

New Treatment Plant Bulstrode Park Gerrards Cross Buckinghamshire



Archaeological Watching Brief Report



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**New Treatment Plant,
Bulstrode Park,
Gerrards Cross, Buckinghamshire**

ARCHAEOLOGICAL WATCHING BRIEF REPORT

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Front cover: Southern elevation of Bulstrode Park House

SUMMARY

Between the 9th and 12th of March 2009, Oxford Archaeology (OA) carried out an archaeological watching brief within the grounds of Bulstrode House, Bulstrode Park, Gerrards Cross, Buckinghamshire (NGR: SU 9870 8820). The work was commissioned by WEC International in advance of the excavation of a new sewer trench and the installation of a new sewage treatment tank. The watching brief revealed an 18th-century boundary/ornamental wall running parallel to the house, deposits relating to the 19th century remodelling of the formal gardens and use of the gardens by the military during WW II.

1 INTRODUCTION

1.1 Scope of work

- 1.1.1 In March 2009 Oxford Archaeology (OA) carried out an archaeological watching brief within the grounds of Bulstrode House, Bulstrode Park, Gerrards Cross, Buckinghamshire, (NGR: SU 9860 8835).
- 1.1.2 The work was commissioned by WEC International in respect of a planning application for the excavation of a new sewer trench and the installation of a sewage treatment tank (Planning Application No. 07/2306).
- 1.1.3 Due to the potential disturbance of archaeological deposits during the development a condition was attached to the planning permission, in line with PPG 16.
- 1.1.4 A project brief was set by David Radford, Archaeological Officer representing Buckinghamshire County Archaeological Service (BCAS), requiring that an archaeological watching brief be carried out during the period of groundworks (BCAS 2008).
- 1.1.5 OA prepared a Written Scheme of Investigation detailing how it would meet the requirements of the brief (OA, 2006).

1.2 Location, geology and topography

- 1.2.1 The site is located approximately 3 km south-west of Gerrards Cross, within the area of Bulstrode Park. The works occurred approximately 100m south-east of the footprint of the current Bulstrode House and ancillary buildings, and within the area of formal gardens abutting the house to the south and east (Fig. 2). The development area traverses the “ha-ha” running along the eastern edge of the gardens and is located on a gentle south facing slope. The underlying geology is glacial sand and gravel, bounded to the east and south by a band of mottled clay, sand and pebbles, which in turn gives way to a band of soft white chalk and then to river gravels and dry valley deposits (Geological Survey of Great Britain Sheet no. 255). The site

occupies an area of approximately 0.5 hectares and is located at approximately 73 ± 2 m above OD.

1.3 Archaeological and historical background

- 1.3.1 A desk based assessment of the proposed site was carried out by OA in August 2005, and an abridged version is reproduced below. A full background to the site can be obtained from the report (OA 2005).
- 1.3.2 Bulstrode Park is thought to have been the site of a medieval manor and from the 17th century onwards it has been the site of a park and garden. The current estate is a Grade II Registered Park and Garden (CAS1540) which incorporates Bulstrode House (Grade II) and the Pigeon Tower (Grade II).
- 1.3.3 A house was built on the site of the current Bulstrode house by the infamous Judge Jeffries between 1676-85. This was an imposing red brick building with a 70 m long south front masking two courts. According to English Heritage summary parks and gardens description, the courts were separated by the hall of the previous manor house, although it is unclear what the origins of this 'manor' are.
- 1.3.4 In 1706 the estate was sold to William Benedinck, the first Earl of Portland, who spent much time improving the estate and completed the wings of Jeffries' house and laid out the surrounding gardens (Vitruvius Britannicus, 1739). The Earl may have been aided by Henry Wise (1653-1738) and Claude Desgots (Harris, 1979). The second Duke of Portland employed Stiff Leadbetter to remodel the house in the 1740s and it was again remodelled *c* 1806-09 for the third Duke by James Wyatt (1747-1813, who created a castellated west wing. The second Duchess of Portland subsequently developed the garden and imported plant species from around the world.
- 1.3.5 From 1789 Humphry Repton (1752-1818) landscaped the existing mid 18th-century park and re-modelled the gardens. Repton wrote at some length about Bulstrode in his Enquiry (1803). The fourth Duke of Portland sold the estate to the Duke of Somerset in 1810, who's son demolished the west wing and in 1860-2 enlarged the house and remodelled the gardens, creating a formal garden over the cellars of the old wing. During the early 20th century, Sir John Ramsen, fifth Baronet, carried out extensive planting and after the Second World War the estate was divided. The house is now occupied by the Headquarters of the Worldwide Evangelization Crusade.
- 1.3.6 Previous work at Bulstrode Park by OA in 2006 and 2007 encountered evidence of extensive landscaping of the gardens, an earlier phase of outbuildings to the east of the main house and an earlier entrance into the north-eastern area of the stable block (OA, 2006, OA, 2007).

