

**The Garden at Carew Manor, Beddington:
An interim report on investigations 1979-2005**

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Acknowledgements

I would like to thank all the people and organisations who have helped over the course of this long-running investigation. The excavations have been conducted under the auspices of the Carshalton and District History and Archaeology Society, formerly the Beddington, Carshalton and Wallington Archaeological Society. We are grateful to Carew Manor School for permission to excavate. Thanks are due to Mrs Mavis Peart the Chairman of the Governors, the two head teachers Brian Wilson and Martin Midgley and the school caretaker Alan Hewett and his predecessors, especially John Hefernan. Joan Richardson's researches into the Carew family history have been invaluable to us. We would like to thank a small group of diggers who have been at the heart of the project through its ups and downs including Roger Browne, Jane Howard, Mike and Pat Bale, Stan and Val Coleman, Peter Stephenson and Derek Bradford as well as two who are no longer with us; Doug Cluett, who more than anyone started the project, and Ron Green. Without them none of the archaeology would have happened. Barry Weston was a key figure in the early stages of the project. Clive Orton carried out the first investigation of the moat culvert and has provided advice on some of the pottery. Valary Murphy, Brian Rosen, Kath Shawcross, Bev Shew, Andrew Skelton, Chris Sumner, Mark Stephenson and Dennis Turner have helped in various ways. Thanks are also due to the Surrey History Centre, British Library and the London Borough of Sutton Archives Local Studies. The latter supplied a number of illustrations. Shirley Williams and Valary Murphy acted as proof readers.

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1 INTRODUCTION

This interim report aims to summarise the archaeological, documentary and other evidence for the sixteenth and eighteenth century gardens at Carew Manor, a former country house at Beddington, Surrey. The evidence has been collected in an amateur investigation over about 26 years, from 1979 to 2005.

In 1979 a culvert was found when contractors were laying a water main to the east of the house. This was investigated by Clive Orton and the late Doug Cluett and it was clear that it was laid in the line of a former moat. Doug Cluett began an investigation of the culvert with a friend, Barry Weston. John Phillips joined the project in the autumn of 1980 and Nicholas Burnett a little later. Gradually other people became involved and the scope of investigation expanded from the moat to the house and then the Orangery and garden.

In 1981 the Carew Manor Group was established at the instigation of Dennis Turner to formalise the project. This has since been wound up and the work has continued under the auspices of the Carshalton and District History and Archaeology Society.¹

It gradually became clear that the Tudor garden had been of considerable importance. The significance of the Orangery was well known and a self flushing toilet described in Aubrey's History of Surrey suggested that there may have been various hydraulic devices on the site. Nicholas Burnett's work on Carew documents showed that Sir Francis Carew had employed French gardeners in the Elizabethan period. The publication of Baron Waldstein's diary in 1981 removed any remaining doubt about the site's importance. However, much of the mid-1980s was taken up with a long-running investigation of Beddington Park Cottages and with a survey of the Orangery Wall. The first formal excavation was not carried out until 1988 when a trench was dug to examine the north-east corner of the moat island. In the autumn of that year John Phillips decided to attempt to find the remains of the Tudor garden by excavation and the following August the first garden-related trench was dug. The task proved to be difficult and trenches were dug in most of the following summers without adding much to our knowledge of the Elizabethan garden, although a good deal was learnt about other aspects of the site. In 1995 and 1996 a mass of rubble from a probable garden structure was found dumped in a former pond or stream in the centre of the east lawn. In 1999 an excavation of a water course on the eastern edge of the south garden produced numerous pieces of decorative rock and mineral. Further excavations on the site revealed a fragment of a decorative garden structure of probable sixteenth century date.

The finds are still being analysed, but it seemed an appropriate point to produce a substantial interim report summarising the findings to date.

¹ Formerly known as the Beddington, Carshalton and Wallington Archaeological Society.

2 THE GARDEN AREAS

In this report the garden has been divided into the following areas:

- The central area running eastwards from the house
- The south garden – to the south of the central area
- The north garden – to the north of the central area including Beddington Park Cottages, Crispin Crescent and the land between them.
- The west lawn to the west of the house
- The park to the north and west of the house.

These divisions reflect present boundaries and land use rather than the layout of the historic gardens.

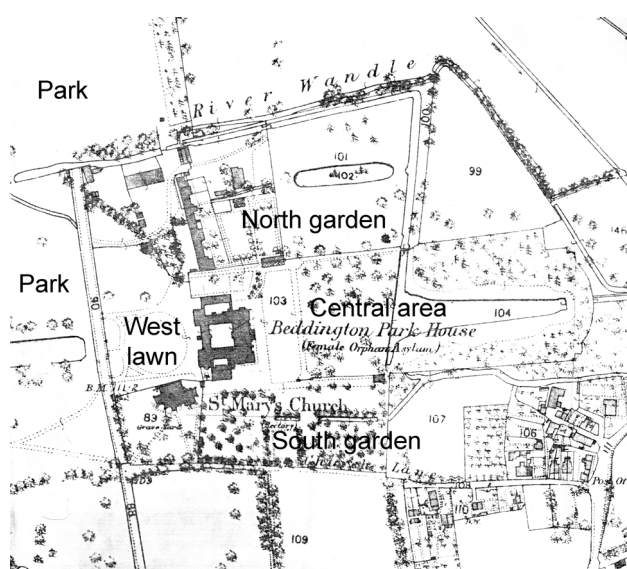


Figure 1. The garden areas added to the first edition 25 inch Ordnance Survey map of 1868.

