

Summary statement

An archaeological evaluation carried out in September/October 1997 recovered evidence for reasonable archaeological survival of features relating to former gardens on the lawn to the south of Upper Lodge, Bushy Park. Planning consent was made conditional on further excavation being carried out in advance of the construction of an ornamental pond on the site of the lawn. It was proposed that this pond should reinstate a similar feature thought to have been on the site in the early 18th century. The work was carried out by C K Currie of CKC Archaeology for Priestmere Properties Ltd in March and April of 1999.

This phase of archaeological excavations at Upper Lodge, Bushy Park, has demonstrated that the archaeological survival to the south of the present mansion is of excellent quality. Although the water garden period is only modestly represented, there is a relatively clear picture of a number of other phases. At least ten phases were identified. These range from the well-preserved remains of a late 16th/early 17th century hunting lodge, with attendant walled garden compartments, through to 20th-century Ministry of Defence terrace build-up.

The phases are summarised below:

Phase 1: first phase of brick structures *c.* 1550-1650

Phase 2: second phase of brick structures *c.* 1550-1650

Phase 3: demolition and terrace build-up *c.* 1685-1710

Phase 4: further terrace build-up *c.* 1685-1710

Phase 5: Halifax Water Garden *c.* 1710

Phase 6: destruction of Central Basin and creation of informal design *c.* 1775-1823

Phase 7: Concrete fountain *c.* 1850-94

Phase 8: destruction of fountain and more terrace build up *c.* 1864-1894

Phase 9: gravel and cinder surfaces laid down, after 1871 but probably early 20th century

Phase 10: final terrace build-up levels in mid 20th century.

The 16th/17th-century structural remains include part of the hunting lodge. This was probably a brick extension to an earlier timber lodge, with the discovery of high status tin-glazed tiles depicting hunting scenes, suggesting an elevation in status in the later 16th or early 17th century. It is possible that further elaboration, including the creation and extension of complex walled gardens continued into the first half of the 17th century in the long keepership of Sir John Hippesley (*c.* 1616-55). The documentary evidence suggests that much of the early structures were demolished after 1685, although some buildings to the east of the excavated area may have survived to be described as 'beyond repair' by the Earl of Halifax in 1709.

Only the northern edge of Halifax's Central Basin was discovered. Elsewhere, it seems that the clay retaining banks of the pond were pushed into the pond hollow, following the Basin's destruction at some time between 1754-75. Hereafter, an informal layout

existed to the south of the mansion, which probably evolved into a Regency-type shrubbery garden fashionable in the early 19th century.

After 1850 a concrete fountain was built in front of the house, but this was relatively short lived. It had gone by 1893-94, and another informal layout in front of the house seems to have been created. Terrace build-up continued into the 20th century, culminating in further heightening of the ground levels under the Ministry of Defence c. 1950.

**An archaeological excavation of the former Central Basin area, Upper Lodge,
Bushy
Park, Richmond, Greater London (NGR: TQ 14627060)**

Greater London Site Code: BHY 97

This report has been written based on the format suggested by the Institute of Field Archaeologists' *Standard and guidance for archaeological excavations* (Birmingham, 1997). The ordering of information follows the guidelines given in this document, although alterations may have been made to fit in with the particular requirements of the work. Additional guidance was taken from the *Archaeological guidance papers, nos. 1-3* as issued by English Heritage for the London region. All work was carried out according to the *Code of Conduct* of the Institute of Field Archaeologists.

1.0 Introduction

An archaeological evaluation carried out in September/October 1997 recovered evidence for reasonable archaeological survival of features relating to former gardens on the lawn to the south of Upper Lodge, Bushy Park. Planning consent was made conditional on further excavation being carried out in advance of the construction of an ornamental pond on the site of the lawn. It was proposed that this pond should reinstate a similar feature thought to have been on the site in the early 18th century. The work was carried out by C K Currie of CKC Archaeology for Priestmere Properties Ltd in March and April of 1999.

The Upper Lodge site is thought to contain the remains of an important formal water garden laid out by Charles Montagu, 1st Earl of Halifax, from c. 1710. These water gardens were given much critical acclaim in their day, being praised by contemporary garden commentators such as Stephen Switzer (Currie 1997). They were subjected to some physical alteration after 1770, and, more recently, to neglect. Prior evaluation seemed to suggest that there was some potential for the recovery of archaeological remains. It was considered that an archaeological excavation of the site should be undertaken before any firm decisions were taken regarding the proposed restoration of the pond. The site also lies within an archaeological priority area where London Borough of Richmond UDP archaeological policies are applicable to any development proposal.

Since 1945 that part of the site containing Upper Lodge and its immediate environs had been used as an extension to the Admiralty Research Laboratory at Teddington. The Ministry of Defence gave up their lease on the site in 1994, and the land returned to the Crown Estates. Much of the area within the Crown Estate's fence line had been built over by a large number of temporary buildings since 1945. These have been removed recently as part of the recent planning application.

2.0 Historical background

The land containing the site was formerly held by the Knights Hospitallers. They had leased the land out for some years before its confiscation by the Crown at the Dissolution of the Monasteries in 1537. In this year a John Field is recorded as living in the lodge. He may have also been acting as Ranger of the royal deer park at Bushy.

The title of Ranger continued until 1709 when the lease on the land was purchased from the Crown by Charles Montagu, 1st Earl of Halifax. At this time the Ranger's house was reported as being in a ruinous condition. As part of the purchase agreement Montagu agreed to rebuild the house in return for a lease of three lives. He seems to have started work on the water gardens soon after this agreement was reached as a plan in the Public Record Office shows the proposals for the site. They were completed soon after this as much comment was made on their beauty before Montagu's death in 1715.

The site passed back to the Crown in 1771 following the death of George Montagu Dunk, Charles Montagu's descendent. The office of Ranger thereafter continued as a sinecure with an annual payment of £6-13s-4d.

After 1770 parts of the water gardens were altered, and the remaining original features gradually fell into neglect. Upper Lodge was empty during the First World War, and George V gave it to the Canadian Red Cross for use as a convalescent home. Between the Wars the house was used as a school, but at the outbreak of the Second World War the house was requisitioned for military use. It remained on lease to the Ministry of Defence until 1994, when it was returned to the Crown Estates (White & Foster 1997, 18-28).

3.0 Strategy

3.1 General principles

It was proposed that the work would be based on guidelines laid down in *The management of archaeological projects* (English Heritage, revised edition, 1992). Additional guidance was taken from the Institute of Field Archaeologists' *Standard and guidance for archaeological excavations* (Birmingham, 1997), and the *Archaeological guidance papers, nos. 1-3* as issued by English Heritage for the London region, where considered appropriate.

It was proposed to undertake an excavation to investigate evidence for successive garden designs on the site of the Central Basin, to inform detailed restoration design, mitigate impact of that restoration, and improve understanding of the historic gardens at Upper Lodge.

3.2 Research aims

3.2.1 Complete the investigation of evidence of the 18th-century gardens on the site of the Central Basin, including the system of water management.

3.2.2 Establish if the relationship between the 18th-century garden and the pre-existing property layout, its gardens, boundary and environs can be further defined.

3.2.3 Identify and determine the character of works to redesign the garden layout between 1710 and the 19th century, when the house was rebuilt.

3.2.4 Determine if the design of gravel paths and informal planting dating to the later 19th century/early 20th century could be discerned, and record as appropriate.

3.3 Publication and presentation

A report will be prepared according to the guidelines listed above. A suitably edited version can then be prepared for academic publication in an appropriate source according to the wishes of English Heritage and the client. It is a condition of the present planning consent that the three previous pieces of work on this site will be combined with this present report into a suitable report for publication.

3.4. Methodology

3.4.1 Excavation strategy

3.4.1 General strategy

The evaluation strategy followed that outlined in the brief issued by English Heritage.

Machinery was used to remove the topsoil, and bulk dumping levels from the excavation area. Once significant archaeology was reached excavation proceeded by hand, although the use of machinery was reserved to help remove some further bulk terrace levelling soils. The latter proceeded after a reasonable percentage of the bulk soils had been sampled by hand digging. The depth of the local stratigraphy made it necessary to step most of the trenches excavated for safety reasons.

The trenches were recorded in plan and by sections at a scale of 1:20 unless special circumstances required planning at 1:10. The trenches were excavated stratigraphically, according each context with a separate number. Single-feature planning was undertaken where suitable remains were encountered. All features were recorded by monochrome and colour photography, using appropriate scales.

The trenches were backfilled by the archaeologists before leaving the site at the completion of the fieldwork. On the instructions of the client, parts of the site were left open where it was thought that this would help the future reinstatement of the pond.

All finds were be retained, including bone, with the exception of post-medieval brick and tile and oyster. The latter was discarded on site after having been suitably sampled.

