House forecourt works as part of Stowe House restoration Campaign (OA 2002a: 2002b) and further work for the National Trust in the Parkscape of Stowe (OA 2002c). Most recently OA monitored the excavation of foundation trenches for a new extension on the side of the New Field House at Stowe School (OA 2003b).
- 1.3.11 A geophysical survey was undertaken by Northamptonshire Archaeology (see Appendix 2) in June 2003, in advance of the archaeological fieldwork. The survey revealed anomalies possibly relating to former garden features south of the house.

2 EXCAVATION AND WATCHING BRIEF AIMS

- 2.1.1 The aims of the investigation were to determine the location, extent, date, character, and state of preservation of any archaeological remains encountered during the excavation of scaffold trenches as set out in the brief (Baker 2003).
- 2.1.2 Attention was given to remains of all periods and in particular remains of garden features dating to the original manor house. This included evidence for past environments, with provision for environmental sampling included.
- 2.1.3 The investigation sought to clarify the nature and extent of any modern disturbance and intrusion on the site.
- 2.1.4 To make available the results of the investigation.

3 EXCAVATION METHODOLOGY

3.1 Scope of fieldwork

3.1.1 The intrusive works (in order to house the scaffolding bearing points) comprised the excavation of four trenches (TR 1-4) by OA (Fig. 2). These were located to the east and west of the south front. A further six trenches (TR 5-10) were excavated by the scaffolding contractors under archaeological supervision (Fig. 2). These were located to the east and west, on the north side of the house.

- 3.1.2 The four trenches to the south of the house comprised two "L" shaped trenches (TR 1 and 2) composed of three linked boxes measuring respectively 3 m x 2 m and up to 1.5 m deep, 6.5 m x 1.5 m by 0.8 m deep and 4.5 m x 2 m by 1.3 m deep, each located on either side of the southern staircase. The remaining two trenches (TR 3 and 4) comprised three linear linked boxes, measuring respectively 3 m x 2 m by 1 m deep, 6.5 m x 1.5 m by 1.3 m deep and 2 m x 2 m by 1.7 m deep, again each located on either side of the southern staircase.
- 3.1.3 Trenches 1 to 4 were hand dug at selected points to determine the nature and depth of any potential archaeology, with the remainder machine dug under archaeological supervision once it was determined that no archaeology would be disturbed.
- 3.1.4 Trenches 5 to 10 comprised two boxes measuring 3.5 m x 2.5 m by 0.8 m deep (TR 5 and 8) and four boxes measuring 3 m x 1 m by 1.25 m deep (TR 6, 7, 9 and 10). These were excavated by machine under archaeological supervision either side of the North front, with four trenches being dug within the cobbled area immediately to the east and west of the steps and two in the grassed areas beyond.

3.2 Fieldwork methods and recording

- 3.2.1 Trench 1 was initially hand excavated to a depth of 0.3 m below ground level in order to assess the presence or absence of garden features believed to exist at this depth (pers. comm. Mr Baker). A series of further hand excavated sondages in Trench 1 confirmed deposits consisted of made ground down to formation levels. A strategy was proposed and agreed with Mr Baker to limit hand excavation where possible to a series of sondages for the remaining trenches (TR 2, 3, and 4) in order to minimise the time delay to the scaffolding contractor through unnecessary hand excavation of made ground. These sondages were cleaned by hand and any features revealed were sampled to determine their extent and nature, and to retrieve finds for dating purposes. All trenches were then machine excavated under archaeological control to their required depth.
- 3.2.2 All archaeological features and structures encountered were planned at scales of 1:20 and 1:50 and their sections drawn at scales of 1:20 and 1:50. All features and structures were photographed using colour slide and black and white print film. Recording followed procedures laid down in the *OAU Fieldwork Manual* (ed. D Wilkinson, 1992).
- 3.2.3 Trenches 5 to 10 were excavated in spits using a mini excavator fitted with a toothless ditching bucket. These machine excavations were undertaken in line with procedures laid down in the OA's Written Scheme of Investigation (OA 2003a).
- 3.2.4 As with Trenches 1 to 4 all features, structures and deposits encountered were issued an unique context number, sections were recorded at a scale of 1:20 and plans were drawn at a scale of 1:20 or 1:50 as appropriate. Colour transparencies and black and white photographs were taken of the sections and plans, as well as general shots of the trenches.

3.2.5 Surveying of the trenches was done by offsetting from known features of the main building. Levels were taken using known benchmarks on site.

3.3 Finds

3.3.1 Finds were recovered by hand during the course of the excavation and watching brief and were bagged by context. Finds of special interest were given a unique small find number.

3.4 Palaeo-environmental evidence

3.4.1 While provision was made for the sampling of any palaeo-environmental deposits, no available deposits were encountered.

3.5 Presentation of results

3.5.1 The results of the excavations of the trenches are presented below with separate sections devoted to the stratigraphic and artefactual evidence. In the stratigraphic section each trench is described individually. This is followed by an overall discussion and interpretation of the evidence.

4 RESULTS: GENERAL

4.1 Soils and ground conditions

- 4.1.1 The site is located on the highest point of rising ground, at approximately 130 m OD and is surrounded by landscaped gardens. The underlying natural geology is a mixture of clays and gravels.
- 4.1.2 Ground conditions were favourable being dry and the stratigraphy clearly visible.

4.2 Distribution of archaeological deposits

- 4.2.1 A small number of features were exposed in all ten trenches excavated. All the features encountered were post-medieval in date. The absence of earlier features can be explained by extensive landscaping of this area during the 18th century relating to the remodelling of the mansion and its gardens. The depth of excavation in all trenches except Trench 6 was insufficient to determine whether archaeological remains of an earlier period may still survive in these areas.
- 4.2.2 A number of deposits relating to possible garden features were exposed in Trenches 3 and 4 while in Trenches 9 and 10, either side of the North Front steps, early masonry was identified. The remainder of the trenches contained made ground deposits used in the landscaping of this area.

5 RESULTS: DESCRIPTIONS

5.1 Description of deposits

South Front

Trench 1 (Fig. 3)

- 5.1.1 Trench 1 was excavated by hand to a depth of 0.3 m below the present ground surface. Two sondages were then hand excavated at either end of the trench. The eastern intervention was a "L" shaped slot measuring 4.5 m x 2 m by 0.6 m wide and 1.3 m deep. The western intervention measured 1.6 m x 1.4 m by 1.5 m deep. The remaining central portion of the trench was then machine excavated to a depth of 0.8 m.
- 5.1.2 In the western end of the trench at a depth of 1 m, a foundation plinth (1008) was exposed, possibly relating to foundations of Stowe House or to the construction of the South Front steps. This was roughly constructed of limestone blocks and thin brick ends and was abutted by a layer of redeposited clay (1007). Overlying 1007 were successive layers of mixed silts and gravels (1002), (1003) and possibly (1006), all tipping from west to east. These deposits were then overlain by a levelling layer of re-deposited natural (1005), into which was cut a 19th century brick drain, constructed from two courses of wire-cut bricks measuring 242 mm x 108 mm x 68 mm. The upper course consisted of unbonded headers and the lower course of two parallel stretcher courses bedded on a yellow sand silt mortar. This structure was then backfill with deposit 1004, which in turn was sealed by a modern gravel pathway running parallel with the South Front steps, consisting of levelling deposit (1001) and surface gravel (1000).