3 THE MOAT, FILL AND CULVERTS

Carew Manor was once surrounded by a wide moat with a substantial wall around the island. The moat, and the culverts that replaced it, collected the drainage from the southern part of the garden and it is therefore necessary to examine their history. When the moat was filled a substantial brick culvert was laid close to the south and west sides of the moat island. This collected water from a number of culverts and drains which ran from both the garden and the house (figure 2). We examined the main part of the culvert in the early 1980s and allocated numbers (prefixed F) to the various features and side culverts. In 1983 the side drains were surveyed by the Chelsea Speleological Society.² The following pages describe the features of the moat and culverts which are relevant to the development of the garden. The features relating to the house have been summarised in Phillips 1989 and will receive more detailed treatment elsewhere.

² Pearman 1984 p12 & 15-17

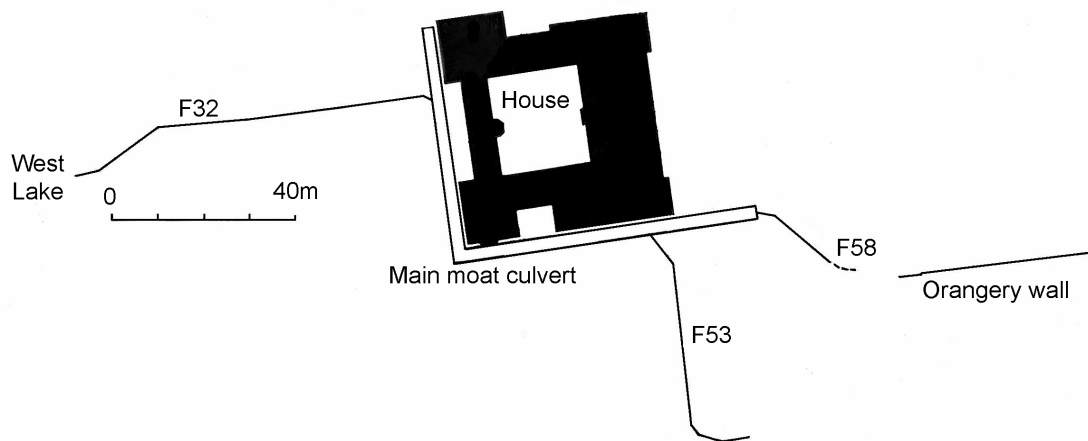


Figure 2. The main moat culvert and side culverts F32, F53 and F58. (From the Chelsea Speleological Society survey).

3.1 The main moat culvert

There is a brick arched culvert about 2.74 m wide along the south and west arms of the moat close to the island wall. Two side drains (F53 and F58) brought water to it from the garden (figure 2).

Culvert F58 ran into the east end of the southern moat culvert. It is brick arched and is 0.86 m wide and 0.48 m high.³ The Chelsea Speleological Society Survey shows that the culvert turns southeast. It then runs in a straight line to an abrupt drop in roof level 19.8 m from the entrance (figure 4). Photos of the roof drop show that the next section is also brick vaulted. The bricks look eighteenth or nineteenth century and have limescale and a black deposit on them. The culvert then bends towards the east. The culvert was crawled by Roger Browne in 1999. He found that the floor is covered with soft mud and that the brick often had a white deposit on it, presumably limescale.

³ Orton 1979

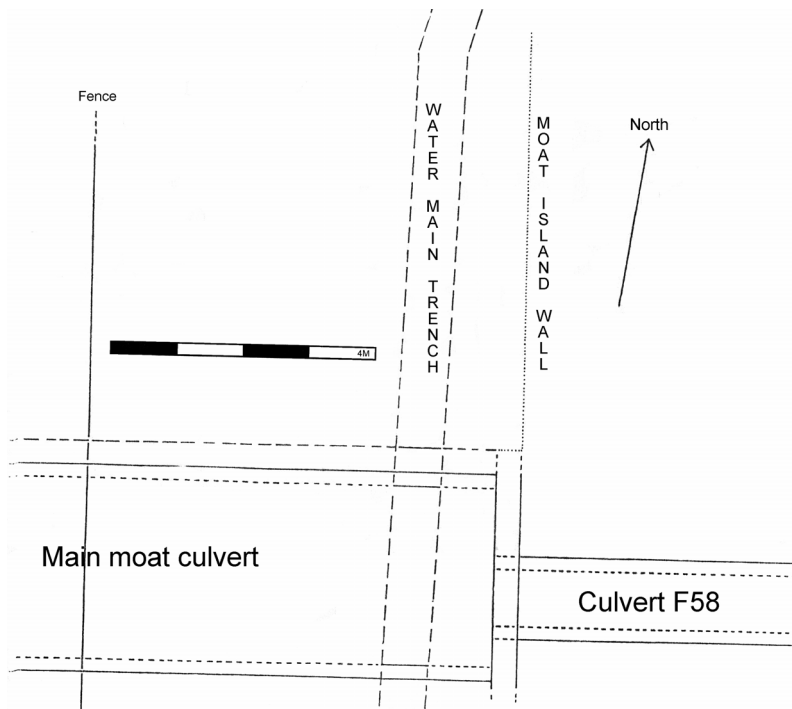


Figure 3: the junction main moat culvert and feeder culvert F58 and the south-east corner of the moat island. From a plan by Clive Orton, 1979.