3.4.2 Specific strategy

It was hoped that the research aims could be answered by an area excavation, covering a representative sample of the Central Basin site. It was anticipated that this sample would be about 40% of the total area of the Basin (originally estimated to be an oval area about 35m by 25m, with an area of about 600 square metres). However, unexpected discoveries pre-dating the pond of an exceptional nature and the poor survival of the early 18th-century pond contributed to a change of policy. After some discussion with English Heritage, it was decided that the excavation priority should be shifted to determining the extent of the earlier remains, so that the reinstatement of the pond could be carried out without causing damage to those remains.

The trenches continued the sequence of trenches at this site, beginning, on this occasion, with trench 18.

3.4.3 Environmental Sampling

Previous work on the site has not indicated that environmental sampling will be successful. However, should the opportunity arise, funds from the contingency fee were allocated to sampling to act as a guide for future expectations. Environmental sampling for CKC Archaeology (Gardens Archaeology Project) is carried out by Elizabeth Pearson of Hereford & Worcester County Council Archaeology Section.

3.4.4 Recording

Recording was undertaken using standardised pro-formas and other materials supplied by CKC Archaeology, based on English Heritage's Central Excavating Service, *Site Recording Manual, version 7*, London, 1992.

3.5 Post-excavation strategy

According to the conditions for planning consent, a policy for post-excavation analysis for this project, together with the three previous pieces of work on the site, will be devised. This will aim at combining the results of the individual pieces of work, and producing a report to be submitted for publication.

All retained artefacts and ecofacts found during this present project were cleaned, conserved and packaged according to the requirements of the recipient museum. They were studied by suitably experienced staff, and any information gained from them was incorporated into the final report. The project archive was prepared according to the requirements of the recipient museum and national guidelines. Cataloguing of finds was undertaken on a suitable pro-forma designed for this purpose.

Provision was made for the conservation of any finds so requiring special conditions of treatment and packaging according to the guidelines laid down by the Society of Museum Archaeologists, *Towards an Accessible Archaeological Archive* (London,

1995), pp. 23-24.

Microfiching will be undertaken directly by the contractor through a bureau recommended by the RCHME. Copies will be deposited with the archive and at the National Monuments Centre in Swindon, Wiltshire.

3.6 Report preparation

The report will be written to guidelines laid down by English Heritage in *The management of archaeological projects* (London, revised edition, 1992). The ordering of information, and the information given, will follow the guidelines given within this document, but may be altered according to the specific needs of the report. Additional guidance was taken from the Institute of Field Archaeologists' *Standard and guidance for archaeological excavations* (Birmingham, 1997) where considered appropriate.

3.7 Copyright

C K Currie (trading as CKC Archaeology) shall retain full copyright of any commissioned reports or other project documents written by himself or his agents, under the *Copyright, Designs and Patents Act* of 1988 with all rights reserved; excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the project design.

4.0 Results

4.1 Trench 18

This trench was the largest excavated on this site. It was essentially an L-shaped trench, with minor slot trenches cut to investigate features found near its edges. It covered the central portion of the conjectured Central Basin. Its original purpose was to examine the full extent of the mid-19th-century concrete fountain basin, to confirm the north edge of the early 18th-century Central Basin, and to examine the extent of earlier walls found in the 1997 evaluation trenches 2 and 5.

It should be noted that the phasing given here is a broad range based on the archaeological evidence. This is refined in the discussion section (section 5.0) by documentary evidence. For instance, the demolition of the earliest buildings is dated by archaeological evidence to after *c.* 1650, but before 1700. The documentary evidence suggests this may have occurred in the 1680s.

4.1.1 Phase 1 and 2 (suggested dating between *c.* 1550 and 1650)

Excavation continued down to the level of some early brick structures, but did not attempt to go beyond these levels. At the north end of the trench, a brick wall (287) was recovered on the line of a wall found in 1997. This extended for 4.2m in a SSE

direction, and was separated from a right-angled return wall (288) by a gap of 0.68m. It was not known if this represented a door or more thorough robbing. Both walls were 0.34m wide on average and built in English Bond. Wall 288 was aligned on a rough W-E alignment, and was found to continue in trench 20 to the east. Within the structure formed by 287/288 was what appeared to be the badly robbed remains of an internal wall (186). Only a few bricks of this remain *in situ*, but they were sufficiently aligned to suggest they were probably the remains of a wall.

To the west of wall 287, near the NW corner of the trench was a circular brick feature (286), approximately 1.4m in diameter. The encircling wall was an average of 0.22m wide. There was a succession of gravelly dumps within the feature. Only two levels (contexts 184 and 185) were excavated to support the suspicion that the feature was a well. The remainder were left *in situ*. Layer 185 contained some sherds of post-medieval coarse earthenwares. These were not datable beyond a broad 16th-18th century range. However, three body sherds of white Borderware, plus other stratigraphic information, suggested that the feature was probably infilled before 1700.

To the south of wall 288 was a curving brick feature 289. This comprised two outer lines of bricks, with a void between of 0.22m width. The total width of the feature was 0.34m, and the excavated length about 1.4m. On removing the fill from the void, a brick base or floor was uncovered, leading to the interpretation that the structure had been a brick drain. It seemed to end abruptly outside the gap between walls 287 and 288. It could not be said if this was deliberate or not.

At the south end of this trench further brick features were found that were considered to be roughly contemporary with those found at the north end. These comprised one E-W wall (227), 10.4m in length, with two squarish brick bases (247 and 248) near the west end of the trench. Wall 227 was an average of 0.39m wide, with four short sections about 0.5m long each where the wall had been apparently robbed out. At the west end of the wall was a squarish brick base (247), about 0.92m W-E and 0.8m N-S. There was then a gap of 1.14m and then another slightly larger brick base (248), 0.91m E-W and 0.94m N-S.

A large brick arched conduit (224) was found under wall 227, extending in a NW direction towards the west end of the present lodge. To the north of 227, a shallow cut had been made down to the level of the conduit. This formed a feature (262) 2m wide, and up to 0.4m deep. The cut did not seem to extend beyond the levels of the next phase, and was filled by a compact gravel (context 263). No obvious explanation could be made for this cut, other than it may have been made to repair the conduit. However, there was no obvious trace that this had been done.

7.4m eastwards from brick base 247 along wall 227 there was another wall (246). This was at right angles to 227 and about 0.32m wide. Only a short section was exposed by the excavations. At a point 10.5m east of brick base 247, wall 227 met another wall (267) with a straight joint. Wall 267 continued the line of 227, but was 0.46m wide, about 0.07m wider than wall 227. The exposed section of 267 was 3.38m in length, but

seemed to continue eastwards beyond the excavated trench.

None of the brick structures found in these phases seemed to be made of early thin bricks. The author has seen structures reputed to be late 16th century with thicker bricks than the standard 'Tudor' type, and it is suggested that the earliest structures may date from the Elizabethan period, although it is equally possible they could be early Stuart.

4.1.2 Phase 3 (suggested dating between *c.* 1660 and 1700)

The structures found in trench 18 seem to have been deliberately destroyed, with much evidence of robbing and random truncation of features. Immediately overlaying the remaining foundations was a dirty sandy loam layer (context 257) containing moderate quantities of rubble, charcoal and other debris. This contained pottery dating mainly from the 16th and 17th centuries, with no distinctly 18th century wares such as salt glaze stonewares amongst it. Overlaying this debris level was a thin, but more concentrated, layer of brick rubble debris (context 226) with similar dating materials within it.

Immediately above the rubble was a series of gravel layers (layers 277, 279, and 280). These extended from the north end of the trench for 7.8m before ending in a sharp downwards slope. Their total height was about 0.35m. At the bottom of the drop off was another thin gravel layer (225) overlaying the rest of the rubble layers to the south. The drop off was interpreted as the edge of a garden terrace laid out over the former buildings in the north part of the trench. South of the drop off, a thin layer of gravel was deposited to cover over the rubble layers south of this conjectured terrace.

4.1.3 Phase 4 (suggested dating between *c.* 1660 and 1710)

A dark sandy loam layer (context 224) was then laid down over layer 225, bringing the ground level up to that of the top of the conjecture terrace. This extended to the southern edge of the trench, suggesting that in this phase, the terrace level was extended across the whole area, to make the ground flat again at between 15.20m AOD at the north end of the trench and 14.84m near the south end.

4.1.4 Phase 5 (suggested dating *c.* 1710 to 1775)

Further terrace dumping is visible at the north end of the trench. Two gravelly layers 278/284 and 281 increased the level of the area by a further 0.5m, bringing the conjectured ground level up to about 15.7m AOD. It is notable that this upper level drops sharply 4.1m from the north end of the trench to about 15.0m AOD. This drop off is similar to that in phase 3, and could be construed as a terrace edge if it were not for the strong documentary evidence for a pond here in the early 18th century.