Trench 2 (Figs. 4)

- 5.1.3 Two sondages were excavated at either end of Trench 2. The eastern "L" shaped intervention measured 3 m x 2 m by 0.6 m wide and 1.5 m deep. The western intervention measured 1.6 m x 1 m by 1.3 m deep. The remainder of the trench was then machine excavated to a depth of 0.8 m. The stratigraphic sequence uncovered is very similar to that of Trench 1.
- 5.1.4 In the corner at the eastern end of the trench, made ground (2020) was exposed at a depth of 1.15 m. This deposit was overlain by stone foundation plinth 2021, similar in construction to 1008, which was visible at a depth of 0.7 m below present ground level. This structure was consolidated by makeup layer 2014, which was overlain by a series of redeposited silts, gravels and clay associated with the garden landscaping (2008, 2009, 2010, 2011, 2012 and 2013) seen in Section 201. Deposit 2014 was also cut by a brick drain (2006), constructed using a single course of red bricks and mortar and visible across the northern face of the trench. This in turn was sealed by a makeup layer of mixed gravel and clay sand (2018).
- 5.1.5 At the western end of the trench made ground 2002; similar to deposit 2020, was encountered at a depth of 0.6 m. This was cut by a pit (2016) filled with concrete (2005) used to underpin the South Front steps and backfilled by deposit 2015. Both

drain 2006 and backfill deposit 2018 were also cut by this feature and at the centre and eastern end of the trench by a modern water pipe, and electric cable and sewer pipe respectively. A flat bottomed pit like feature (2004) measuring up to 0.2 m deep cut 2015 and was filled by sandy gravel (2003). This was only visible in Section 200. Deposits 2015 and 2018 and all modern intrusions were then sealed by a levelling layer (2001) for the present gravel pathway (2000).

Trench 3 (Figs. 5)

- 5.1.6 Two hand dug sondages were excavated in Trench 3, located at the western end and in the middle of the trench. The western intervention measured 3 m x 0.7 m by 1 m deep. The central intervention measured 2 m x 0.6 m by 1 m deep. The remainder of the trench was then machine excavated to a maximum depth of 1.75 m.
- 5.1.7 At the centre of Trench 3 was a large clay tank (3300) approximately 2.2 m wide by over 0.8 m deep in section (Fig. 5, section 302). This feature was seen in both north-western and south-eastern facing sections, extended beyond the trench and may related to the construction of the house and/or the South Front. Supporting 3300 were two clay gravel banks (3013 and 3014) that surrounded the tank, and which appear to have been used for its construction. The clay lining and the strengthened sides suggest that this feature was a probable free standing water reservoir, predating the levelling of the south side of the gardens. This structure was later backfilled filled with construction debris (3301), again likely to relate to building works at Stowe House.
- 5.1.8 The tank was later butted by a succession of made ground deposits, (3003), (3007), (3008), (3009), (3010), (3011), (3012) and (3016) associated with the garden landscaping of this area. These deposits were finally sealed by a further levelling layer (3002) of silty clay and gravel. This layer was cut by two features, (3302) and later (3303), at the western end of the trench possibly representing the remains of a hedge line trough and pathway respectively. These features and layer 3002 were then sealed by a modern garden soil (3000) and turf across the centre and western part of the trench. A modern gravel pathway (3004) later overlaid 3000 at the eastern end of the trench. This pathway was later still cut by a modern pipeline seen running north-south in Trench 1.

Trench 4 (Figs. 6)

- 5.1.9 A single intervention was hand dug in Trench 4 measuring 1.6 m x 0.7 m by 0.7 m deep. The remainder of the trench was then machine excavated and recorded in spits to a maximum depth of 1.75 m. While both north and south sections were draw only deposits and feature relating to Section 402 is described below.
- 5.1.10 A clean gravel (4008), possibly natural subsoil, was identified at a depth of 1.5 m below present ground level in Trench 4. This was overlain by a sequence of made ground deposits (4002-7). These layers were composed of redeposited natural material, possibly derived from the excavation of the lakes and valley to the south, and formed part of the terrace and first Parterre alongside the South Front. At the most western end of the trench a modern water pipeline cut deposits 4003, 4004 and

4007. This service trench and deposits 4004 and 4003 were then sealed by levelling layer 4001, which was in turn cut by an electric cable trench at the western end of the trench. At the eastern end 4001 was cut by a further electric cable and two shallow features (4009 and 4010) representing a possible former 20th century gravel garden path and hedge gully respectively. Overlying these features was the current flower bed (4000), which was partially overlain at its most western end by the present gravel pathway.

North Front (Fig. 7)

Trench 5 (Fig. 8)

- 5.1.11 Trench 5 was located at the south-east corner of the cobbled area surrounding the steps of the North Front. This area had previously been investigated in September 2002 during the relaying of the north forecourt. This could be seen in the top 0.3 m of the trench in the form of modern cobbles and their cement bed, (5000) and (5001) overlying a modern levelling layer (5002).
- 5.1.12 At the centre of this trench a brick culvert (5005 in cut 5004) was identified sloping sharply down towards the east, running under the colonnade, which flanked it to the east. It was constructed using early 18th century bricks, two courses high, bonded with lime mortar and capped with roughly dressed limestone slabs. The culvert had cut earlier redeposited clay silts (5006-5011) forming a large platform of made ground alongside the North Front, seen at the base of the trench (Fig. 8, section 501). The culvert trench had been backfilled by a mixed deposit of clay silt and gravel (5003), which was later truncated by a modern culvert (5012) identified during previous investigations (OA 2002b). A layer of concrete (5002) sealed these deposits and the modern culvert, overlying which was a second concrete layer (5001) and abutting made ground deposits (5014-5016). Finally these were sealed by the present cobbled surface (5000).

Trench 6 (Fig. 9)

5.1.13 This trench was located in the cobbled roadway which runs under the steps of the North Front. The stratigraphic sequence was similar to Trench 5. Two layers of possible natural gravel (6009) and (6010) were exposed at the base of the trench (Sections 600 and 601 respectively). These were subsequently overlain by a series of redeposited clay silts (6006-6008), which were truncated by an early to mid 19th century brick culvert (6003) constructed on a two course thick base with side walls formed by three courses and capped by a shallow brick arch. The upper part of the culvert trench was backfilled by mixed clay silt and gravel (6011), which truncated by a modern cable run. Both the cable trench and 6011 were sealed by a modern levelling layer (6002). This makeup was sealed by a concrete bed (6001), over which was laid the present cobbled surface (6000).

Trench 7 (Fig. 10)

5.1.14 This trench, also located in the cobbled pathway running under the steps of the North Front, was the counterpart of Trench 6. At the base of the trench was a series of layers of made up ground (7005-7008) used as a platform cut by the construction

trench (7011) of the brick culvert (7009) continuing through from Trench 6 (6003). This was backfilled by 7010, which was sealed by levelling layers (7003) and (7004). These layers were cut by a modern electric cable trench and water pipeline within made ground 7002. Layer 7002 was sealed by a concrete bed (7001) and cobbled surface (7000).