Figure 4. The drop in the roof of culvert F58. (Photo Roger Browne.)

The junction between F58 and the east end of the main culvert is shown in figure 3. The arch of the main culvert butted up against a brick wall which ran southwards from the corner of the moat island. The eastern side of this wall was flush with the wall along the east side of the moat island. Culvert F58 entered the main culvert through

this wall. The end of the culvert and the wall (figure 5) were fairly neatly made although there is some peg tile packing at the top of the arch and some areas which have not been properly pointed so the mortar has spread over the brick. It seems likely that culvert F58 is earlier than the main culvert and that the wall was constructed to retain the fill of the east arm of the moat.



Figure 5. Culvert F58 entering the east end of the main south moat culvert.

Another culvert F53 enters the south side of the main moat culvert 24.23 m from the east end. It follows the line shown in figures 2 and 6 and appears to have picked up water from the channel in the south garden shown on the 1820 enclosure award map (figure 63).

The culvert was planned by the Chelsea Speleological Society in 1983 and was crawled again by Roger Browne in May 1999. He found that construction was the same all the way along and that the end was blocked by a sloping bank of rubble and earth.

At the main culvert end the floor was very rough as it was covered with rubble which seemed to be mostly Reigate stone with a good deal of flint and some brick. There was at least one piece of probable oolitic limestone. Some of the Reigate stone was quite big up to 20cm (by eye) often with smoothed surfaces. Some pieces looked rusticated but no mouldings were seen. The floor became smoother further south. One section appeared to have been floored with peg tiles. There was one whole brick with a frog on the floor close to the outfall into the main culvert.

Some of the bricks are soft red but others appeared to have a coarser red fabric and looked late eighteenth or early nineteenth century. The mortar is very hard - possibly

dark grey - although this was difficult to judge in the conditions. (The mortar in the main culvert is also very hard).

Culvert F53 enters the main culvert over a 'weir'. The top of this is formed by a course of headers which continues as a soldier course along the culvert wall on both directions so it appears that the weir was part of the original culvert or an earlier wall along the side of an open channel.

A blocked culvert from the south garden (F53A)

There is a blocked opening in the south side of the main culvert 1.14 m east (up stream) of the east side of F53. The blocking is 0.85 m wide and it rises 0.6 m above the culvert floor. The arch is not an even shape as the curve is much steeper on the west side. The course of the culvert is not known although it is likely to have brought water from the south garden.

A bonding break towards the west end of the main south moat culvert (F17)

There is a bonding break in the arch of the main culvert 62.58 m from the east end and about 2.7 m from the inner corner at the junction of the south and west culverts. Here the crown of the arch drops in height by one stretcher or 21.5 cm to 23 cm. The low side is to the west. The width of the tunnel does not change significantly. This may mark a break in building with one side older than the other.

3.2 Deposits and water flows in the moat culvert

The eastern end of the south culvert has a gravel floor. Towards the western end the floor drops fairly suddenly and the gravel is replaced by fine soft silt. This suggests that gravel was washed into the east end of the culvert and it carried along the floor until it was deposited on the downstream edge of a slowly building bar.

The gravel contained many large pieces of pottery and other finds. Most of the material dates from the early eighteenth century but some is mid- to late-eighteenth or possibly early nineteenth century.

Many of the finds were embedded within the gravel so there must have been enough flow to move it when they were deposited. Most of the pottery from the culvert was in good condition – not heavily abraded – which is consistent with gravel deposition. Any pottery dropped into the water would tend to be washed along until it reached the end of the bar where it would sink and be buried in gravel.

It is not easy to see how the pottery entered the gravel in the main moat culvert. The options are:

- The culvert side drains F53 and F58 described above. This does not seem consistent with unabraded condition of most of the pottery.
- Through the eastern end of the main moat culvert (if this was still open as late as c.1800).
- By being tipped down a shaft against the south side of the kitchen block (F52).
- By being tipped down an access manhole the near the kitchen (F0).
- By being tipped through a privy shaft on the inner side of the culvert.

It is also possible that the present culvert arch was built around 1800 over a previously open channel into which the pottery had been thrown.

The gravel extended up to the eastern end of the moat culvert where culvert F58 entered suggesting that this was the source. Culvert F58 has been traced to a point near the east end of the Orangery wall. The water here could have come from four possible sources (figure 6):

- Through the east lake.
- Along a hypothetical channel along the south side of the east central garden to the south of the east lake and north of the channel from Beddington Ford.
- Along the channel from Beddington Ford and then through a hypothetical channel along the north side of the Orangery wall.
- Along the channel from Beddington Ford into the south garden and then through this to the end of culvert F58 by an unknown route.