2 PROJECT AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 To identify and record the presence or absence, extent, condition, quality and date of archaeological remains in the areas affected by the development.
- 2.1.2 To preserve by record any archaeological deposits or features that may be disturbed or destroyed during the course of the groundworks.
- 2.1.3 To make available the results of the archaeological investigation.

2.2 Methodology

- 2.2.1 The watching brief was conducted as a series of site visits during any works likely to impinge upon possible archaeological deposits. These works consisted of approximately 50 m length of trenching, two connections to an existing sewer and the excavation of a large pit to contain the treatment tank. The excavations were completed using either a 3 tonne or 13 tonne mechanical excavator where appropriate.
- 2.2.2 A plan of the excavations was maintained at a scale of 1:100 (Fig. 2). Any recorded sections were drawn at a scale of 1:20. All excavations and any features were photographed using digital photography, colour slide and black and white print film. A general photographic record of the work was also made. Recording followed procedures detailed in the *OA Field Manual* (ed, D Wilkinson, 1992).

3 RESULTS

3.1 Description of deposits

Pit for the treatment tank

- 3.1.1 This was situated on the eastern edge of the garden, on a gentle south-facing slope (Fig. 2). It was initially intended to measure 8.5 m long, 3 m wide and up to 4 m in depth. Due to the instability of the geology it was necessary to batter the sides leaving the footprint at the top of the excavation measuring approximately 10.5 m long by 6 m wide.
- 3.1.2 A layer of natural orange-red sand (17) was encountered at a depth of between 1.2 m and 1.9 m below the current level of the lawns (Fig. 3, Section 1). This deposit sloped noticeably down to the south, much more steeply than the current gardens. Overlying this was a layer of red-brown clay silt (16) up to 0.9 m in depth. Within the southern half of the pit this was overlaid by a 0.15 m deep layer of grey-brown clay silt loam (15), which probably represents a buried topsoil horizon.
- 3.1.3 Cutting layer 15 was a 1.1 m wide by 0.6 m deep vertically sided, flat bottomed trench (14). This was aligned south-east to north-west, running roughly parallel to the

southern terrace of the main house. Built within this trench was a solid brick foundation (13), 1.1 m wide by 0.75 m high. This was constructed using hand moulded red bricks measuring 0.222 m x 0.103 m x 0.062 m.