Trench 8 (Fig. 11)

- 5.1.15 This was located in the south-west corner of the cobbled forecourt surrounding the North Front and was the counterpart of Trench 5. Whilst works had been carried out in September 2002 in this area, they did not reach any significant archaeological levels at that time.
- 5.1.16 The base of the trench was filled by made ground (8011). This deposit was cut by 8009, a continuation of the culvert seen in Trench 5 (5005). This had been heavily damaged by both frost and subsidence. Sealing the backfill (8008) of 8009 and made ground (8011) were levelling layers (8006) and (8007). It was at this level that a modern drainpipe (8005 in cut 8004) cut layer (8006). The backfill (8003) of the drainpipe trench along with both levelling layers were then sealed by a modern levelling layer (8002), which in turn was sealed by a concrete bed (8001) and cobbled surface (8000).

Trench 9 (Fig. 12)

- 5.1.17 This trench was located on the lawn to the west of the North front steps.
- 5.1.18 This trench revealed a series of made ground deposits (9004-9006) at its base. These were cut by three truncated stone piers (9008, 9010 and 9012), separated at intervals of 0.8 m (Section 901). These three structures appeared in the southern half of the trench, orientated very roughly north-south. The alignment formed by their northern edges followed a shallow curve while their southern extent remains unknown. All three piers presented a similar construction with dressed stone on the outside and a rubble and brick core sitting on a thick footing of mixed mortar and stone fragments. Their construction cuts also appeared at the same level which suggest they were part of the same feature(s). Due to the limited extent exposed, the function of these features remains problematic, but some suggestion can be made. They could represent the bases for a series of linked arches flanking the steps or they could possibly be buttresses for the wing wall immediately to the south.
- 5.1.19 The spaces between the piers were backfilled by a layer of silty clay (9003). This layer was subsequently cut by a pipe trench along the western face of pier 9010. A thin layer of demolition debris (9002) consisting of mortar, stone and CBM fragments was observed partially overlying this pier and deposit 9003, and included within it a modern cable run. Topsoil (9001) and turf (9000) then sealed these deposits and piers.

Trench 10 (Fig. 13)

5.1.20 Trench 10 was the counterpart to Trench 9 and was located in the lawn to the east of the North Front steps. Both trenches presented a very similar stratigraphic sequence.

5.1.21 As with deposits in Trench 9, this trench revealed layers of made ground (10012 and 10013) at its base, which had been cut by three truncated stone piers (10006), (10008) and (10010). Backfilling the spaces between these piers were mixed deposits of clay silt and gravel (10004) and (10005). Sealing these deposits was a layer of demolition debris (10003), similar to 9002 in Trench 9. This was then overlain by a modern levelling layer (10002) and finally topsoil (10001) and turf (10000).

5.2 Finds

5.2.1 The finds recovered from all trenches, below modern 20th century layers, consist mostly of brick fragments and sherds of pottery, dated to the 18th and 19th centuries. A very small amount of finds were retrieved in relation to the volume of material excavated. This probably because the majority of layers consisted of made ground, formed of sterile redeposited clays and silts. These deposits probably derived from undisturbed natural horizons.

Small Finds

5.2.2 The only small find was a Rose Farthing of 17th century date found in Trench 2 in the path make up (2002) indicating that it was residual.

5.3 Palaeo-environmental remains

5.3.1 No deposits suitable for palaeo-environmental sampling were exposed.

6 DISCUSSION AND INTERPRETATION

6.1 Summary of results

South Front

- 6.1.1 Several possible 20th century garden features were exposed in Trenches 3 and 4, although their full extent could not be observed because of the limited extent of the excavation trenches and truncation by present day flower beds and gravel pathways. These features consisted of the bases of possible hedge line troughs (3302 and 4010) together with the bases of probable gravel paths (3303 and 4009), showing in the west end of Trench 4 and to a limited extent within Trench 3. Trenches 1 and 2 showed no evidence for garden features, but they had both been severely disturbed by the insertion of later services (Plate 2), including "French drain" 1004 and 2006, running parallel to the base of the main building and by the construction of steps around the South Front in the 19th century.
- 6.1.2 The bulk of deposits present in all trenches was represented by a series of tiplines of made up ground related to the levelling and raising of the area during the construction of the house in the 17th and 18th centuries. The levelling of the South Front may have been achieved in more than one phase as shown by the presence of made ground deposits both under and butting up against the foundation plinth (1008 and 2005) exposed in Trenches 1 and 2. The dating evidence retrieved from these layers is minimal and consists mainly of CBM and a few sherds of pottery, all dated to the 18th century and presumably related to the construction of the house itself.

6.1.3 The clay lined feature (3300) observed in Trench 3 (Plate 1) appears to predate the levelling of the South front garden and may relate to the remodelling of the house in the 18th century.

North Front

- 6.1.4 Trenches 5 to 10 located on the North Front all showed severe modern disturbance in the top 0.4 m. These deposits had been truncated by the recent remodelling of the forecourt area and were sealed by modern layers of cobbles and associated concrete beds. Below the cobbled surface of the forecourt, two separate culvert systems were identified (Plates 3 and 4). In Trenches 5, 6 and 7 an existing modern brick culvert, found during an earlier watching brief on the forecourt (OA 2002), was identified. This system followed the curve of the forecourt, with at least one section branching off into the north-eastern corner of Stowe House (Trench 5). An earlier 19th century stone capped culvert was exposed in Trench 8 and underneath the modern culvert in Trench 5 (see Plate 4). The alignment and the material used to construct these culverts suggest they represent a single system running parallel with the north front of Stowe House and later replaced with a more modern system identified in Trenches 5, 6 and 7. The remainder of the stratigraphic sequence was composed of made ground, similar to the trenches in the South Front.
- 6.1.5 Trenches 9 and 10 located in the lawns to the east and west of the North Front steps displayed a different sequence of events. The top 0.3 m consisted of modern turf overlying a layer of modern worked topsoil. Directly below these deposits was a series of truncated stone piers, (9008), (9010), (9012), (10006), (10008) and (10010). The truncation appears to have been deliberate with their height being reduced to below the topsoil level, leaving corresponding demolition layers 9002 and 10003 overlying them. The positioning and spacing of these piers mirrors, to a lesser degree, the present North Portico arcade walls (Plates 5 to 8), suggesting they could have formed the bases of an early colonnade or an arched arcade (Fig. 7). The dressing of the stone also suggested they were meant to be seen, supporting this interpretation. The footings for these features cut layers of made ground similar to those in Trenches 5, 6, 7 and 8 confirming that they were constructed during or after the re-building of Stowe House, between 1697 when the first Lord Cobham rebuilt the North Front and added the east and west wings and 1779 when the Earl Temple further enlarged the house through the remodelling of both Fronts.