The east lake route is unlikely as it was filled with fine silt (see section 4.6 below). Although a channel close to the north side of the Orangery cannot be ruled there is no evidence for it and it was not seen in the small exploratory trenches dug against the wall. This leaves the channel from Beddington Ford into the south garden. Trenches CU and CW showed that gravel was washed along this. The flow regime later changed to still water laying fine silt. This also happened in culvert F58 where the fine silt probably overlay gravel.

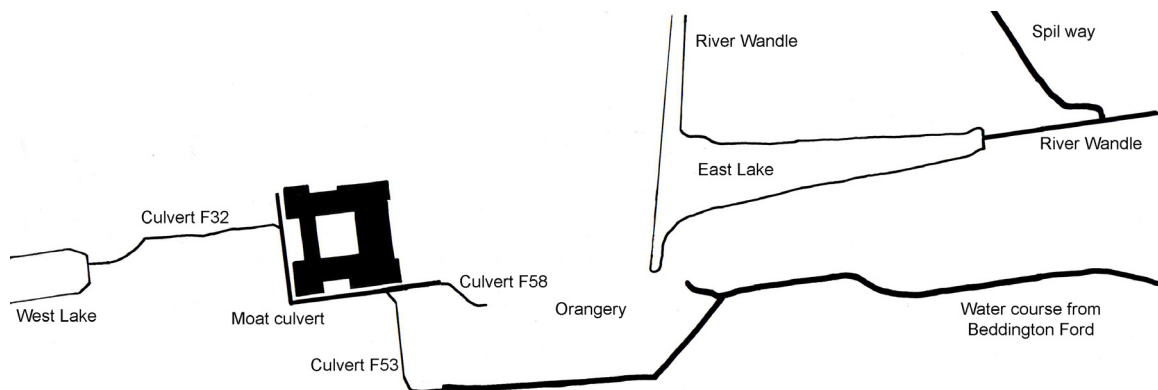


Figure 6. The watercourses upstream of the culvert.

3.3 Excavations and contractors' trenches

Several trenches have been dug into the moat fill either by contractors or as archaeological excavations. These are summarised below. The summaries only include material relevant to the garden, to water flows and to the filling sequence of the moat. Other aspects will be described elsewhere.

3.3.1 A contractors' trench near the NW corner of the house (AA)

Contractors dug a small trench to investigate a defective drain in the position shown on figure 9. The trench exposed a short section of wall which was aligned roughly

east-west⁴. The lowest exposed part of the wall was 0.7 m thick (figure 7). There was a 0.1 m offset on the north side so the upper part was 0.6 m thick. The fill to the north of the wall was soft grey sandy mortar with many fragments of brick and flint. On the south side there was brown sand with pieces of flint, brick and bone and lumps of brown soil. Both deposits ended at the level of the wall top and all three were covered with about 0.36 m of brown soil. The structure is within the projected line of the moat but its significance is unclear.

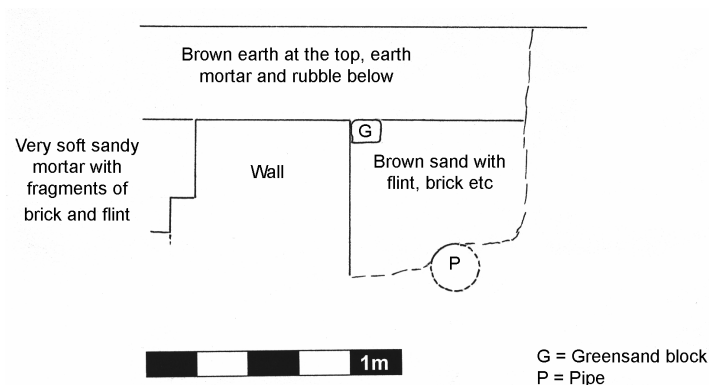


Figure 7. Section of trench AA.



Figure 8. The wall in trench AA looking west.

3.3.2 The laundry foundation trench AC

This trench was dug by contractors in 1983 when one of the outbuildings on the north side of the house was rebuilt to deal with subsidence. The trench ran round the footprint of the building giving the U shaped plan shown in figure 10. It passed through a series of layers of fill into the silt and gravel bed of the former moat. The stratigraphy and finds were recorded in a watching brief.

⁴ It was aligned at 85 degrees from magnetic north in 1982. Magnetic north was then about 8 degrees west of O.S. grid north so the wall was aligned 93 degrees from grid north. The notes on OS sheet TQ 26/36 dated 1973 say that magnetic north was 8.5 degrees west of grid north decreasing about half a degree in eight years.