4.1.5 Phase 6 (suggested dating between *c.* 1775 and 1850)

This phase is characterised by a thick dump of sandy clay (context 223) across the trench from the edge of the levels made by layers 278/284 and 281 to the southern edge of the trench. This overlays a thin, often intermittent layer of brick rubble (context 276). Layer 223 is between 0.3 and 0.45m thick, and brings the ground level up to roughly that of the top of 281 in the previous phase, bearing in mind that all phases drop gradually to the south with the natural fall of the land. This layer is the only one (apart from 229 - see below) found on this present site to contain any reasonable percentage of clayey soil within its make up.

It was interpreted as being the soil in layer 223 had previously made up the banks required to dam the Halifax pond against the lower ground to the south. When this pond was destroyed, the soil in the banks was pushed into the void (pond) to level the terrace. The thin rubble layer beneath it was interpreted as being the remains of structural elements of the pond, possibly the edging or a structural floor, that were robbed out before the pond was infilled.

Another feature that seems to date from this phase, or soon after it, is a large, possibly linear cut to the north of the old edge formed by 278/284 and 281. This feature seems to be a substantial cut (282), up to 1.9m wide and 0.45m deep. It was filled by a silty clay loam soil (283). It was interpreted as a large plant bed cut into the terrace level, possibly after the destruction of the pond, and the levelling of the terrace. This might have created a large shrubby-like bed of the type popular in the later Georgian/Regency period. Although a broad phase dating has been given above, based on the archaeological evidence, it is thought that the pond was destroyed *c.* 1775, and an informal layout executed thereafter.

4.1.6 Phase 7 (suggested dating between *c.* 1850 and 1871)

At some time after 1850, but before 1871, a concrete fountain basin (228) was cut into the dump layer 223. This was laid into a circular cut (230). This cut was approximately 4m in diameter, and was initially filled with a dark brown clay contaminated with brick rubble (229). The concrete basin was served by a lead pipe (previously identified in 1997) coming from the NW. The concrete basin itself was about 0.3m thick. It comprised four layers of clay tile, set in and separated by concrete. The exact height of the basin is not known. The highest surviving fragment was 0.33m above the flat base of the basin. The bottom of the concrete basin was at a level 15.14m AOD. The estimated ground level at this point was probably no more than 15.6m AOD, giving a possible maximum height for the sides of the basin.

4.1.7 Phase 8 (suggested dating between *c.* 1871 and 1894)

The basin was subsequently destroyed by smashing the concrete rim, and pushing the rubble into the basin hollow itself. Map evidence shows that this had been done by 1894 at the latest. A layer of brown loam (222) was then added to the terrace, apparently covering feature 282, and thereby removing it from the garden layout. It is possible this feature had been removed earlier when the fountain was made.

4.1.8 Phase 9 (suggested dating after *c.* 1895, probably 1914-45)

There may have been a number of levelling phases carried out in this phase. They are associated with the laying down of successive cinder and gravel layers. In this trench there is a distinctive cinder layer (221) sandwiched between two gravel layers of varying thickness. In trenches elsewhere two cinder layers can be recognised. Also associated with this phase was a feature created by an edging of brick (194) within the cinder surface. This is thought to be a plant bed. The cinder and gravel layers are thought to be hard-standing areas. They may have been decorative, or purely functional for vehicle parking. They do not appear to belong to the type of landscaping typical of a gentleman's house, and so it is thought they are probably associated with the lodge's 20th-century institutional phase, either as a military establishment in World War I (1914-18), or afterwards as a school.

4.1.9 Phase 10 (suggested dating between *c.* 1939 and 1960)

This phase is associated with a thick layer of topsoil-like loam (220) dumped across the present site. This varies in depth from 0.2m at the north end of the trench to 0.55m at the south end. In places it represents a major piece of terrace levelling, giving a false picture of what previous levels would have been, and thereby causing a number of incorrect assumptions about levels to be made about the site. It is probable that this dumping occurred during the latest military occupations of the site, either during World War II or during Ministry of Defence tenure thereafter.

4.2 Trench 19

This trench was excavated across the end of the 1997 evaluation trench 5 to examine further brick drains found in this vicinity. The alignment of these features resulted in another L-shaped trench being dug. It should be noted that the phasing of this trench was difficult, as the levels in other trenches did not correspond exactly with those in this trench.

4.2.1 Phase 5 or earlier? (date to *c.* 1710)

A series of brick drains was cut into a cleanish gravel level (213). These drains comprised rectangular voids created by setting unmortared bricks around it, and capping the whole with bricks laid lengthways across the hollow created. The full construction method was examined in 1997. Only the top of the brick cappings was exposed on this occasion.

On the east side of the trench, the continuation of the brick drain (216) excavated in 1997 was examined. A section 5m long, on a N-S alignment, was uncovered. It continued beyond the south edge of the trench towards the open parkland. Excavations carried out in 1997 had shown that the drain began about 1.15m north of this current trench.

Another drain (217) was connected into drain 216 at a rough right angle. This headed in a WNW direction towards the surviving ponds on the west side of the site. A length measuring 9.7m was uncovered. A further drain (218) was found to leave 217 at a point 7.7m west of drain 216. This drain was roughly parallel to drain 216, on a N-S alignment. Where drains 217 and 218 met, the capping was made of two whole roof tiles. It was possible that these were an extra support under the brick capping. However, root disturbance (which was extensive throughout this trench) was particularly heavy here, and a major tree root had partly dislodged the capping bricks, and had dislocated the first half meter or so of bricks in drain 218.

Offset a further 0.6m west of the junction of drains 217 and 218 was a stone capping roughly 0.4m square, with an iron grill 0.18m square in the centre. On lifting, this was found to be set on a short brick 'tower'. The whole was located about 6cms north of drain 217, with the drain beneath the capping leading into drain 217. No drain extending northwards was seen, the north side of this drain being a short blind brick wall.

What was considered unusual about this drain capping was that it was set at approximately the level of the cappings of drain 217. The height of the top of the capstone was 14.68m AOD. That a grill was present in what appeared to be an *in situ* structure suggested that at one time this capstone was at ground level, and the tops of the brick drains were barely buried, if at all. This was approximately the level of the phase 1 and 2 buildings found in trench 18. This seems to indicate that the area in front of the present lodge was approximately level at one time, and that the subsequent increase in level has occurred from subsequent dumpings after that time. This is largely confirmed by the stratigraphic phasing of trench 18, but it suggests that a number of the dumping phases did not extend this far south.

The brick types used in the construction of these drains are similar to those found in the phase 1/2 buildings. It should be noted, however, that these bricks are not distinctive enough to be accorded anything but the broadest late 16th-early 18th century date range.

The function of these drains can not be fully explained. If they were from phase 1/2, why are they outside the conjectured garden walls 227/267 and gates (247/248)? Does this suggest that there were further early features beyond these walls? What are they supposed to be draining? Alternatively they may belong to a later phase, such as phase 3 or 4, or even to Halifax's scheme. Although the latter is possible, one has to wonder why they appear to be at a lower level than the pond, or why they should be, apparently, beyond the bank, rather than within it.

4.2.2 Phase 6 or 7? (dated between c. 1775 and 1900)

The drains appear to have fallen out of use when a thick layer of dirty gravel (212) was dumped over them. This was up to 0.35m deep. A similar layer in the 1997 trench 5

seemed to be beneath the pond levelling layer (223 in trench 18) of the later 18th century. It was not possible to determine exactly how this layer related to the good succession of layers visible in the other trenches excavated in this current exercise. It is possible that it was the remnant of a terrace dump level to the south of the retaining bank of the 1709 pond, thereby making it part of Halifax's landscaping. It is equally possible that it was laid down as a terrace dump after the pond was infilled. The only relationship that can be equated with it is the dumping of a phase 8 layer immediately over it (see below).

4.2.3 Phase 8 (dated to between 1871 and 1894)

This is the earliest phase that can be readily equated with levels elsewhere on the site. In this phase a loamy soil is dumped over the trench (211). It is reasonably certain that this level is a continuation of layer 222 from trench 18.

4.2.4 Phase 9 (early 20th century)

This phase is equated with the remnants of a cinder layer (210) found on the east side of this trench. It did not seem to extend further west than the line of the 1997 trench 5.

4.2.5 Phase 10 (mid 20th century)

A deep topsoil like loam layer (209) was dumped over the trench. This was up to 0.25m deep in places.

4.3 Trench 20

This was a linear trench excavated on an E-W alignment to find a wing wall on the east side of the house as shown on 18th-century plans. This wall was parallel to part of the northern curve of the Central Basin. The ephemeral nature of the remains of the Central Basin suggested that the discovery of these walls might act as a reference point for determining the shape of the basin without more positive evidence. This wing wall was not located within this trench.