- 3.1.4 Cutting layer 16 on the north side of this wall was a 1.5 m wide by 1 m deep ditch (11), running parallel to the wall. The base of this ditch was filled by a 0.15 m deep layer of dark red-brown silt clay (10), a probable silting deposit. Resting on top of this deposit and leaning against wall 13 was the remnants of a demolished wall (12). This measured 0.6 m in width, approximately 0.5 m high and was visible running the full width of the pit. It was constructed of identical components to wall 13 and it is probable that both walls 12 and 13 were part of the same structure. It would appear that after wall 12 was reduced in height it was pushed over into ditch 11.
- 3.1.5 Ditch 11 had then been partially backfilled with a 0.4 m deep layer of red-brown clay silt (9), leaving voids between walls 12 and 13. Filling the remainder of the ditch and running over the top of wall 13 was a 0.35 m deep layer of light yellow-brown clay silt (8). This contained numerous fragments of brick and much mortar flecking suggesting that it was composed of demolition debris and imported material.
- 3.1.6 Overlying this backfill, wall 13 and the original ground level 15 was a 0.3 m deep layer of red-brown clay silt (7), a landscaping layer of made ground. This was sealed by a layer of reddish orange-brown silt clay (6) measuring up to 0.8 m in depth, the depth increasing towards the south. This deposit contained numerous angular fragments of brick indicating that this was a layer of made ground. Overlying this was a 0.35 m deep layer of grey-brown clay silt (3). This contained similar fragments of brick as layer 6. Its composition suggests it was the final landscaping layer forming the topsoil of the landscaped gardens.
- 3.1.7 At the northern edge of the pit this layer had been cut by a 0.2 m deep construction cut (5). This was filled by a concrete and brick foundation supporting a concrete platform (4) measuring 12 m long and 5 m wide. This is associated with the military occupation of the park during WWII and probably forms the base for a “Nissan” hut or similar structure.
- 3.1.8 Overlying layer 3 and butting up to structure 4 was a 0.25 m deep layer of dark grey-brown silt loam (2). This deposit produced a quantity of modern (20th-century) building debris including plastic sheeting and paint cans. This was sealed by a thin skim of grey-brown clay loam (1), less than 0.1 m in depth representing a modern landscaping deposit.

Northern connection to existing sewer pipe

- 3.1.9 These works consisted of a 25 m length of trenching passing under the “ha-ha” wall and connecting to an existing access chamber. The excavations were up to 1.4 m in depth and 0.5 m wide (Fig. 2).

3.1.10 A continuation of the underlying natural sand (17) was encountered at a depth of 0.4 m below the current ground level (Fig. 3, Section 2). This was overlaid by a 0.3 m deep layer of light grey-brown clay silt (19). This may be a buried soil horizon representing the original ground level. Overlying this was a 0.12 m deep layer of dark grey-brown clay silt loam (18), the present day topsoil and turf.

Southern connection to the existing sewer trench

3.1.11 These works comprised a total of 25 m of trenching consisting of a 14 m length of trenching from the outflow of the treatment tank to the east side of the “ha-ha” and 11 m length of trenching across pasture to a second existing access chamber (Fig. 2).

3.1.12 At the base of the trench a layer of grey-brown clay silt (23) was encountered (Fig. 3, Section 3). This deposit contained fragments of hand moulded bricks measuring 0.23 m x 0.105 m x 0.06 m suggesting that it represents a layer of made ground. This was overlaid by a layer of red-brown silt clay (22) measuring between 0.6 m and 1 m in depth. This layer produced many sub-angular brick fragments again suggesting a layer of made ground and is a possible continuation of deposit (6).

3.1.13 This was sealed by a 0.2 m deep layer of light grey-brown silt clay subsoil (21) similar to layer 19, which was overlaid by a 0.2 m deep layer of dark grey-brown clay loam (20), the present day topsoil and turf, similar to layer 18.

3.1.14 In the area immediately east of the “ha-ha” ditch this was overlaid by a lens of mixed red-brown silt clay and grey-brown clay loam (24), 3.6 m wide and up to 0.35 m in depth forming a rough bank following the length of the ditch. This represents material either excavated from the “Ha-Ha” ditch during its construction or material from its periodic cleaning.

3.2 Finds

3.2.1 The majority of the dating evidence observed consisted of both fragments and whole examples of bricks. These can be divided into two different size groups, suggesting respectively late 18th and 19th century dates. These were recorded but were not retained.

3.2.2 A large amount of 20th-century building debris was observed within layer 2, again the presence of this material was recorded but it was not retained. No dating evidence earlier than the 18th-century was recovered.