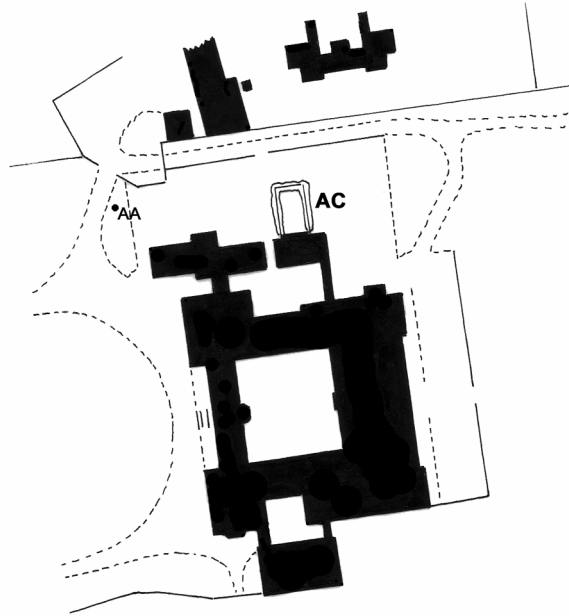


Figure 9. The location of trenches AA and AC

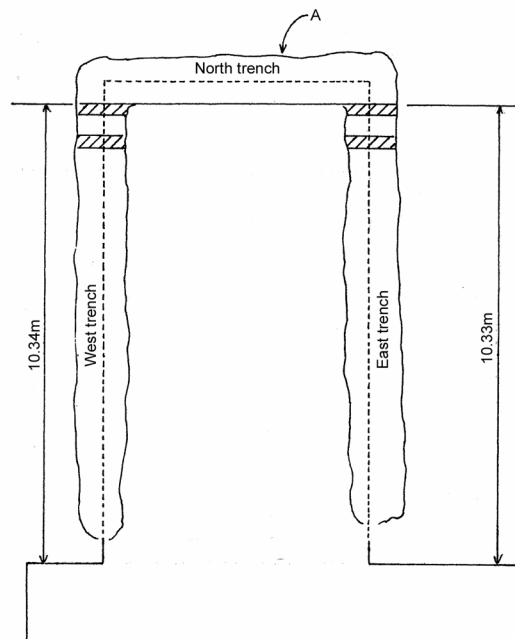


Figure 10. Sketch plan of trench AC

The lowest layer consisted of green silty sand which was probably the natural base of the Thanet beds. This was overlaid by dark brown oily, smelly gravel which was, in turn, covered with dark smelly silt. This must represent the bed of a watercourse which was at least 8 m wide and is likely to have flowed east to west. The south end of the trench, which was not necessarily the south side of the water course, was 14 m from the north wall of the house shown on Colen Campbell's plan of 1717.⁵

The size of the gravel implies that there was at times a considerable flow of water, and this, combined with the width, suggests that it once carried a substantial part of the

⁵ Published in Campbell 1717.

flow of the Wandle. The overlying silt was so fine that the water must have been either still or very slow flowing. There was therefore a change in flow in the channel's life.

Several large blocks of chalk were found in the bottom of the north part of the trench close to section A in figure 10. They were together in a group with the tops more or less at the same level. They seem to be a rather unlikely natural feature, but they could not be examined in detail, and their significance is not known.

Five more or less complete horse skulls, parts of several others, and many large disarticulated bones were found in the bottom of the trenches.

In the next phase the water course was drained and a small brick culvert was constructed running east-west across the site. Several layers of soil, rubble and gravel were then dumped in the bottom of the watercourse. The whole area was then covered with layers of brown soil. These were covered by a green layer with yellow patches and then with a layer of brown earth.

The dating evidence for the filling of the water course was scanty as there were few stratified finds. The key items were:

- <33> An L25 pipe bowl marked WR came from [AC29] a layer of gravel at the bottom of the north side of the north trench. This implies that the gravel was still moved by water in or after the early eighteenth century.
- <17> The base of a large glass mallet wine bottle which almost certainly came from the silts at the bottom of the water course or from the underlying gravel. Comparison with the examples in Dumbrell 1983 suggests a date after c.1725-30 with the range running into the second half of the century.
- <1> An ointment jar with pale blue tin glaze which came from the south end of east trench close to the bottom.

These finds, combined with the absence of later material from the lower layers, suggest that the watercourse was filled in the second or third quarter of the eighteenth century. The wine bottle tends to suggest that the work was not done by Nicholas Carew, 1st Baronet, who died in 1727. The trustees who controlled the estate after his death, or his son the 2nd baronet who controlled the house from 1741-1762 seem more likely.

3.3.3 A tin glazed hanging flower pot from trench AC

Workmen found part of a tin glazed pot in the lower part of the trench. It was originally about 280 mm in diameter with a flat rectangular handle projecting from the side. The handle was pierced for suspension. The outside was decorated with blue, green, yellow and white tin glaze (figure 11). The form is unusual and may be part of a hanging flower pot. Tin glaze of this type was made in Antwerp or the south Netherlands in the late sixteenth and early seventeenth centuries but could equally have been a product of one of the two tin-glaze kilns that are known to have operated in Norwich and Aldgate, London in the sixteenth century.⁶

⁶ Orton 1984.