4.3.1 Phase 1 and 2 (later 16th/early 17th century)

At the west end of this trench at least two phases of brick structures were uncovered. These are thought to be continuation of structures 287/88 found in trench 18. The earliest structure is a substantial brick foundation (244). This is 0.9m wide, with an apparent terminal just on the southern edge of the trench. The excavated length was just over 1m, with the north edge of the trench obscuring its continuation in that direction.

This feature was directly overlain by a thinner wall (243), 0.32m wide, set on the thicker foundation. Abutting this wall, by an apparent straight joint, was another wall (242) at right angles to it. By its SW-NE alignment, it would seem that wall 242

extended into trench 18 to become wall 288. Thus, the walls 242, 243, 287 and 288 seemed to form the three outside walls of a rectangular structure approximately 5.8m wide internally. Its length was not fully excavated, but from that excavated, it was at least 4.8m internally.

Within this structure was a single line of bricks (271), parallel with wall 243. To the east of this line was a single *in situ* plain floor tile (270), set on a sandy mortar bed (268), traces of which could be identified with the structure between walls 270 and 243. The above layers and structures were buried beneath a rubble layer (241).

To the east of walls 243/244 was another structure (245). This comprised two parallel lines of bricks with a loamy fill between. The distance between the two brick alignments was 0.2m. When the soil between was cleaned out, no brick base was found underneath, as there had been in similar structure 289 in trench 18. However, for the want of a better alternative, it was considered that 245 was a drain, just like 289. It was noted that they were of slightly different construction to the brick drains in trench 19, suggesting they may have been of a different, possibly earlier, date.

A cut feature (206) was found excavated into the levels associated with the construction of the structures in this trench. This was 2.1m wide and 0.5m deep in the part sectioned. It contained a sandy clay loam fill, with some moderate fragments of rubble within. It was overlain by a rubble layer (205) that signified the demolition of the structures within these phases.

4.3.2 Phases 3 and 4 (c. 1660-1710)

These phases were presented by the dumping of gravelly layers (204, 291, 292) over the demolition rubble of phases 1/2. Layer 291 can be matched up with layer 279 in trench 18.

4.3.3 Phase 5 (c. 1710-1775)

More dumping of gravelly layers in this phase. The lowest of these layers contained moderate amounts of rubble (203), with the thicker upper layer (202) also containing occasional rubble. It is thought that these levels represented terrace dumping into which the pond was shaped. There were no traces of the pond, or pond levelling layers in this trench. It was assumed that the pond did not extend into this area. This matches up with the discoveries in trench 18.

4.3.4 Phase 6 (c. 1775-1850)

The above dumping levels were cut through by a loam-filled cut (275). This did not appear to extend into layer 204. If it did, it seems only to have cut the top few centimetres. Both layers 203 and 204 were cut by it. There were two fills, the lowest being sandy loam (274), followed by a loamy clay (290). The latter layer had similarities to the fill of cut 282 in trench 18. This feature was thought to be a

continuation of 282, and was interpreted as late 18th or 19th-century shrubbery bed.

4.3.5 Phase 10 (mid 20th century)

The final layer within this trench was a thick dump of loamy soil (201), up to 0.35m deep, making up the present topsoil. There were no traces of the intervening phases 7-9 in this trench.

4.4 Trench 21

This was originally another linear trench on an E-W alignment designed to try to find the second wing wall on the west side of the house. The line of the trench was obstructed by a modern manhole, causing the trench to be dog-legged to allow it to continue westwards. It is not thought that the excavation here extended much deeper than phase 4 or 5.

4.4.1 Phase 5 or earlier (*c.* 1710)

It is uncertain exactly what phase the lowest excavated levels in this trench began at as direct correlations with other excavated areas were not available from the earliest phases. The earliest levels were a series of rubbly loams (layers 250 and 251). These may pre-date phase 5, as they are cut through by the construction cut (260) of a large stone rubble foundation (261), overlain by brick and mortar rubble (253). This latter feature was thought to be a wing wall shown on post-1709 plans as part of the Halifax garden design. These walls seem to have survived the central pond, as they still appear to be shown on a print of 1775, when the pond had been removed.

There were other features cut into these levels. These included a shallow cut (191) filled by a soil heavily contaminated with charcoal (189), and two large mortary lenses (190 and 192). What these layers represented is uncertain as the trench was not excavated into these levels to any extent. Apparently just above these levels was an extensive, but thin, spread of mortar (237) that extended over much of the east end of the trench.

The disturbance to the phase 5 levels was such that it was not certain what had gone on in this area. The rubble stone foundation appears to match up with the line of the wing wall. The brick dump overlying this may have been the remains of the wing wall. If so, was the stone foundation an earlier wall, or merely a foundation to a brick wall? It is possible that the thin mortar layer (237) was contemporary with the wall, and may represent the bedding of a stone flagged path. A path of sorts appears to be shown on contemporary plans. Possibly the layers (250/251) between 237 and the foundation were remnants of plant beds, but considering the extensive dumping all across this site, any such interpretation must be viewed cautiously. It seems the only fixed point in this trench is that there is a reasonable chance that the rubble foundation is associated with the wing wall.

4.4.2 Phases 6 and 7 (c. 1800-50)

This seems to be represented by a thick gravel dump layer (235) which overlies the destruction of the wing wall. This must have occurred a little after the destruction of the pond as the wing wall still seems to be present on the print of 1775, after the pond had gone. The wall had gone by 1823, suggesting that the dumping was probably a later part of phase 6. Another dumping level (198) was dumped over 235 in the SW part of this trench. It is not known if this was part of the later phase 6 episode or a separate dump carried out in phase 7.

At some time after the dumping phase, but before phase 8, a deep cut (238) was excavated through all the levels exposed in this trench at its east end. This was backfilled by a dirty gravel loam (239). It was at least 0.7m deep, its full extent not being excavated. Its irregular outline suggests it might have been a planting pit of some sort, or an excavation for the removal of a large tree.

4.4.3 Phase 8 (late 19th century)

The loam dump (234), equivalent to layer 222 in trench 18, was found immediately over dumps 198 and 235. Curiously, this overlays a thin layer of cinders (296) at the far west end of the trench, suggesting the possibility of this phase being slightly later than the evidence from the other trenches suggested.

4.4.4 Phase 9

This phase is represented by another thin layer of cinders (197) overlain by a much thicker layer of gravel. The latter contained much yellow brick rubble (233). This is overlain by yet another thin cinder layer (232).

4.4.5 Phase 10

Topsoil (231) dumping over the former cinder levels is about 0.2m deep in this area.

4.6 Trench 22

This was a linear trench cut on a N-S alignment between trenches 18 and 19 to try to recover the southern edge of the Central Basin. This had been attempted in trench 5 in 1997 without clear success. However, to determine if the absence of a southern edge in trench 5 was merely a local phenomenon, this further trench was excavated as a check. The phasing in this trench was relatively simple, it comprising nothing more complex than ten layers one on top of each other.

4.6.1 Phase 1/2

This is represented by a gravelly layer (180), overlying a dark loamy layer (181). The gravel layer appears to be a dump, but the loamy layer has the appearance of being an original topsoil, possibly the original surface onto which the late 16th/early 17th-century arrangement was laid out. The thin gravel layer lay outside the conjectured perimeter wall of phase 1/2, and may have been a contemporary levelling layer. A demolition spread (179) probably represents the destruction levels of these phases being spread out to level the area. This is equivalent of layer 226 in trench 18.

4.6.2 Phase 3

A dump of gravel (178) overlies the demolition levels, representing a terrace level phase. This is the equivalent of layer 225 in trench 18.

4.6.3 Phase 4

The topsoil-like loam (177) dumped in this phase to level an earlier stepped terrace overlay the phase 3 gravel. This is the equivalent of layer 224 in trench 18.

4.6.4 Phases 5 and 6

A clayey dump layer (176) overlay the phase 4 levels. This is thought to represent the pushing of the retaining banks of the phase 5 pond into the ensuing void to level the site in phase 6. There is a slight rise in this level about mid way through this trench that might tentatively be put forward as the line of the bank of that pond. That is, the north edge of this rise could be cautiously interpreted as the southern edge of the pond.

4.6.5 Phases 7 and 8

Phase 7 is not represented in this trench. The loam layer (175) overlying the clayey dump is thought to be a levelling dump brought on to the site after the destruction of the phase 7 fountain. It is equivalent to layer 222 in trench 18, and is the phase 8 terrace level.