APPENDICES

APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

Context No	Туре	Width (m)	Depth (m)	Comment	Finds	Weight (g)	Date
Trench 1							
1000	Layer		0.07	Gravel path			
1001	Layer		0.2	Path Make up			
1002	Layer		0.2	Levelling	Pottery	157g	C18th
1003	Layer		0.1	Levelling			
1004	Structure	0.32	0.16	Brick drain			
1005	Layer		0.6	Levelling			
1006	Layer		0.3+	Ground make up			***************************************
1007	Layer		0.3+	Ground make up			
1008	Structure		0.7	Foundation plinth for building			
Trench 2							
2000	Layer		0.03	Gravel path			
2001	Layer		0.13	Path make-up			
2002	Layer	1.2	0.5	Made up ground	Coin	3g	C17th
2003	Fill	0.39	0.2	Fill of pit			
2004	Cut	0.39	0.2	Pit			
2005	Structure	0.3	0.45	Concrete underpinning			
2006	Structure	1.2	0.2	Brick Drain			
2007	Layer		0.32	Garden soil			****
2008	Layer		0.32	Levelling Layer			
2009	Layer		0.15	Make up layer			
2010	Layer		0.35	Re-deposited natural dump			-
2011	Layer		0.15	Re-deposited debris lens			
2012	Layer		0.5	Re-deposited natural	CBM		C18th
2013	Layer	1	0.15	Re-deposited natural			
2014	Layer		0.5	Re-deposited make-up			
2015	Layer	0.9	0.5	Back-fill		***************************************	

Context No	Туре	Width (m)	Depth (m)	Comment	Finds	Weight (g)	Date
2016	Cut	0/9	0.5	Underpinning cut			
2017				Number not used			
2018	Layer		0.2	Made ground			
2019	Layer		0.3	Wood shuttering			
2020	Layer		0.3+	Made up ground			
2021	Structure		0.7	Foundation plinth for building			
Trench 3							
3000	Layer		0.3	Garden soil	Pottery	llg	C19th
3001	Lens	0.4	0.05	Building rubble	Pottery	110g	C19th
3002	Layer		0.6	Levelling			
3003	Layer		0.25	Clay Lens			•
3004	Surface		0.35	Possible gravel path			
3005	Layer		0.18	Layer of construction debris			
3006	Layer		0.4+	Dump of redeposited natural			
3007	Layer		0.35	Made up ground			
3008	Layer		0.18	Made up ground			
3009	Layer		0.3+	Lens of redeposited sands			
3010	Layer		0.4	Made up ground			
3011	Layer		0.5	Layer of redeposited sands			
3012	Layer		0.25	Redeposited soils and construction debris			
3013	Deposit		0.7	Banked up redeposited soils. Part of structure 3300			
3014	Deposit		0.7	Banked up redeposited soils. Part of structure 3300			
3015	Layer		0.28	Made up ground			
3016	Layer		0.5	Made up ground			

Context No	Туре	Width (m)	Depth (m)	Comment	Finds	Weight (g)	Date
3017	Surface		0.2	Gravel pathway			
3300	Structure	1.3	0.7+	Clay lined pit or tank			
3301	Fill	1.6	> 1	demolition debris fill of clay lined tank	Mortar, crushed brick, CBM		C18th
3302	Cut	0.6	0.12	Possible garden hedge line trough			
3303	Cut	>0.65	0.3	Possible garden path			
Trench 4						-	
4000	Layer		0.2	Garden soil			
4001	Layer		0.3	Levelling			
4002	Layer		0.2	Rubble dump	Pottery	13g	C18th
4003	Layer		0.5	Made up ground			
4004	Layer		0.5	Made up ground	Pottery	290g	C18th
4005	Layer		0.3	Made up ground			
4006	Layer		0.3+	Made up ground			
4007	Layer		0.4	Mixed construction debris and redeposited soils			
4008	Layer		0.3+	Probable natural gravels			
4009	Deposit	0.4	0.15	Probable gravel path			
4010	Lens	0.35	0.22	Possible hedge trench			
4011	Layer		0.22	Earlier worked soil			
4012	Lens	0.6	0.22	Possible gravel path			
4013	Layer		0.3	Mixed construction debris and redeposited soils			
4014	Layer		0.6	Made up ground			
4015	Layer		0.5	Made up ground			

Context No	Туре	Width (m)	Depth (m)	Comment	Finds	Weight (g)	Date
Trench 5	5						-
5000	Surface	5.0+	0.15	Modern Cobbles			
5001	Layer		0.12	Cement bed for cobbles			
5002	Layer		0.3	Modern concrete	•		
5003	Fill		0.4	Backfill of culvert trench			
5004	Cut	0.7	0.7	Cut for culvert			
5005	Structure	0.7	0,4	Brick culvert with stone capping	Brick		C18th
5006	Layer		0.4	Made up ground			
5007	Lens		0.2	Lens of redeposited soils			
5008	Layer		0.4	Made up ground			
5009	Layer		0.4	Made up ground			
5010	Layer		0.3+	Made up ground		:	
5011	Layer		0.3+	Made up ground			
5012	Structure	0.45	0.27	Brick culvert	Brick		C20th
5013	Cut	0.5	0.27	Culvert trench			
5014	Layer		0.08	Modern levelling			
5015	Layer		0.06	Modern levelling			
5016	Layer		0.03	Modern levelling			
Trench 6							
6000	Surface	1.0	0.15	Modern cobbles			
6001	Layer		0.15	Cement bed for cobbles			
6002	Layer		0.2	Modern levelling			
6003	Structure	1.0	0.5	Brick culvert	Brick		C18th
6004	Cut	1.0	0.9	Culvert trench			
6005	Deposit		0.5	Made up ground			
6006	Deposit		0.8	Redeposited natural clays.			
6007	Deposit		0.5	Made up ground			
6008	Layer		0.4	Possible natural gravel			

Context No	Туре	Width (m)	Depth (m)	Comment	Finds	Weight (g)	Date
6009	Layer		0.2+	Possible natural gravel			
6010	Deposit		0.3+	Made up ground			
Trench 7							
7000	Surface	3.5	0.15	Modern cobbles			
7001	Layer	3.5	0.15	Cement bed for cobbles			
7002	Layer		0.12	Modern levelling layer			
7003	Layer		0.5	Made up ground			
7004	Layer		0.25	Made up ground			
7005	Layer		0.5	Made up ground			
7006	Layer		0.5	Made up ground			
7007	Layer		0.7	Made up ground			
7008	Layer		0.3+	Made up ground			
7009	Structure	0.7	0.4	Brick culvert	Brick		C18th
7010	Fill		0.6	Backfill of the culvert trench			
7011	Cut	0.7	0.6	Culvert trench			
Trench 8							
8000	Surface	5.0	0.15	Modern cobbles			
8001	Layer	5.0	0.2	Cement bed for cobbles			
8002	Layer		0.2	Modern levelling	Spirit level		C20th
8003	Fill		0.6	Backfill of modern culvert			
8004	Cut	0.6	0.6	Culvert trench			
8005	Structure	0.2	0.18	Storm drain			C19th/
							C20th
8006	Layer		0.35	Made up ground	***********		
8007	Layer		0.4	Made up ground			
8008	Fill		0.3	Backfill of 18 th century culvert			
8009	Structure	0.7	0.4	Stone and brick . culvert	Brick		C18th
8010	Cut	0.8	0.4	Culvert trench		***************************************	