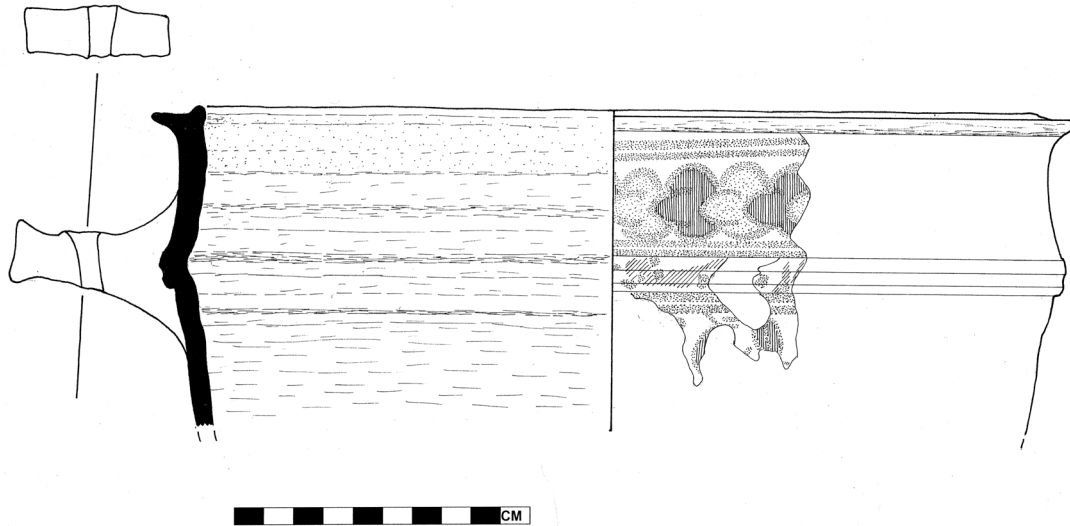
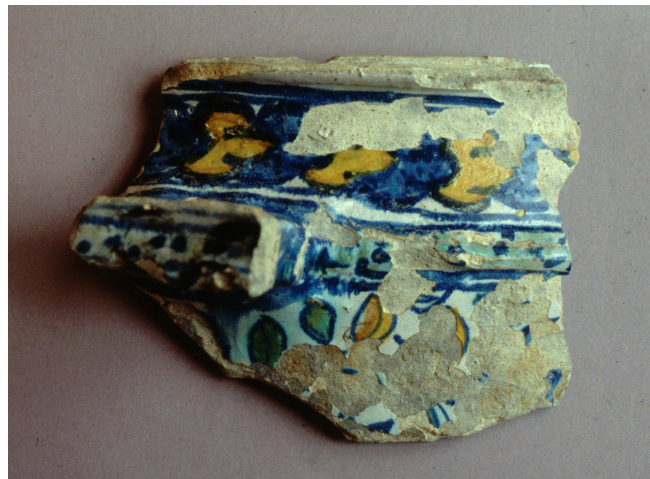


Figure 11: the tin glazed hanging flower pot above, drawn by Clive Orton, and photographed below



3.3.4 Trench CA

This was excavated at the north-east corner of the moat island in 1988. The trench uncovered the corner of the moat island wall which was about 1.9 m thick and consisted of flint and mortar faced with blocks of Kentish rag and Reigate stone.

The deposits within the moat were excavated in two small areas, one east of the moat wall and the other at the corner of the island. The areas were separated by a bulk left to support an old electricity cable. In both areas safety considerations prevented the excavation reaching the bottom of the moat. The deepest excavation was in the area east of the wall. Here the lowest layer encountered [CA15] consisted of slightly smelly grey sand of mixed size with bits of twig, small bits of wood, snail shells, bone, small stones and small pieces of brick. The top of this was at 30.44 m O.D. and was 1.23 m below the top of the moat wall. Brown twiggy sand is easily found on the bed of the river Wandle today so it seems likely that the river once flowed through the moat.

The sand in the trench was overlaid by brown earthy mud [CA14]. The thickness of this deposit was very variable, as the mud had been pressed up between the loose rubble blocks of the overlying layer. On the north side of this the top of the rubble sloped

downwards to the north and was covered with a layer of green sand [CA12]. These layers were covered with brown soil.

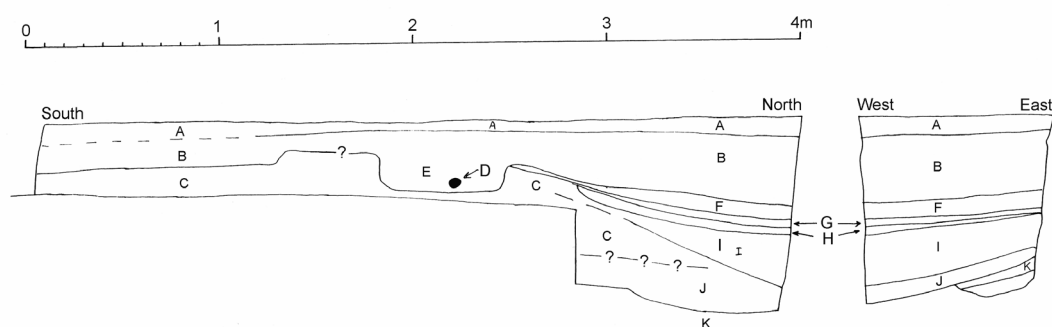


Figure 12. The west and north sides of trench CA

A – turf line and top soil; B = Medium brown soil with chalk, stones and a little tile; C = Very light brown – cream soil with much mortar and chalk; D = Old electric cable; E Brown soil trench fill; F = silty brown soil, no stones, very occasional chalk flecks; G = Medium brown soil with 50% chalk stone peg tile; H Mid-brown soil with 10% stone and chalk rubble; I = 50% soil, 45% green sand, 5% chalk and small stone; J = similar to C but sandier; K = 15% small tile.