4.6.6 Phase 9

This is represented by a thin remnant of a cinder layer (174) overlying the loam layer 175 at the north end of this trench. The cinders are overlain by a thin layer of gravel (173). Neither layers extend very far south in this trench.

4.6.7 Phase 10

The final phase in this trench is a deep layer of topsoil loam (299), up to 0.5m thick.

5.0 Overall Discussion

The excavation results have revealed that the development of the Upper Lodge site was

more complex than could have been envisaged from the documentary evidence alone. Prior to this excavation, it was generally considered that the site was of relatively minor importance until the creation of the Halifax water gardens c. 1709-15. The present excavation has shown that the site was of some complexity at an earlier date, and that there would appear to have been at least four phases of building and landscaping prior to the creation of the water gardens.

The earliest phase seems to have been associated with a brick building associated with at least two walled garden compartments, and possibly a complex series of drains indicating an involved system of water management before Halifax began work on the site. It can not be said at this stage if these drains were involved in the use of water for obviously ornamental purposes, but the system does suggest a high degree of integration into the ornament of the lodge.

The most important question would seem to be the date of the main phases of the excavated brick structures. This is not an easy question to answer. The excavated pottery from the demolition layers above the structures comprises mainly Border Wares and ubiquitous coarse earthenwares. The latter are notoriously difficult to date, remaining in the same form from the 16th through to the 19th century. The Border Wares are more useful in this respect. These consist mainly body sherds of an unexceptional nature. Although they can be given a fairly broad date range, from the late 15th through to the 17th century, it is unlikely that they fall outside the period 1550-1660. This date is supported by occasional sherds of stoneware of mainly 16th and early 17th century date, and clay pipe bowls that are unlikely to date much beyond c. 1660. This evidence suggests it is possible that the structures could have been demolished after the mid 17th century.

If we can suggest a date for the end of this phase, the brick types in the structures themselves may help to date the construction. Judging a building by brick thickness alone can be unreliable, but the absence of thin 'Tudor' bricks both in the structures, and residually in demolition layers seems to suggest that the buildings may not be of early 16th century date. The brick thicknesses are of a type more normally associated with the 17th century, although the second half of the 16th century is feasible. On the basis of brick evidence alone, the structures seem to date from c. 1560-1660. Two phases of building work might suggest that the latter date is too late if a later 17th-century date is accepted for demolition. This suggests the structures are Elizabethan or early Stuart.

Records for work on structures in the park survive, but these do not give any conclusive information concerning the earliest lodge buildings. In 1537 Thomas Gadsbe was paid for gathering white thorn for quicksets (hedges) for 'the new perke next unto hampton towne' (PRO E36/254, pp. 227-29). This appears to relate to the creation of a new park centred on Upper Lodge. This had formerly been arable land, and was also called 'Ffylde Park' after John Field, who occupied the land at the time of its emparkment. He appears to have gone on to become the park keeper. This new park was attached to the much larger 'Great' or 'Upper Park' to the east (White & Foster

1997, 15-18). In 1538 an 'olde barne' was set up in Field's Park by Willi Gyrdler, a carpenter, after it had been dismantled and transported from Merton Abbey (PRO E36/239, p. 623). On this occasion it is recorded that the barn is transported to 'fylde lodge besyd hampton town', suggesting that a lodge house had been built by this date. The name Bushy Park does not seem to have been used until c. 1605.

About 1616 John HIPPESLEY was created under-keeper at Bushy with Upper Lodge as his apparent residence there (White & Foster 1997, 18-19). A survey of 1653 records 'the messuage or dwelling house in the tenure of Sir John HIPPESLEY, commonly called the Greater Lodge, consisting of a hall, a faire parlor, a kitchen, a pantry, and other convenient Roomes below stayres, seven Lodging roomes above stayres, with a large Barne, Stable and other outhouses, belonging to the same...' (PRO E317/Middlesex/32). This building is probably the one partly recovered by the excavations, demonstrating that it existed by this date.

By the 1670s John Lightfoot had the custody of the park. In 1674 it is recorded in 1674 that timber was cut for 'Mr Leightfootes Conduit House'. In 1676 foundations were dug for 'brickeworke under the banqueting house at Mr Lightfoots', and 'at the Conduit by Mr Lightfoots'. Further records include carpenters 'making a Centre to turne the Arch at the Conduit in Bushy Parke', bricklayers 'washing, stoping and whiteing the banqueting house in Mr Lightfoots Parke', and 'underpinning the Railes at the Banqueting house at Bushy Park and working a draine there' in 1678 (PRO Works 5).

By 1685 Henry Savile had been made Keeper. In this year he presented a petition to the Treasury for money to repair Upper Lodge, stating that it was in serious disrepair. He claimed to be 'finding everything in such disorder by the several hands it had beene in that most of the particulars here annexed will be necessary to put it in such a condition as is fitt for your Mtes Service'. The underkeeper's lodge is here assessed as being 'very old & almost past repayre..' (PRO T27/9 p.233).

On account of this petition, John Fisher seems to have visited the place for the Surveyor General. His report states that:

'The Under keepers lodge next Hampton Town... outhouses and barn were so ruinous as cannot be well repaired for £100, but one end is already built with brick...

There was formerly a Garden at ye East side of ye Cheif [sic] Lodge, walled in, part of which wall is now taken down and another built in ye stead and some other part leans so much as it can hardly be kept up but must be pull'd down and rebuilt, and there was a large old Orchard at ye north side of ye house formerly fenced with an old pale, but is now adioined to ye Garden and allmost all walled in with good brick wall of two brick thick at bottom and a brick and a half to ye top, full 9 foot above the ground, which for all materials and workmanship and severall gates is agreed as I am informed at £5 a rod square and is computed when finished to conteyn 50 rod wch as set down in ye Estimate will amount to £250' (PRO CRES/6/15).

These references are curious. Do they suggest that the phase 1/2 buildings had survived until 1685? They talk of repairing them, but it is clear from the archaeology that they had been demolished and at least two phases levelling undertaken on the site before Halifax's works of *c.* 1710. It could be suggested that the brick building found near the lodge site was the 'brick end' referred to in 1685. This might suggest that this part of the building was a later addition, possibly to an original timber lodge. If this is the case, it is possible that the garden walls and gate piers are contemporary later additions. The brick types suggest a later 16th or early 17th century addition to the earliest more modern lodge.

It is tempting to date these brick structures in the long keepership of Sir John Hoppesley (*c.* 1616-55). However, the discovery of high status tin glazed tiles amongst the demolition layers might suggest a possible late 16th century date for the elevation in status of the lodge. Further references to Lightfoot's work in the 1670s indicate that work was still being carried out associated with the lodge at this late date. This may even suggest that the complaints made in 1685 on the condition of the site were exaggerated to get more money out of the crown for refurbishment of the site.

The most confusing element of the subsequent sequence is the Gough map of *c.* 1701-09. Interpretation made prior to the present excavations seem to show a house to the east of the present site with a turning circle off-centre to the SW (Bodleian Library, Gough Drawings a.4, folio 62; interpreted thus by RCHME 1996, 5). This is very difficult to fit into the sequence as given by the archaeology and the other documentary evidence. There was no sign of a turning circle during the excavations, or a layout approximating to that shown.

There are four possible explanations. One is that the 1701-09 plan was very short-lived. That is the earlier structures were destroyed in 1685, and this new layout carried out, and then destroyed entirely after 1710. The second is that the 1701-09 layout was a proposal that was never fully implemented. The third is that it has been misinterpreted. A drawing of *c.* 1710 seems to show Halifax's design superimposed over the Gough plan, with only what appear to be minor buildings on the conjectured site of the lodge (PRO Works 32/313A). Could it be that the so-called lodge building offset from the turning circle was not the lodge at all, but just some of the many outhouses mentioned in the 17th century? This could put the lodge, or what was left of it, back nearer the centre of the design, at the head of the turning circle. The 1701-09 plan is not in any way clear as to where the lodge was sited. A fourth explanation might be that the pre-1700 lodge was very extensive, and only a part was demolished *c.* 1685, leaving the bulk of the building standing, even though it appears to be some distance from the site of the brick building found by excavation.

Around 1700 there seem to have been further works carried out on the lodge. At this time Lord Macclesfield had the care of the site. In October 1700 Henry Wise, the royal gardener, is recorded as planting a walk with 110 large elm trees leading to the lodge. He also records that:

'the piece of ground at ye North End that is on ye Park Side between ye new wall and ye Cutt of water or Canal last made in levelling ye ground must remove 400 solid yards....Digging and Working it into Bedds and borders 1555 solid yds...' (Wren Society vol. IV, 9th October 1700).