Context No	Туре	Width (m)	Depth (m)	Comment	Finds	Weight (g)	Date
8011	Layer		0.2+	Made up ground			
Trench 9)						
9000	Layer		0.1	Modern turf/lawn			
9001	Layer		0.1	Worked topsoil			
9002	Lens	1.0	0.05	Demolition material		1111	
9003	Layer	*****	0.25	Made up ground			
9004	Layer		0.35	Made up ground			
9005	Layer		0.25	Made up ground			
9006	Layer		0.5	Made up ground	CBM	1856g	C18th
9007	Cut	0.8	0.5	Foundation cut for pier (9008)			
9008	Structure	0.7	0.6	Truncated stone pier			
9009	Cut	0.7	0.9	Foundation cut for pier (9010)			
9010	Structure	0.7	0.8	Truncated stone pier			
9011	Cut	0.7	0.8	Foundation cut for pier (9012)			
9012	Structure	0.5	0.7	Truncated stone pier			
Trench 1	0						
10000	Layer		0.1	Modern turf/lawn			
10001	Layer		0.1	Modern worked topsoil			
10002	Layer		0.12	Modern levelling layer			
10003	Layer		0.18	Layer of demolition debris			
10004	Lens	1.2	0.22	Lens of redeposited soils			
10005	Layer		0.5	Made up ground			
10006	Structure	0.5	0.8	Truncated stone pier			
10007	Cut	0.5	0.4	Foundation cut for pier (10006)			
10008	Structure	0.7	8.0	Truncated stone pier			

Context No	Туре	Width (m)	Depth (m)	Comment	Finds	Weight (g)	Date
10009	Cut	0.7	0.4	Foundation cut for pier (10008)			
10010	Structure	0.5	0.9	Truncated stone pier			
10011	Cut	0.5	0.5	Foundation cut for pier (10010)			
10012	Layer		0.5	Made up ground			
10013	Layer		0.5	Made up ground			

APPENDIX 2 GEOPHYSICAL SURVEY

Geophysical survey was undertaken on four areas of garden with a combined area of approximately 0.063 hectare adjacent to Stowe House, Buckinghamshire. Earth resistance survey was carried out across all four areas and revealed anomalies possibly relating to former garden features south if the house.

Introduction

Northamptonshire Archaeology conducted a geophysical survey on four areas of land with a combined area of approximately 0.063 hectare at Stowe House, Buckinghamshire. (NGR SP 7470 7435, Fig 14). Oxford Archaeology commissioned the work, as part of a mitigation strategy to preserve the historic remains whilst conservation and repairs were made to the structure of the House on behalf of the Stowe House Preservation Trust (Baker 2003). The aim of the work was to identify the extent and nature of any buried archaeological remains, especially those relating to former garden features, which might be threatened by the positioning of scaffolding bases and to provide evidence that might inform the redevelopment of the gardens.

Methodology

The earth resistance survey was conducted using a Geoscan RM15 Resistance Meter with a twin electrode configuration in a mobile probe spacing of 0.5 m. Traverses were spaced 1 m apart and were walked in a 'zig-zag' fashion with readings logged at 0.5 m intervals in 10 m x 10 m grid squares. All fieldwork was in accordance with English Heritage Guidelines (EH 1995).

The data were analysed using Geoplot v3.0. In the resultant plots, low resistance is shown as white and high resistance as black. The plots are shown as processed data (Fig. 14). The data were processed using a 'de-spiking' algorithm to replace extreme readings sometimes caused by uneven contact with the ground and with stones lying immediately beneath the surface, with the local average. The mean 'background' resistance level of each area was reduced to zero to aid comparison with the other areas. No further processing of the data was required.

Survey results (Fig. 13)

North-West lawn

The increase in resistance detected from east to west is likely to reflect a natural increase in moisture near the base of stairway. High resistance readings along the southern edge of the area are probably a response to the stone balustrade and void beyond.

North-East lawn

As with the north-west lawn, low resistance increasing away to the east of the stair probably reflects drainage from that structure. The stone balustrade and stairwell void also cause high resistance anomalies.

South-West lawn

The survey of this area was severely constricted by gravel paths on three sides and a large flower bed. Very high resistance anomalies were detected where the path was surveyed. A small fenced area, used in a recent dog show was present in the centre of the lawn during the survey, but although this was an obstacle it did not noticeably affect the results.

An elliptical low resistance anomaly, approximately 10 m long north-east and 6 m wide north-west, was detected in the centre of the lawn. Such an anomaly may reflect a buried, moisture-retaining, flower bed. A 'Y'-shaped higher resistance anomaly divides the 'elliptical' anomaly into three sectors, possibly reflecting a solid feature providing partitioning in the putative flower bed.

Two 1.5 m wide linear high resistance anomalies were detected orientated north-west on the same alignment, either side of the elliptical feature. A similar linear anomaly was detected

orientated south-west from the north-eastern side of the central 'elliptical bed'. A total of five further, more narrow linear high resistance anomalies were detected on the northern, western and southern sides of the central feature. The linear resistance anomalies do not match exactly with known parchmarks, but do show the characteristics of buried pathways. Two high resistance anomalies were located on the south-western edge of the survey area. Although apparently discrete, these anomalies may have continued outside the survey. If they are indeed individual anomalies, then they could represent buried masonry such as foundations or plinths.

South-East lawn

The survey of the south-east garden was progressed around a large flower bed, providing very little overall context for the readings. A high resistance anomaly was detected to the north-east of the flower bed. This was probably a linear anomaly although it is difficult to be sure as the area was only two readings wide. If so, the feature seems likely to be a buried path.

Conclusion

Earth resistance survey was carried out over lawn areas adjacent to Stowe House. Of the four areas surveyed it is only the south-western lawn that has yielded potentially significant anomalies. A large oval area has been suggested as a possible former partitioned central flower bed, surrounded by a network of possible linear pathways and two putative masonry foundations to the west. Although the resistance anomalies do not form a clear pattern as suggested by parchmark evidence (see Fig. 15), it must be considered that over the three century history of the house and its grounds, the garden form may have been altered on several occasions, resulting in a palimpsest of buried features to be detected geophysically.

APPENDIX 3 BIBLIOGRAPHY AND REFERENCES

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English Heritage, 1995 Geophysical Survey in Archaeological Field Evaluation, Research and Professional Services Guideline 1

OAU, 1992	Fieldwork Manual (ed. D. Wilkinson)
OAU, 2000	Stowe School, Stowe, Buckinghamshire. Archaeological Watching Brief
OA, 2002a	Drayson Hall, Stowe School, Buckinghamshire. Archaeological Watching Brief
OA, 2002b	Stowe House, New Forecourt, Stow, Buckinghamshire. Archaeological Watching Brief
OA, 2002c	Stowe Landscape Gardens, Cuttle Brook Restoration Project.
OA, 2003a	Stowe House, Stowe, Buckinghamshire. Written Scheme of Investigation
OA, 2003b	New Field House, Stowe School, Stowe, Buckinghamshire. Archaeological Watching Brief

APPENDIX 4 SUMMARY OF SITE DETAILS

Site name: Stowe House, Stowe, Buckinghamshire.