The deposits at the north-east corner of the island are shown in figure 12. They consisted of various layers of rubble and soil which sloped downwards to the north. The green sand layer [CA12] was not seen in this area and it is likely that the top of it sloped downwards to the north and passed below the deposits recorded in figure 12.

The deposits filling the east moat thus dip under those filling the north moat. However, there was no obvious turf line in the sequence which may represent one more or less continuous dumping episode from south to north.

There were very few datable finds in the lower layers none of which need be later than about 1700.

3.3.5 Trench CG, CH and CI

In 1992 these three trenches were dug into the fill of the southwest corner of the moat as an evaluation prior to the construction of an extension on the north side of the chancel of Beddington church.

Trench CH was located against the outer face of the churchyard wall so that the footings could be examined. It was 2 m long and 1 m wide and was excavated with a mattock and shovel to a maximum depth of 2 m. The churchyard wall was found to rest on a foundation of mortared flint which was set back about 0.04 m from the face of the wall and was not pointed, so that the mortar was set back from the face of the flints. This foundation, extended to a depth of 0.4 m to 0.56 m, where it rested on a wall of squared stone blocks. The upper part of material excavated from the trench consisted of earth with some pockets of chalk and of crushed Reigate stone. There was a concentration of large flint and a scatter of brick and roof tile. The lower part consisted of sandy, light brown soil with a scatter of brick and tile. There were very few datable finds.

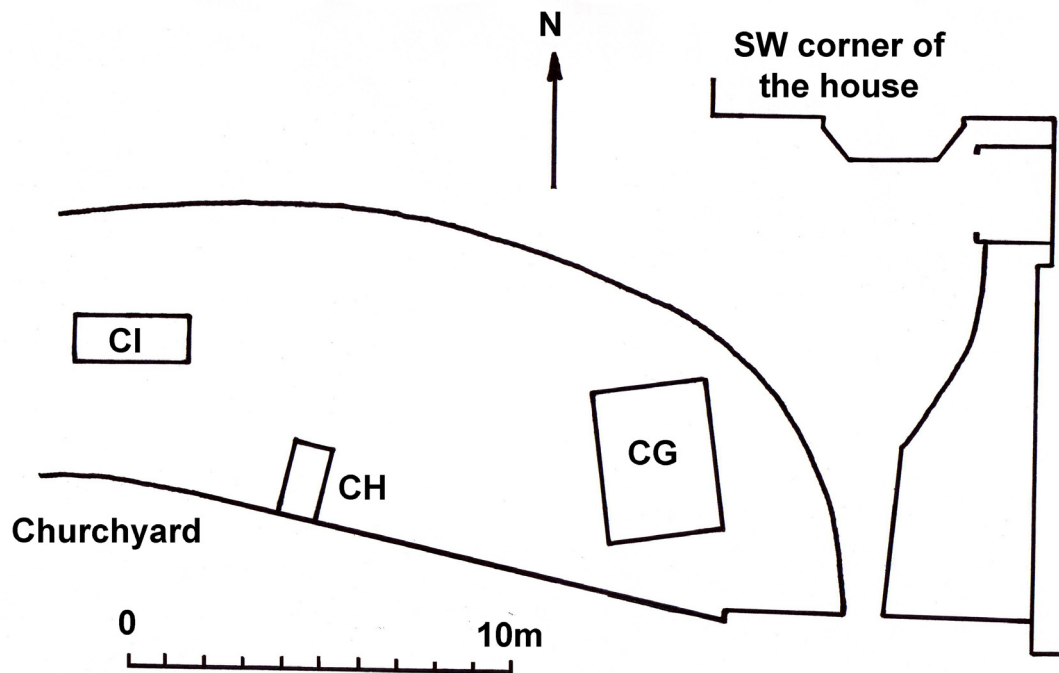


Figure 13. The position of trenches CG, CH and CI

Trench CG was initially 4 m long from north to south, by 3 m from east to west. The top soil was underlain by small gravel in an orange matrix which appeared to have formed the surface of a path or drive. This was cut by three features which were filled with loose mortar and rubble. Two of these were emptied and found to be modern utility trenches. The third was not examined but was probably similar. The excavation was then confined to the north-east corner of the trench. Here the orange gravel was about 0.2 m thick. The lower 0.05 m was slightly more orange. The gravel rested on 0.2 m of broken chalk, which was presumably a foundation. The chalk rested on a layer of crushed mortar and brown earth with a great deal of roof tile. This in turn rested on a layer of solid mortar and then by a layer of greenish sand with a good deal of rubble in it. There was a further layer of solid mortar at the north end of the trench with further greenish sand and rubble below. These deposits had a total thickness of about 0.5 m. The next layer consisted of grey-green sand with rubble. It had a heavily compacted strip running diagonally across the top of it which probably marked the line of a path. The excavation terminated in this layer at a depth of 1.4 m. A short section of the foundations of a brick wall were exposed in the eastern side of the trench. The wall had been aligned roughly north-south and the upper parts of it had been robbed out.