3.3 Palaeo-environmental remains

3.3.1 No deposits suitable for palaeo-environmental sampling were encountered during the course of the watching brief.

4 DISCUSSION AND CONCLUSIONS

- 4.1.1 Evidence for a major early landscaping feature in the form of an east-west running wall (structures 12 and 13) was encountered during the excavation of the pit for the installation of the treatment tank. The bricks used in its construction date to the early to mid 18th-century, which would fall within the period of landscaping of the gardens conducted by Henry Wise and Claude Desgots for the first Earl of Portland during the 1730s.
- 4.1.2 This wall consisted of a large foundation plinth (13) surmounted by a brick wall (12) that appears to run parallel to the front of the house. Ditch 11 is associated with this wall and possibly forms a “ha-ha” running cross the base of the gardens, although its orientation is the reverse of what would be normally expected (ie the ha-ha wall faces away from the house so as to be invisible). It is also possible that the wall actually represents a boundary wall demarking the limits of the garden landscaping during this period. A study of the Bowles engraving of the 1730s (Fig. 4) suggests that this structure may form part of the high wall and tower visible in the left-hand corner of the engraving. The location, alignment and size of the wall would support this hypothesis. The presence of the buried topsoil horizon, 15, indicates the original ground level in this area before the landscaping, while the absence of any made ground associated with this phase of landscaping banked up against the wall also suggests that the wall was in fact a boundary or ornamental wall rather than a terrace wall, again supporting the hypothesis that it is the wall shown in the Bowles engraving.
- 4.1.3 The wall appears to have been deliberately demolished as part of a later phase of landscaping. Wall 12 appears to have been reduced in height and the remainder toppled over into ditch 11. The ditch was partially backfilled by deposit 9 while successive layers of made ground 6, 7 and 8 were tipped over the demolished wall forming a smooth gradient running down to the base of the slope. The presence of large quantities of fragmented brick and mortar within layer 8 suggests it was related to the demolition of wall 12. Layer 6 contained a large amount of fragmented brick, but these were of a harder material and slightly larger than those used in constructing walls 12 and 13 suggesting a 19th-century date. This phase of landscaping is probably associated with that conducted by the Duke of Somerset’s son c1860. The house was also enlarged during this period and layer 6 probably represents material excavated from the foundations/and or cellars from this work together with construction debris in the form of brick fragments. By the time of the publication of the 1st edition of the Ordnance Survey map in 1875, the area is shown as open parkland with no structures visible, confirming that walls 12 and 13 had been demolished and buried by that time.
- 4.1.4 Layer 3 represents the final landscaping layer from this phase of work forming the topsoil and turf line of the lawns/parkland.

- 4.1.5 After that phase of landscaping this area of the gardens appears to have remained unchanged until the requisition of the house by the military in WWII when a large amount of temporary accommodation represented by the concrete and brick hut bases (4) were constructed along the eastern edge of the formal gardens.
- 4.1.6 The excavations for the trench connecting to the existing sewer north of the tank showed that this area had not been subject to the same degree of landscaping with the presence of the subsoil (19) directly overlying the natural sand 17 suggesting that this area had been relatively undisturbed.
- 4.1.7 The excavations for the trench from the outflow of the treatment tank back to the existing sewer passed across land that had been heavily landscaped during the 1860s. West of the “ha-ha” the stratigraphy encountered was similar to that recorded within section 1. East of the “ha-ha” both layers 22 and 23 represent layers of made ground. The composition and the presence of 19th-century brick fragments within layer 22 suggests that it may be a continuation of layer 6.
- 4.1.8 Visual observation of the area east of the “ha-ha” showed that these deposits of made ground form a large platform or terrace running approximately 50 m out into the field to the south and east, suggesting that the formal landscaping may have extended much further than the present gardens.
- 4.1.9 The “ha-ha” appears to be of modern construction using machine moulded bricks and cement mortar to construct the retaining wall. This may have occurred during the division of the estate after WWII. The absence of any pathways linking the concrete hut bases built in WWII running across the “ha-ha” would also suggest that its construction occurred after the huts had been demolished.
- 4.1.10 No evidence for any features or deposits pre-dating the 18th-century were encountered.