Site code: SSSE 03

Grid reference: NGR SP 6700 3750

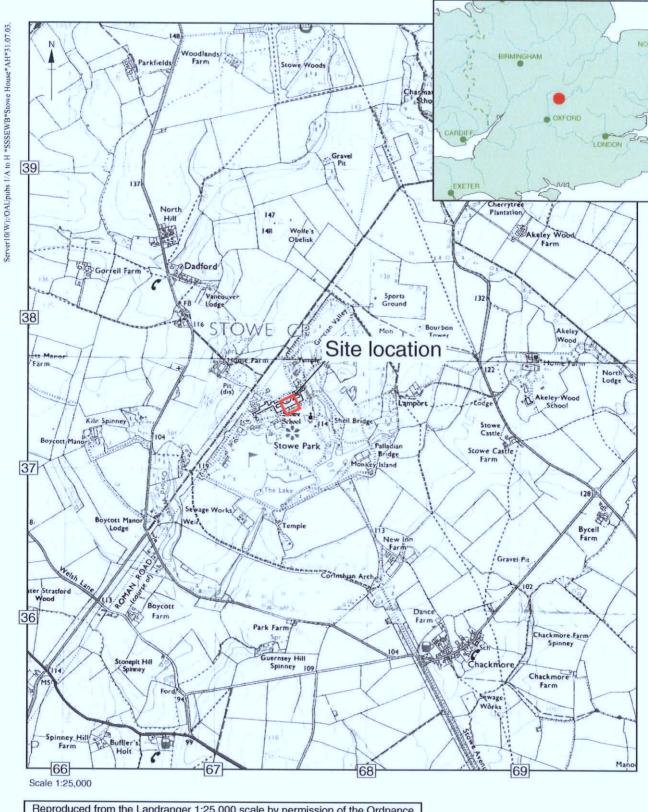
Type of excavation: Excavation of 4 trenches and Watching brief on further 6 trenches.

Date and duration of project: A total of 14 days from 3rd July to 17th July 2003.

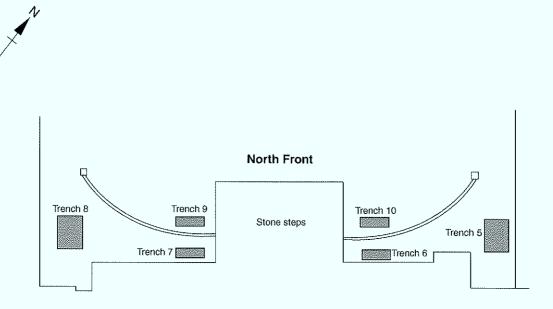
Area of site: 0.063 hectare

Summary of results: A series of truncated masonry piers possibly representing an earlier colonnade or arched arcade, C19th and modern brick and stone culverts and make up for the terrace was exposed in the North Front. C20th garden features was exposed to the south of the house together with evidence for the landscaping of the terrace and a clay lined tank associated with the construction or remodelling of Stowe House in the 17th and 18th centuries. Geophysical survey results identified possible earlier garden features within the south-west lawn, west and outside of the area of trenches in the South Front.

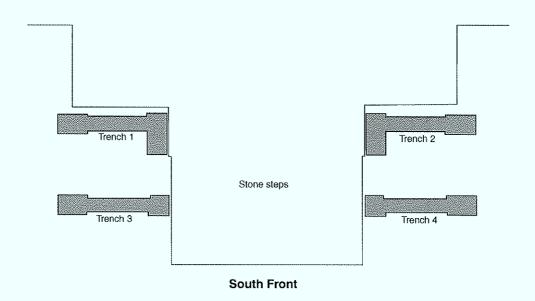
Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with the Buckinghamshire County Museums Service in due course.



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MAIN BUILDING





Trench location

Figure 2: Trench location plan

Figure 3: Trench 1 - plan and sections

ж Plan

Figure 4: Trench 2 - plan and sections

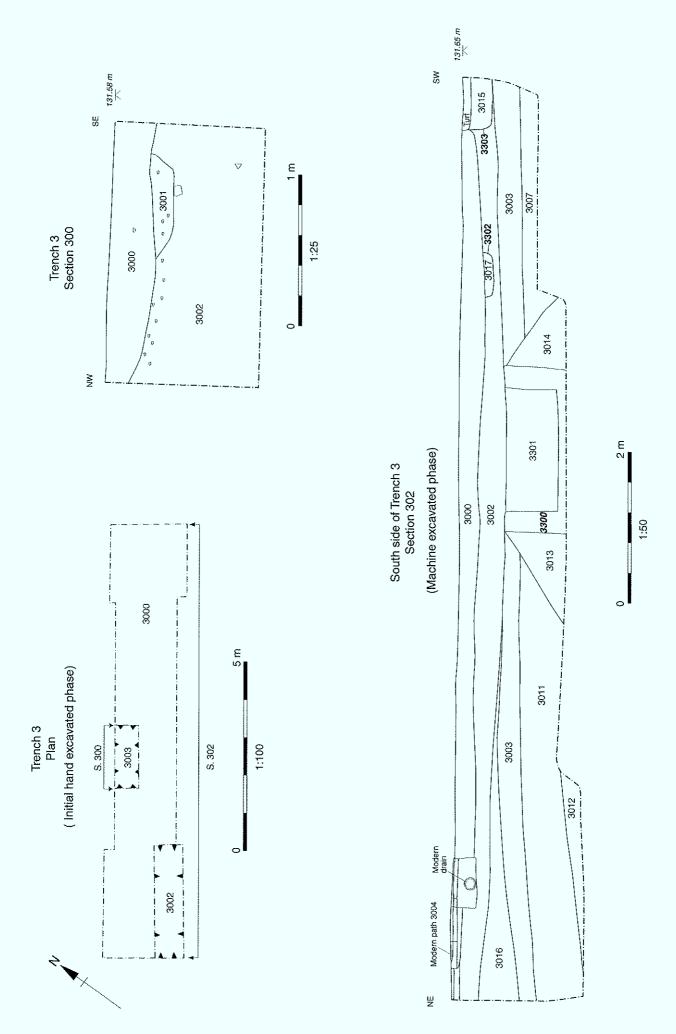
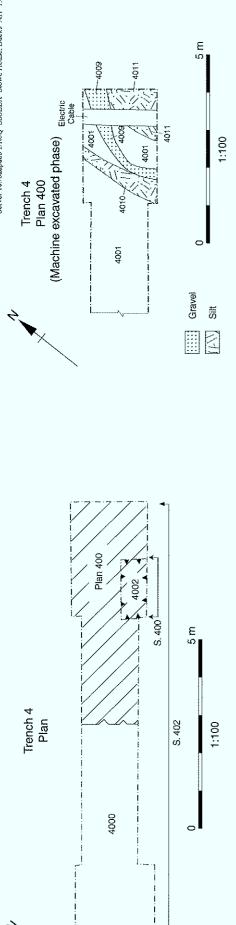


Figure 5: Trench 3 - plan and sections



South side of Trench 4 Section 402

(Machine excavated phase)