It is not entirely clear where this land is, although the 'North End' suggests that it may not be within the excavated area. However, what is of interest here is that some major landscaping seems to be carried out around this time. This could fit in with the phase 3/4 archaeological episodes. It is interesting that a canal is mentioned. There is no water course on the north side that could be called a canal, so again the location is unclear. It is possible that the north side refers to the north side of something other than the lodge, or the north-west side where the Longford River may be the 'canal'. The reference to a canal might suggest that elements of Halifax's water garden may have already existed. None are shown on the Gough plan, causing further uncertainty about the accuracy of this document.

When Halifax took over the keepership of the park early in 1709 it is recorded that the lodge has been 'for many years uninhabited and very rotten' and the buildings 'so crippled by the great storm [of November 1703?] that they can not be repaired but must be rebuilt with new ripping the Great Lodge...' (Calendar of Treasury Books 1708-09). By 1710 works had progressed sufficiently for it to be recorded that a Matthew Banks had made 'Bayes to keep the Water back while the Cascade was putte down in Bushy Parke...' (PRO A01/2447/144).

There were only ephemeral trace's of Halifax's Central Basin found during these excavations. Like the ponds around the cascade, 'bayes' or banks would have had to be constructed to hold the water against the lower ground to the south. The remains of these banks, it is believed, can be found in layer 223. Only the slope upwards of the surrounding terrace on the north side can be traced in the surviving stratigraphy. Elsewhere, the banks must have been pushed inwards to fill the void formed by the pond after it was decided to remove it. This would account for the complete lack of remains on the south, east and west sides of the former pond.

The archaeological evidence did not refine the date for the destruction of the pond any further. For details of the water gardens and their significance, the reader is referred to the discussion given in the earlier report (Currie 1997). A print of 1775 shows the Central Basin gone, but the wing walls still in place, although General Roy's Ordnance Survey baseline map of 1784 seems to show a pond still in place. It is generally thought that the latter may have included anachronistic features, and so can not be relied upon for accuracy. John Rocque's normally accurate maps show the Central Basin still intact in 1754, indicating that its destruction was probably shortly before the 1775 print was made.

Little is known about the informal garden that succeeded the formal water garden. This is shown on Warren's plan of 1823 (PRO Works 32/653). It is possible that the conjectured large bed (282) laid out to the north of the pond may have been dug as part

of this layout. The wing walls are gone, suggesting they must have been destroyed between 1775 and 1823, thereby removing these vestiges of formality. The terrace was built up further. It is possible that a fashionable Regency shrubbery-type garden existed during this phase, although it may have undergone a number of alterations within its life span. This basic plan continued until after 1850, by which time the house seems to have been rebuilt with three bay windows at the front.

By 1863-64, when the first edition 25" OS map is surveyed, a fountain had been laid out in front of the house. This is clearly indicated by the archaeological remains as feature 228. The 1897 OS 25" map shows it has been removed. This was surveyed in 1893-94, indicating that this feature had been destroyed by this date. This destruction was followed by further terrace levelling, possibly to form another informal design. Following this a number of gravel and cinder surfaces were laid down. These can not be accurately dated, but it is suspected that at least some of them belong to one of the lodge's institutional phases in the early 20th century. Further terrace levelling was carried out over the top of these levels in the mid 20th century. This was probably a way of getting rid of surplus earth excavated during the massive changes carried out following Ministry of Defence requisition in the Second World War and after.

6.0 Conclusions

This phase of archaeological excavations at Upper Lodge, Bushy Park, has demonstrated that the archaeological survival to the south of the present mansion is of excellent quality. Although the water garden period is only modestly represented, there is a relatively clear picture of a number of other phases. At least ten phases were identified. These range from the well-preserved remains of a late 16th/early 17th century hunting lodge, with attendant walled garden compartments, through to 20th-century Ministry of Defence terrace build-up.

The phases are summarised below:

Phase 1: first phase of brick structures *c.* 1550-1650

Phase 2: second phase of brick structures *c.* 1550-1650

Phase 3: demolition and terrace build-up *c.* 1685-1710

Phase 4: further terrace build-up *c.* 1685-1710

Phase 5: Halifax Water Garden *c.* 1710

Phase 6: destruction of Central Basin and creation of informal design *c.* 1775-1823

Phase 7: Concrete fountain *c.* 1850-94

Phase 8: destruction of fountain and more terrace build up *c.* 1864-1894

Phase 9: gravel and cinder surfaces laid down, after 1871 but probably early 20th century

Phase 10: final terrace build-up levels in mid 20th century.

The 16th/17th-century structural remains include part of the hunting lodge. This was probably a brick extension to an earlier timber lodge, with the discovery of high status tin-glazed tiles depicting hunting scenes, suggesting an elevation in status in the later

16th or early 17th century. It is possible that further elaboration, including the creation and extension of complex walled gardens continued into the first half of the 17th century in the long keepership of Sir John Hippesley (c. 1616-55). The documentary evidence suggests that much of the early structures were demolished after 1685, although some buildings to the east of the excavated area may have survived to be described as 'beyond repair' by the Earl of Halifax in 1709.

Only the northern edge of Halifax's Central Basin was discovered. Elsewhere, it seems that the clay retaining banks of the pond were pushed into the pond hollow, following the Basin's destruction at some time between 1754-75. Hereafter, an informal layout existed to the south of the mansion, which probably evolved into a Regency-type shrubbery garden fashionable in the early 19th century.

After 1850 a concrete fountain was built in front of the house, but this was relatively short lived. It had gone by 1893-94, and another informal layout in front of the house seems to have been created. Terrace build-up continued into the 20th century, culminating in further heightening of the ground levels under the Ministry of Defence c. 1950.

7.0 Finds

7.1 General summary

A summary of the finds made are listed in Appendix 2. Apart from five categories of find, worked flint, tin glazed tiles, pottery, clay pipe, and animal bone, there was little recovered of any great interest. Readers are referred to the appendix and the archive for further details of the lesser categories.

7.2 Worked flint

Six pieces of worked flint were recovered from demolition and terrace dumping levels. This material was clearly residual, having been brought on to the site from outside. However, it might be suggested that they had not travelled far, and had originated in the park. The pieces recovered were generally of a high standard of workmanship, some possibly of Neolithic date. They indicate a prehistoric presence in the park, but were not of sufficient quantity to make any further comment.

7.3 Tin glazed tile

62 sherds of tin glazed tile were recovered from context 257, a demolition level associated with early post-medieval structures on the site. About 85% of this assemblage was found within a discrete area of about one square metre to the SSW of the conjectured early lodge building. With only one exception they had been deposited face down, and appear to have been thrown down with some force, as the glaze was invariably cracked.

No entire tiles were recovered, but sufficient of about a dozen individual tiles were found with enough surviving decoration to determine that they seemed to be depicting hunting scenes. Provisional opinion suggests that these tiles originated from the Low Countries. It is possible that they were a specially commissioned set, dating from the later 16th or early 17th centuries.

7.4 Pottery

The pottery assemblage was largely of poor quality, with coarse red earthenwares making up the majority of the wares (45.1% by sherd count; 66.6% by weight). Coupled with other coarse earthenwares (a further 6.9% by sherd count; 8% by weight), they were, by far, the most common wares on the site. The types found were of the types found throughout most of the post-medieval period, and they did little to refine the dating of the site.

The next most common ware on the site was white Borderwares (25.5% by sherd count; 11.2% by weight). These were mainly green glazed types, with a number of sherds being of 16th century date, although some of the lighter green glazes were also known in the 17th century. Only three sherds of 16th/17th century stoneware were found, and a small assemblage of mainly 17th-century tin glazed earthenwares (6.9% by sherd count; 1.6% by weight). The only other sherd of any note was a rim sherd of a Cistercian ware jug, probably of 16th century date. The reader is referred to Appendix 2 for more details.

Nearly all the finds came from demolition levels overlying the early brick structures. There was a notable absence of any distinctively 18th-century wares, such as salt-glazed stonewares or late tin glazed earthenwares. Those pottery finds made were mainly of 16th or 17th century date, with little that seemed to date from the latter part of the 17th century. The presence of wares from the first half of the 17th century would suggest that the buildings were unlikely to have been demolished until after 1600, but how far into that century is difficult to say. Certainly some of the Borderwares and tin-glazed sherds could have been found in the second half of the century. However, as there are two phases of terrace dumping between the demolition of the buildings and the creation of Halifax's water garden, it would seem unlikely that the demolition phase was later than *c.* 1680.

Documentary evidence of the pre-1709 building being 'ruinous' would suggest that this was the suspected successor building to the earlier structures that is shown on the *c.* 1709 plan. To become ruinous, one would expect it to be at least 50 years old, thereby suggesting that the demolition of the earlier structures had taken place before *c.* 1660. This accords largely with the modest pottery evidence, although it is not entirely conclusive, and a later date for the demolition layers is not impossible.