APPENDICES

APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

<i>Context</i>	<i>Type</i>	<i>Depth/ Height</i>	<i>Width</i>	<i>Comments</i>	<i>Finds</i>	<i>Date</i>
1	Layer	0.15 m	-	Topsoil, Landscaping layer	Brick	C20th
2	Layer	0.25 m	-	Made ground	Brick, plastic, metal	C20th
3	Layer	0.4 m	-	Made ground/ Landscaping layer	Brick	Early C19th
4	Structure	0.5 m	3 m	Concrete and brick base for barrack block or nissan hut	Brick	1940s
5	Cut	0.2 m	0.3 m	Construction cut for structure 5	-	1940s
6	Layer	0.2 m – 0.8 m	-	Made ground	Brick	Early C19th
7	Layer	0.3 m	-	Made ground	Brick	Early C19th
8	Layer	0.35 m	-	Made ground	Brick	Early C19th
9	Fill	0.3 m	-	Deliberate backfill	Brick	Early C19th
10	Fill	0.15 m	-	Primary fill of 11, silting deposit	-	C18th/ C19th
11	Cut	1 m	1.5 m	Ha-Ha or terrace ditch	-	C18th/ C19th
12	Structure	0.5 m	0.5 m	Terrace or retaining wall	Brick	C18th/ C19th
13	Structure	0.7 m	1.1 m	Foundations associated with wall 12	Brick	C18th/ C19th
14	Cut	0.4 m	1.1 m	Construction cut for foundations 13	-	C18th/ C19th
15	Layer	0.3 m	-	Buried soil horizon, probable original ground level	Brick	C18th/ C19th
16	Layer	0.5 m – 0.8 m	-	Natural, probable colluvium	-	-
17	Layer	> 2.5 m	-	Natural sand	-	-
18	Layer	0.15 m	-	Topsoil and turf	Brick	C20th

<i>Context</i>	<i>Type</i>	<i>Depth/ Height</i>	<i>Width</i>	<i>Comments</i>	<i> Finds</i>	<i>Date</i>
19	Layer	0.3 m	-	Subsoil	-	-
20	Layer	0.2 m	-	Topsoil and turf	-	-
21	Layer	0.2 m	-	Subsoil	-	-
22	Layer	0.6 m	-	Made ground	Bricks	C19th
23	Layer	> 0.15 m		Made ground	Bricks	C18th/ C19th
24	Layer	0.35 m	3.5 m	Material excavated from the "Ha-Ha" ditch	Bricks	C20th

APPENDIX 2 BIBLIOGRAPHY AND REFERENCES

BCAS, 2006 *Brief for an Archaeological Watching Brief*

Campbell, C, 1739 *Vitruvius Britannicus Volume IV*

Harris, J, 1979 *The Artist and the Country House P.168*

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OA, 2005 *Land at Bulstrode House, Gerrards Cross : Desk Based Assessment*

OA, 2007 *Bulstrode Park, Gerrards Cross, Buckinghamshire: Written Scheme of Investigation for an Archaeological watching Brief*