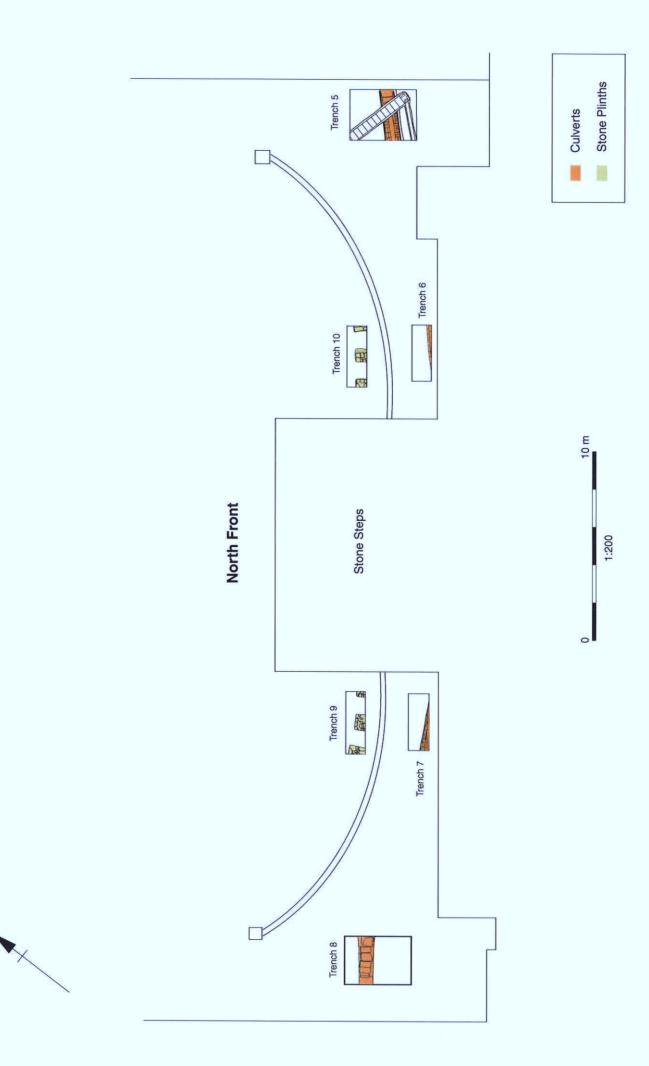
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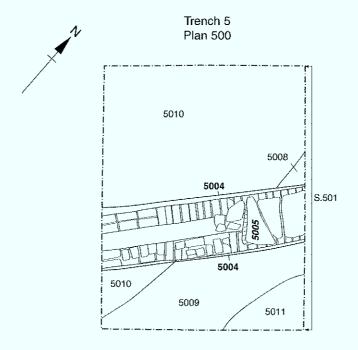
Electric_ cable

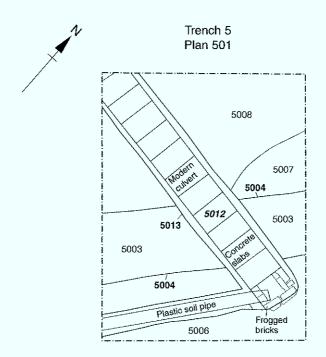
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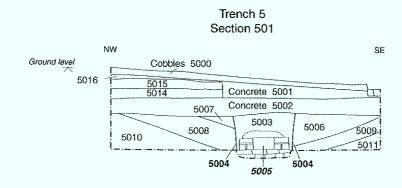
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Figure 6: Trench 4 - plans and sections









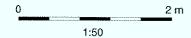
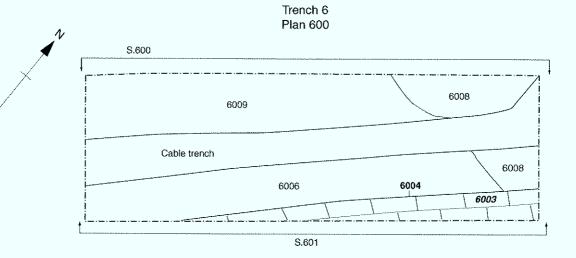
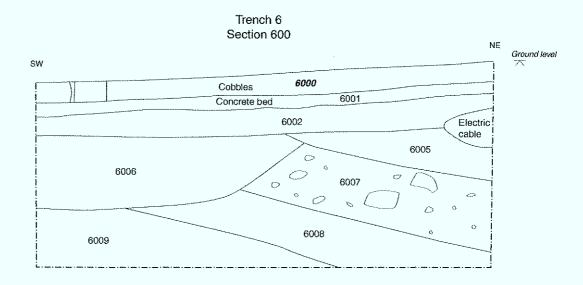


Figure 8: Trench 5 - plans and section







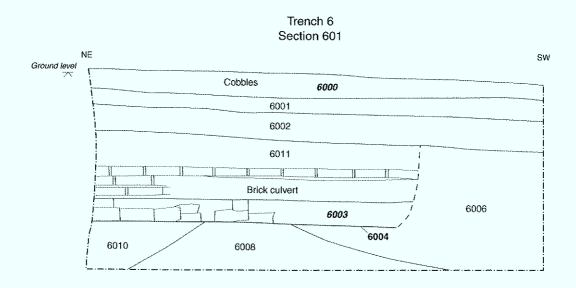
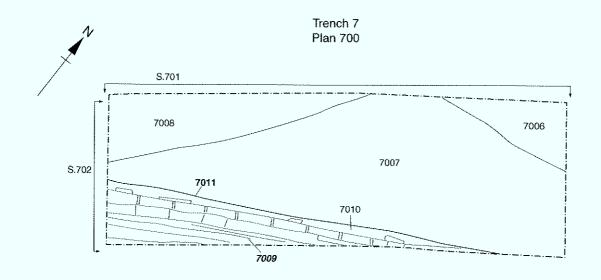
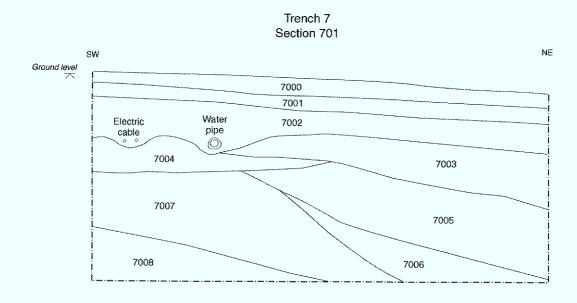
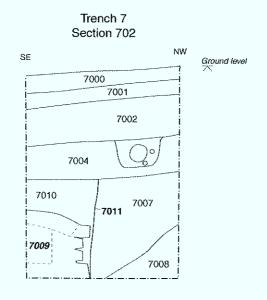




Figure 9: Trench 6 - plan and sections







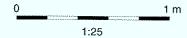
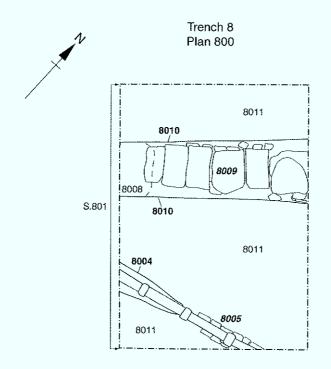
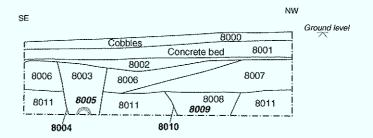
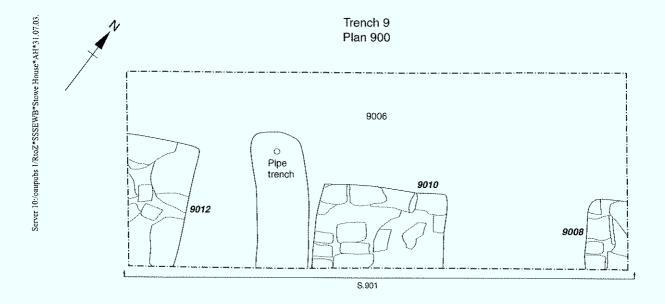