One aspect of the assemblage that is somewhat surprising is the apparent scarcity of high status wares. Although occasional sherds of higher status wares such as stonewares and tin glazed wares were recovered, these were heavily outnumbered by

coarse earthenwares. The apparent low status of the assemblage could be biased by the small sample recovered.

7.5 Animal bone

A small quantity of bone was recovered, comprising 45 pieces totalling 854 grms. It comprised mainly common domestic species, and did not add significantly to the interpretation of the site. They were added to the overall collection from the site, and will be reported on in more detail in a later report.

8.0 Archive

The archive for this work will be deposited with London Museum (accession no. BHY97). The archive will not be deposited immediately, as there is thought to be a need for continuing work. Copies of the report were lodged with the client, the Planning Department of London Borough of Richmond, English Heritage, RCHME, the Museum of London Sites and Monuments Record (SMR), and the National Monuments Record in Swindon, Wiltshire.

9.0 Acknowledgements

Sincere thanks are given to all those involved with this project. In particular, Kathy White (Bushy Park Water Gardens Trust), Colin White and Peter Foster (Friends of Bushy and Home Parks), Ken Whittaker (English Heritage), Paul Pattison (RCHME), Martin Buckthorpe of Priestmere Properties and their security staff, and Ray Brodie and his staff (Royal Parks). Peter Foster and Cathy White are thanked for supplying copies of historic documents concerning the site, and for their constructive discussion of the finds. Project monitoring was undertaken by Ken Whittaker for English Heritage, with overall project management being by Paul Pattison of RCHME.

The excavation was carried out by the author, C K Currie MIFA (supervisor), with assistance from Neil FitzPatrick BA PIFA, Mark Stewart BA MPhil, Neil Rushton BA (Department of History & Archaeology, University of Southampton), and Derek Fox BA (Department of History & Archaeology, King Alfred's College, Winchester). The post-excavation work was carried out by C K Currie. Plant was supplied by Coyne Construction Ltd, New Malden, Surrey.

10.0 References

10.1 Original sources

Maps and plans:

A pre-1709 plan of the park prior to Halifax's alterations c. 1709-15 (Bodelain Library, Oxford Gough Drawings a.4 folio 62).

A plan of *c.* 1710 superimposing what appears to be the proposed plan of the water gardens on a rebuilt house (PRO Works/32/313A).

A general plan of Hampton Court and its environs, believed to date to pre-1714, showing the water gardens completed (PRO MR 1454). This plan does not seem to have been issued until *c.* 1735, but is thought to show the site as it was 20 years previously.

John Rocque's plan of the London area *c.* 1741-45.

John Rocque's plan of Middlesex *c.* 1754.

A 'Plan of the River Thames from Boulter's Lock to Mortlake surveyed by Order of the City of London in 1770 by James Brindley, Engineer' (The King's Topographical Collection, The Map Room, British Library).

A plan by General Roy showing the Ordnance Survey baseline, with details of Bushy Park, dated 1784.

A plan of Bushy Park estate by W T Warren of 1823 (PRO Works/32/653).

A plan of the parish of Hampton by E & G N Driver dated 1850 (PRO IR/30/21/25).

The 1870 Ordnance Survey 25" map (Middlesex sheet xxv.7; surveyed 1863-64)

The 1897 Ordnance Survey 25" map (Middlesex sheet xxv.7; surveyed 1893-94).

The 1915 Ordnance Survey 25" map (Middlesex sheet xxv.7).

Manuscript sources (transcripts provided courtesy of Mr Peter Foster):

PRO - in the Public Record Office

PRO E36/239: works at Bushy Park, 1537

PRO E36/245: works at Bushy Park, 1538

PRO E317/Middlesex/32: Survey of Hampton Court, 1653

PRO WORKS 5: works at Bushy Park, 1670s

PRO Calendar of Treasury Books T27/9: works at Bushy Park 1685

PRO Constat Books CRES/6/15: report on Bushy Park, 1685

PRO Audit Office, Declared Accounts, AO1/2447/144: works at Bushy Park, 1710

Wren Society Vol. IV: works at Bushy Park, 1700

10.2 Secondary sources

Central Excavating Service, *Site Recording Manual, version 7*, London, 1992.

C K Currie, *An archaeological evaluation of former water gardens at Upper Lodge, Bushy Park, Richmond, Greater London*

C K Currie, *Project Design for an archaeological excavation of the Central Basin, Upper Lodge, Bushy Park, London Borough of Richmond upon Thames*, unpublished report to the Friends of Bushy & Home Parks (copy in site archive), 1999

English Heritage, *The management of archaeological projects*, London, 1992, revised edition

Institute of Field Archaeologists, *Standard and guidance for archaeological excavations*, Birmingham, 1997

Land Use Consultants (LUC), *Upper Lodge, Bushy Park: report on restoration of gardens*, unpublished report, 1996

RCHME, *Upper Lodge, Bushy Park, London Borough of Richmond upon Thames. An archaeological survey*, unpublished report, 1996

Society of Museum Archaeologists, *Towards an accessible archaeological archive*, London, 1995

K White & P Foster, *Bushy Park. Royals, rangers and rogues*, East Molesey, 1997

K Whittaker, *Brief for an archaeological field evaluation. Water Garden, Upper Lodge, Bushy Park, London Borough of Richmond*, unpublished report written for Greater London Archaeological Advisory Service and English Heritage, 23rd September 1996

K Whittaker, *Addendum to brief for an archaeological field evaluation. Water Gardens, Upper Lodge, Bushy Park, London Borough of Richmond*, unpublished report written for Greater London Archaeological Advisory Service and English Heritage, 17th May 1997

Appendix 1: list of excavated contexts

Context number	Description
173	T/22; loamy sand layer (Munsell Colour 10YR 5/6)
174	T/22; crushed cinder layer (Munsell Colour 10YR 2/1)
175	T/22; sandy loam layer (Munsell Colour 10YR 3/3)
176	T/22; sandy clay layer (Munsell Colour 10YR 4/6)
177	T/22; silty sand loam layer (Munsell Colour 10YR 3/3)
178	T/22; sandy loam layer (Munsell Colour 10YR 4/3)
179	T/22; rubbly layer (Munsell Colour 5YR 4/4)
180	T/22; gravel layer (Munsell Colour 10YR 4/4)
181	T/22; sandy loam layer (Munsell Colour 10YR 3/3)
182	T/18; sandy loam fill of drain 289 (Munsell Colour 10YR 3/4)
183	T/18; sandy loam layer (Munsell Colour 10YR 5/6)
184	T/18; gravel fill of well 286 (Munsell Colour 10YR 5/8)
185	T/18; loamy sand fill of well 286 (Munsell Colour 10YR 4/4)
186	T/18; badly robbed brick wall?
187	T/21; sandy loam layer (Munsell Colour 10YR 3/3)
188	T/21; gravel layer (Munsell Colour 10YR 3/4)
189	T/21; sandy loam/charcoal fill? of 191 (Munsell Colour 10YR 3/2)
190	T/21; mortar layer (Munsell Colour 2.5Y 8/3)
191	T/21; shallow cut?
192	T/21; mortar sand layer (Munsell Colour 10YR 6/6)
193	T/18; gravel layer (Munsell Colour 10YR 6/8)
194	T/18; brick edging for modern plant bed
195	T/18; fill of 194 (Munsell Colour 10YR 3/2)
196	T/18; gravel layer (Munsell Colour 10YR 4/6)
197	T/21; cinder layer (Munsell Colour 10YR 2/1)
198	T/21; clay loam layer (Munsell Colour 10YR 3/4)
199	T/18; gravel layer (Munsell Colour 10YR 4/6)
200	number not allocated
201	T/20; loam layer (Munsell Colour 10YR 3/3)
202	T/20; sandy clay layer (Munsell Colour 10YR 4/4)
203	T/20; thin rubble layer (Munsell Colour 10YR 4/6)
204	T/20; gravel layer (Munsell Colour 10YR 4/6)
205	T/20; rubble layer (Munsell Colour 10YR 4/2)
206	T/20; cut
207	T/20; sandy clay loam fill of 206 (Munsell Colour 10YR 4/4)
208	T/20; sandy loam layer (Munsell Colour 10YR 5/3)
209	T/19; sandy loam layer (Munsell Colour 10YR 3/2)
210	T/19; cinder layer (Munsell Colour 10YR 2/1)
211	T/19; silty loam layer (Munsell Colour 10YR 3/2)
212	T/19; dirty gravel layer (Munsell Colour 10YR 3/4)