APPENDIX 3 SUMMARY OF SITE DETAILS

Site name: Bulstrode Park, Gerrards Cross, Buckinghamshire

Site code: GCBPSP 08

Grid reference: Centred on SU 9860 8835

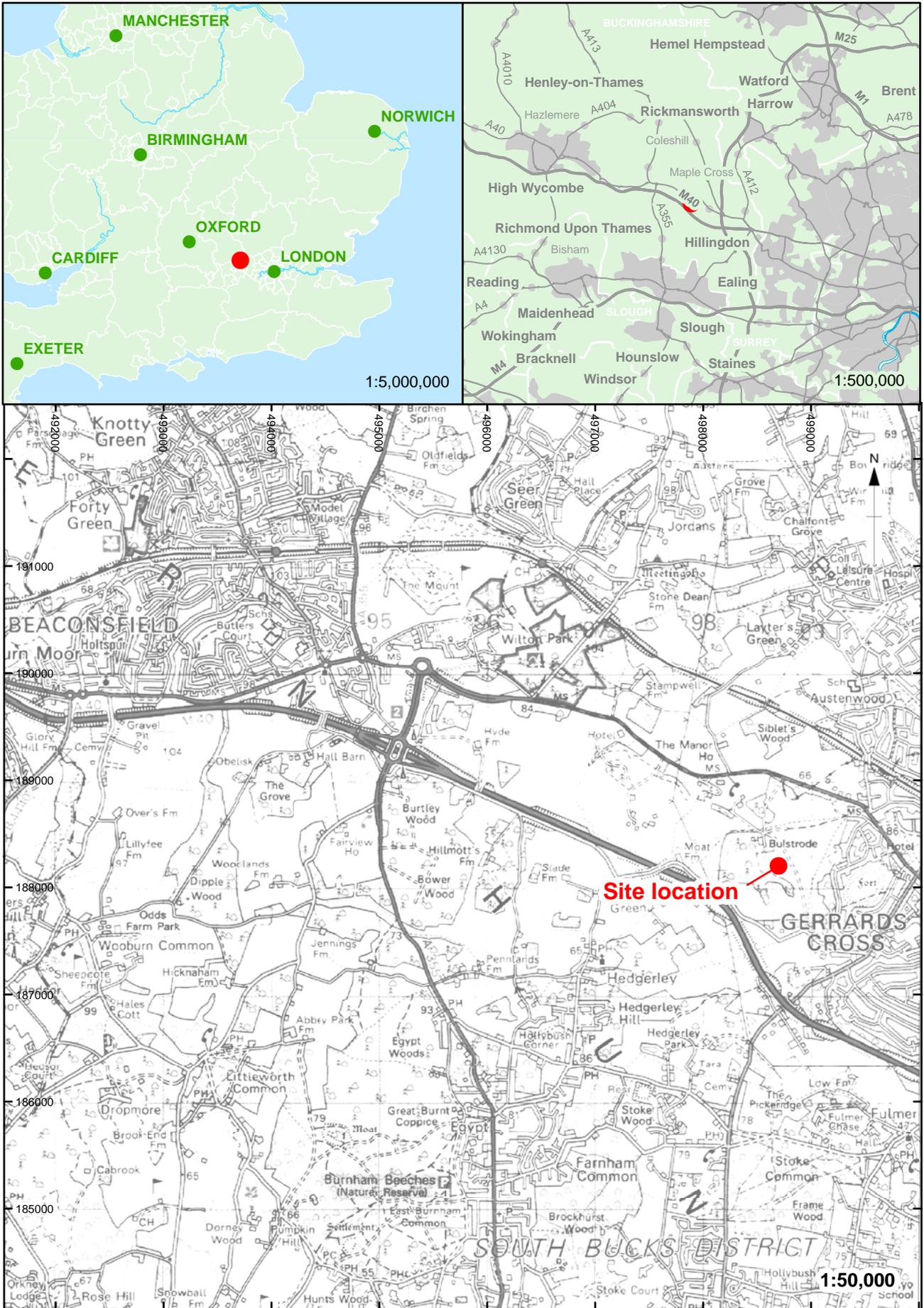
Type of watching brief: Machine excavation of sewer trench and a pit for sewage treatment tank.

Date and duration of project: Between 9th and 13th of March 2009, 3 site visits.

Area of site: 0.6 Hectare

Summary of results: Exposure of a series of layers of made ground associated with the 18th and 19th century landscaping of the grounds including a C18th boundary/ornamental wall.

Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Buckinghamshire County Museum in due course, under the following accession number: AYBCM:2008.136



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Figure 1: Site location



Figure 2: Site plan

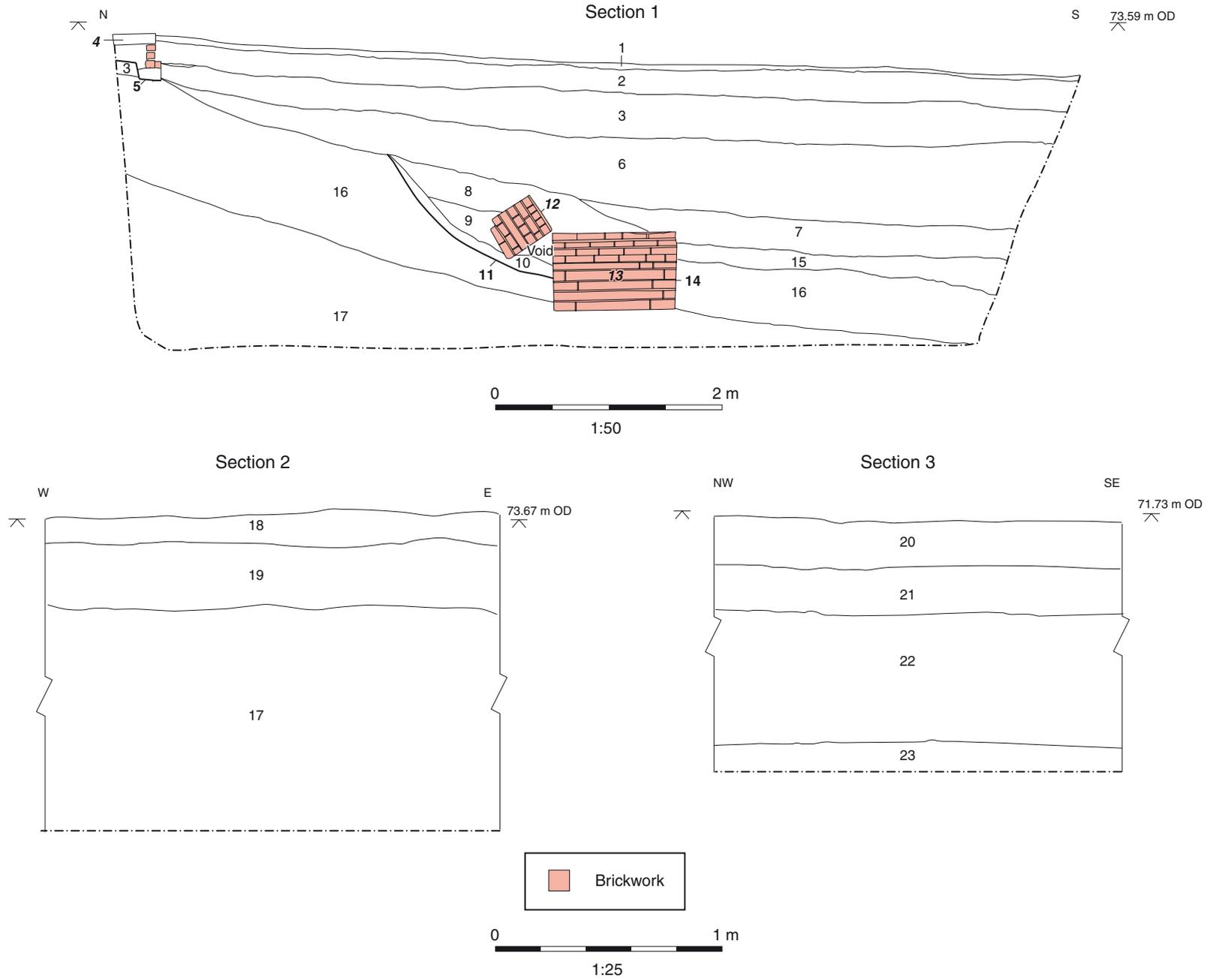


Figure 3: Section 1-3

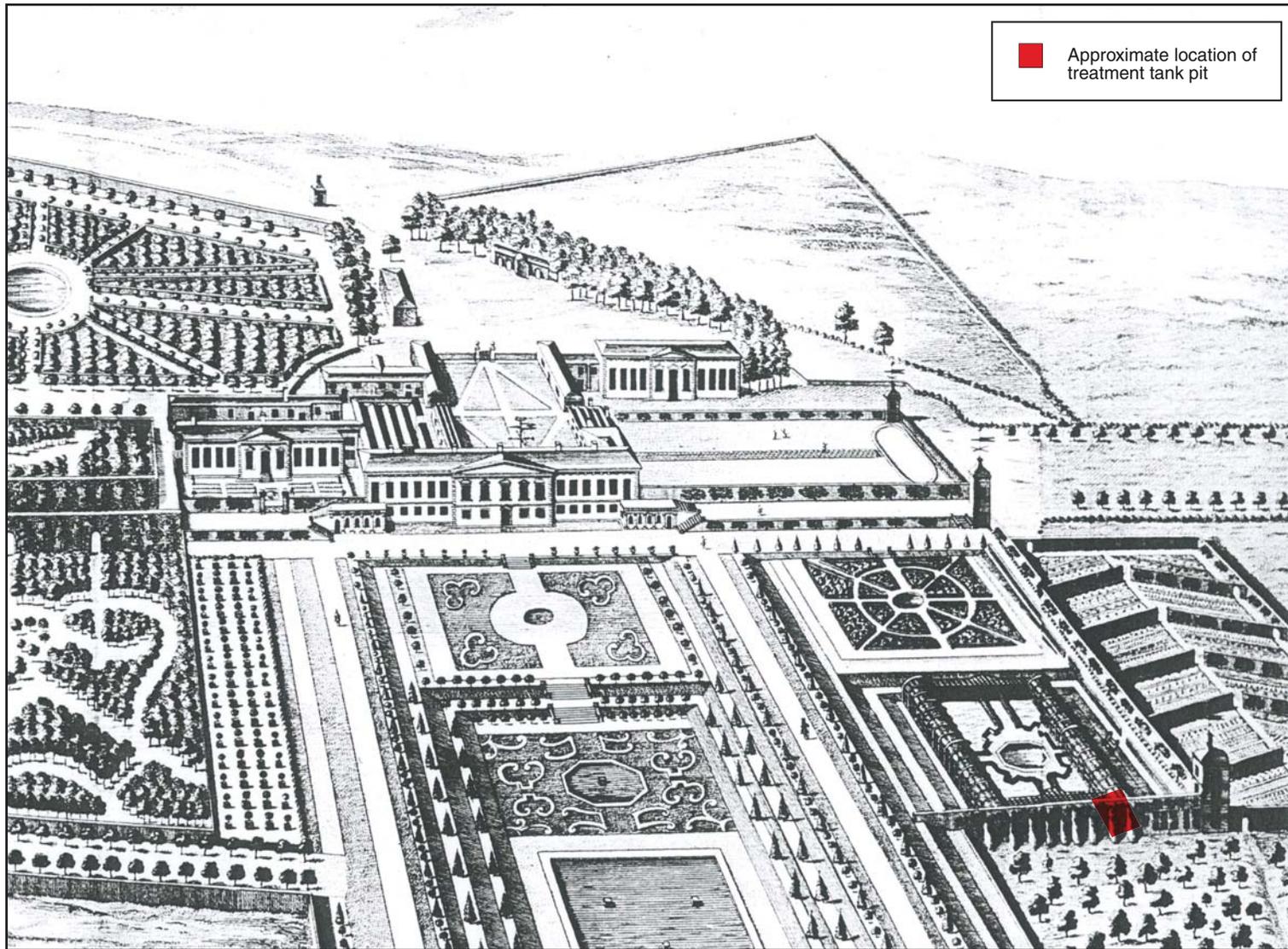


Figure 4: Engraving of Bulstrode Park Gardens by Bowles c1730



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