Figure 10: Trench 7 - plan and sections

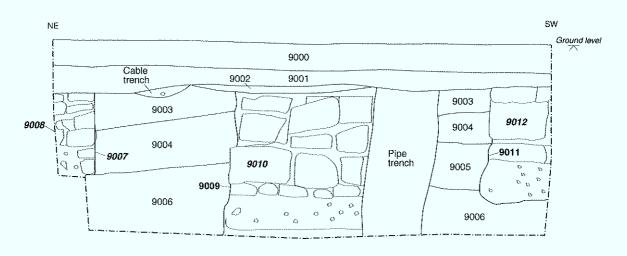


Trench 8 Section 801





Trench 9 Section 901



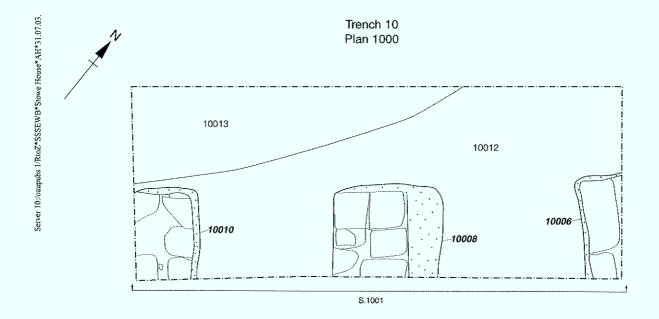
Dressed stone

Oressed stone

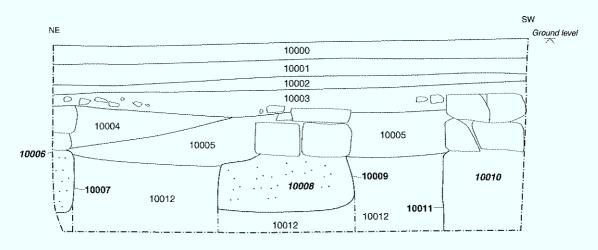
Mortar and stone fragments



Figure 12: Trench 9 - plan and section





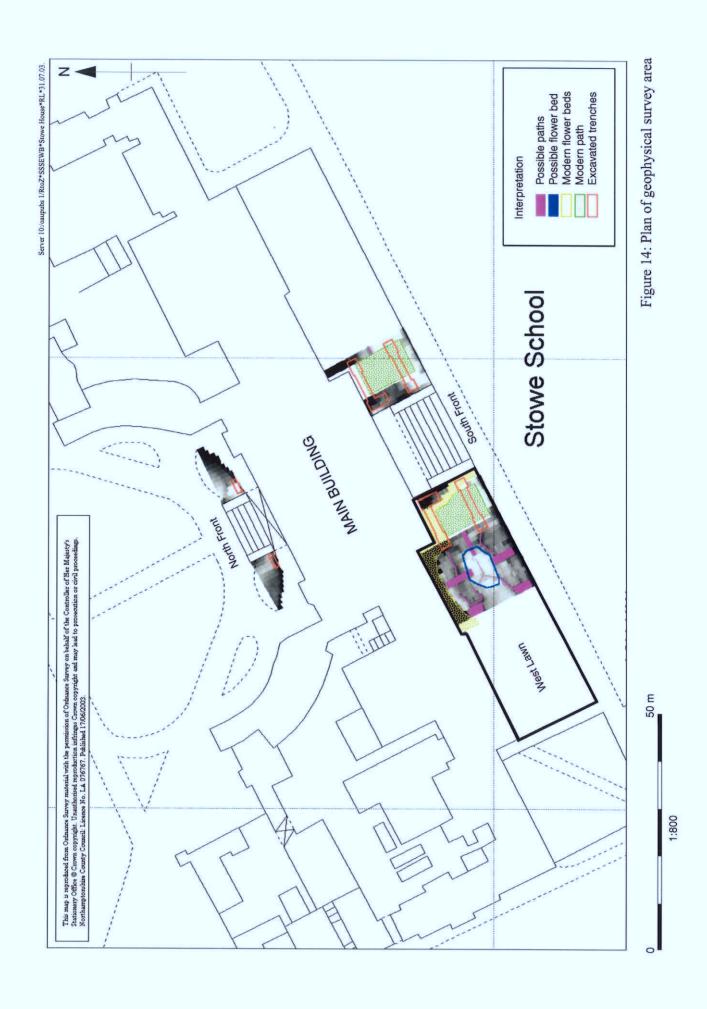


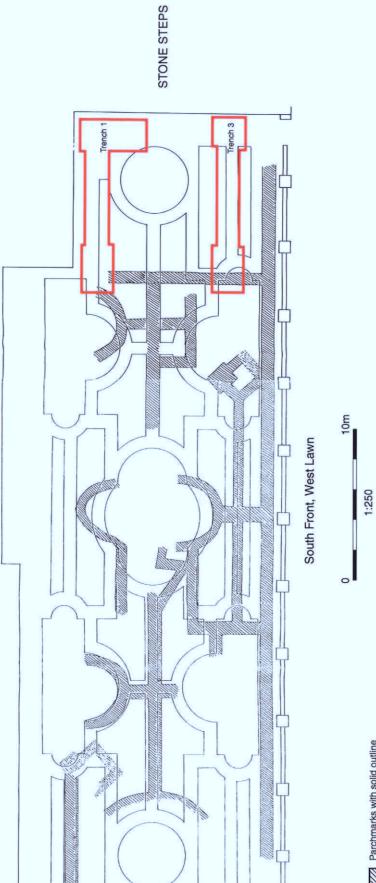
Dressed stone

o o o o Mortar and stone fragments



Figure 13: Trench 10 plan and section





Parchmarks with uncertain outline

Parchmarks with solid outline

Figure 15: Plan of parchmarks synthesised with 19th century maps



Plate 1: Trench 3, showing clay lined tank



Plate 2: Trench 2, showing brick drain and concrete underpining of South Front steps



Plate 3: Trench 7, showing modern culvert



Plate 4: Trench 5, showing 19th century culvert



Plate 5: Trench 9, showing stone plinths south-west of North Portico



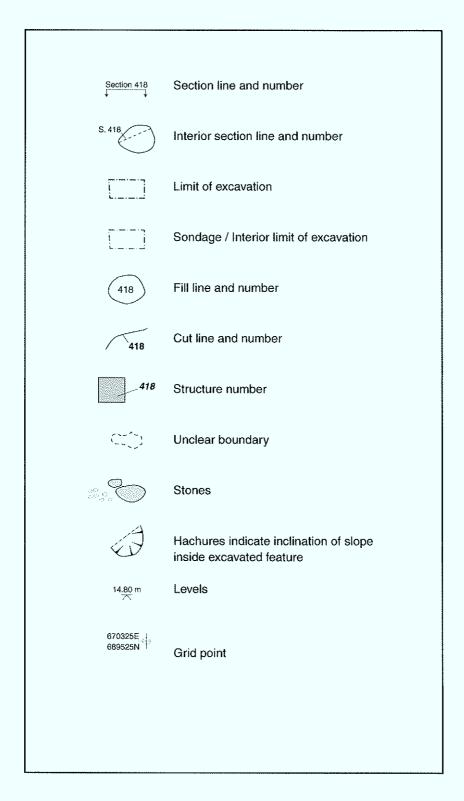
Plate 6: Trench 10, showing stone plinths north-east of North Portico



Plate 7: Trench 9, showing northern view of stone plinths



Plate 8: Trench 10, showing northern view of stone plinths





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