213 T/19; gravel layer (Munsell Colour 10YR 5/8)
214 T/19; cut of trench 5
215 T/19; backfill of trench 5
216 T/19; brick drain
217 T/19; brick drain
218 T/19; brick drain
219 T/19; stone capping to drain
220 T/18; sandy loam layer (Munsell Colour 10YR 3/3)
221 T/18; cinder layer (Munsell Colour 10YR 2/1)
222 T/18; silty loam layer (Munsell Colour 10YR 3/2)
223 T/18; sandy clay layer (Munsell Colour 10YR 4/6)
224 T/18; silty sand loam layer (Munsell Colour 10YR 3/3)
225 T/18; thin gravel layer (Munsell Colour 10YR 3/6)
226 T/18; rubble layer (Munsell Colour 10YR 4/4)
227 T/18; brick wall
228 T/18; concrete basin
229 T/18; clay and rubble fill of cut 230 (Munsell Colour 10YR 4/2)
230 T/18; cut containing concrete basin
231 T/21; loam layer (Munsell Colour 10YR 3/2)
232 T/21; cinder layer (Munsell Colour 10YR 3/1)
233 T/21; gravel layer (Munsell Colour 10YR 5/8)
234 T/21; silty sandy loam layer (Munsell Colour 10YR 3/1)
235 T/21; dirty gravel layer (Munsell Colour 10YR 3/4)
236 T/21; rubble layer (Munsell Colour 10YR 3/4)
237 T/21; thin mortar layer (Munsell Colour 10YR 7/3)
238 T/21; cut
239 T/21; sandy loam fill of 238 (Munsell Colour 10YR 3/3)
240 T/21; sandy loam layer (Munsell Colour 10YR 3/3)
241 T/20; sandy clay loam layer (Munsell Colour 10YR 3/4)
242 T/20; brick wall
243 T/20; brick wall
244 T/20; brick foundation?
245 T/20; hollow brick structure
246 T/18; brick structure
247 T/18; squarish brick base
248 T/18; squarish brick base
249 T/18; brick rubble concentration
250 T/21; sandy loam layer (Munsell Colour 10YR 5/4)
251 T/21; sandy loam layer (Munsell Colour 10YR 5/3)
252 T/21; thin clay loam layer (Munsell Colour 10YR 4/2)
253 T/21; brick rubble
254 T/20; silty sand layer (Munsell Colour 10YR 3/2)
255 T/20; gravel layer (Munsell Colour 10YR 3/6)
256 T/20; gravelly sandy clay layer (Munsell Colour 10YR 5/3)
257 T/18; clay loam layer (Munsell Colour 10YR 3/2)
258 T/18; cut (same as 262)

259 T/18; gravel fill of 258 (same as 263)
260 T/21; cut
261 T/21; stone rubble within cut 260
262 T/18; shallow cut
263 T/18; gravel fill of 262 (Munsell Colour 10YR 4/6)
264 T/18; brick arch conduit
265 T/21; same as 261
266 T/18; sandy loam layer (Munsell Colour 10YR 4/3)
267 T/18; brick wall
268 T/20; sandy mortar layer (Munsell Colour 10YR 5/8)
269 T/20; clay loam layer (Munsell Colour 10YR 4/3)
270 T/20; *in situ* floor tile
271 T/20; brick wall?
272 T/20; charcoal layer (Munsell Colour 10YR 3/1)
273 T/20; gravelly clay layer (Munsell Colour 10YR 4/4)
274 T/20; sandy loam fill of 275 (Munsell Colour 10YR 5/4)
275 T/20; cut
276 T/18; thin rubble layer (Munsell Colour 10YR 3/4)
277 T/18; gravel layer (Munsell Colour 10YR 4/6)
278 T/18; sandy loam layer (Munsell Colour 10YR 3/4)
279 T/18; thin gravel layer (Munsell Colour 10YR 3/3)
280 T/18; gravel layer (Munsell Colour 10YR 5/8)
281 T/18; gravel layer (Munsell Colour 10YR 3/4)
282 T/18; cut
283 T/18; silty clay loam fill of 282 (Munsell Colour 10YR 3/4)
284 T/18; sandy loam layer (Munsell Colour 10YR 3/4)
285 T/18; clay loam layer (Munsell Colour 10YR 3/3)
286 T/18; circular brick well?
287 T/18; brick wall
288 T/18; brick wall
289 T/18; hollow brick structure (drain)
290 T/20; loamy clay fill of 275 (Munsell Colour 10YR 4/3)
291 T/20; gravel layer (Munsell Colour 10YR 3/3)
292 T/20; gravel layer (Munsell Colour 10YR 5/6)
293 T/21; sandy loam fill of 294 (Munsell Colour 10YR 4/3)
294 T/21; cut, same as 260
295 T/21; thin loamy sand fill?? of 294/260
296 T/21; cinder layer (Munsell Colour 10YR 3/1)
297 T/21; gravel layer (Munsell Colour 2.5Y 6/6)
298 T/21; sandy loam layer (Munsell Colour 10YR 4/3)
299 T/22; sandy loam layer (Munsell Colour 10YR 3/2)

Appendix 2: summary list of finds recovered

Worked flint

6 pieces @ 35 grms

Floor tile (representative sample only)

Plain earthenware floor tiles: 3 pieces @ 1.965kg.

Roof tile (representative sample only)

Plain clay roof tile: 7 pieces @ 760 grms.

Tin glazed tile

mainly depicting hunting scenes

62 pieces @ 2.57kg.

Pottery

Type weight	no. of sherds	% of sherds	wt in grms	% of
Glazed red earthenware 60.9	40	39.2	962	
White Borderware 11.2	26	25.5	177	
Manganese glazed earthenware 7.9	6	5.9	125	
Stoneware A 0.5	1	1.0	8	
Stoneware B 0.9	1	1.0	15	
Stoneware C 0.6	1	1.0	10	

Late Stoneware 7.6	3	2.9	120
Tin glazed earthenware 1.6	7	6.9	25
Unglazed earthenware	6	5.9	90
Glazed pink earthenware 0.1	1	1.0	2
Glazed sandy ware 2.0	8	7.8	31
Cistercian ware 0.3	1	1.0	5
Unglazed sandy ware 0.6	1	1.0	10
Total	102		1580

Clay Pipe

21 pieces @ 81 grms (one bowl, one foot ring)

Glass

Bottle glass 14 sherds @ 204 grms.
Window glass 10 sherds @ 11 grms

Iron

13 pieces @ 465 grms (mainly nails).

Lead

3 pieces of lead window flashing @ 20 grms.

Bone

45 pieces @ 854 grms.

Oyster (representative sample only)

9 pieces @ 100 grms.

Cockle shell

1 shell @ 10 grms.

Archive list for Upper Lodge, Bushy Park, 1997-99 (BHY97)

There were four main phases of work on this site. These were:

- A. Original evaluation of water garden remains, August/September 1997.
- B. Evaluation on area to north and east of the mansion, April 1998
- C. Evaluation of the area around the Upper and Lower Pools, September 1998
- D. Excavation of the area of the Central Basin, south of the mansion, March/April 1999

The archive contains the following:

- 1. Context sheets, numbers 1-88 (phase A), numbers 88-127 (phase B), numbers 128-172 (phase C), and numbers 173-199 and 201-299 (phase D). Number 200 was not used.
- 2. Finds recording forms: 32 in total; 6 for phase A, 1 for phase B, 6 for phase C, and 19 for phase D.
- 3. Photographic recording sheets: total 7.
- 4. Drawing recording sheets: total 4.
- 5. Seven packs of Black/White photographs, with negatives.
- 6. Twelve plastic sleeves containing colour slide film.
- 7. English Heritage brief for project, plus addendum, 5 sheets.
- 8. Geophysical report, 6 pages text, plus 6 figures.
- 9. Drawing A86313/HV/1500 by WS Atkins showing external services, 1:250.
- 10. Drawing BP/2 by Priestmere of proposed plan, 1:500.
- 11. Drawing BP/101 by Priestmere showing buildings to be demolished, 1:500.
- 12. Letter from Land Use Consultants, 21/4.98, about restoration of water gardens.
- 13. Original permatrace drawings, total 20, varying sizes, mainly large.
- 14. Report, with figures, for phase A, 35 sheets (assorted A4 & A3).
- 15. Report, with figures, for phase B, 18 sheets (assorted A4 & A3; no fig. 1- not required).
- 16. Report, with figures, for phase C, 30 sheets (assorted A4 & A3).
- 17. Report, with figures, for phase D, 36 sheets (assorted A4 & A3).
- 18. Report, with figures, on short watching brief, November 1998, 9 sheets (assorted A4 & A3).
- 19. Project Design for phase A includes Health & Safety Risk Assessment, 10 sheets.
- 20. Project Design for phase B, 9 sheets.
- 21. Project Design for phase C, 9 sheets.
- 22. Project Design for phase D, 10 sheets.
- 23. Project Design for post-excavation analysis, 10 sheets.