The third trench (CI) was 3 m long from west to east by 1 m north to south. It was laid across the expected line of the west bank of the moat with a view to confirming its position. The turf was underlain by a thin layer of fine top soil which rested on about 0.14 m of soilly gravel. This was underlain by a well-made surface of large, tightly packed struck flints bedded in yellow sand. In some places there was a layer of fine soil on the surface of the flints. The bedding sand for the flints rested on a thick layer of sand which contained a large amount of rubble including brick, flint, chalk, mortar and roof and floor tile. At the western end of the trench this was underlain by a layer of dark flinty soil the top of which dipped sharply towards the east as shown in figure 14. The trench reached a maximum depth of 1.4 m. At this point the eastern end

appeared to be entering almost pure rubble with many voids, and the excavation stopped for safety reasons.

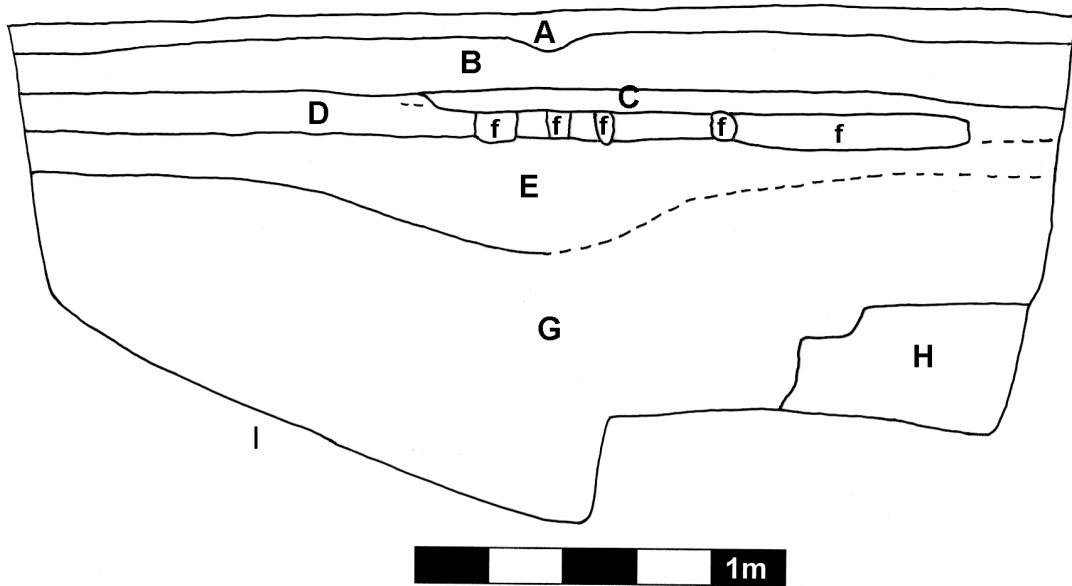


Figure 14. The north side of trench CI.

- | | | | |
|---|------------------------------------|---|------------------------------------|
| A | Fine dark brown top soil. | f | Flints |
| B | Gravel in a sparse earth matrix. | G | Light brown sand with much rubble. |
| C | Fine earth. | H | Large rubble |
| D | Dirty sand with flint impressions. | I | Dark pebbly soil (not excavated). |
| E | Yellow sand. | | |

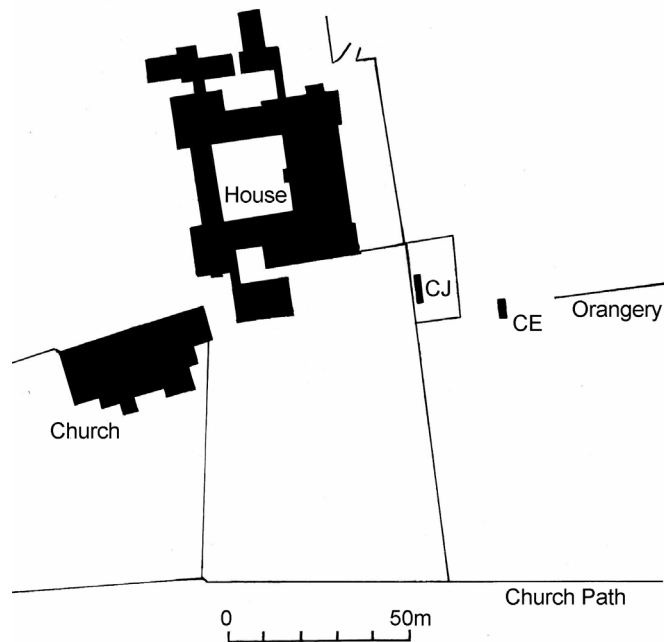


Figure 15: The location of trenches CE and CJ.

3.3.6 Trench CJ

This trench was excavated in the fill towards the southeast corner of the moat in the position shown in figure 15. The sides of the trench had to be stepped for safety reasons so it narrowed from 8 m north – south by 2 m east – west at grass to 1.3 m by 0.8 m at the bottom.

The moat bottom was of gravel which sloped downwards to the northwest from 30.61 to 30.43 m OD. It was covered by a layer of dark silt which contained two pieces of pipe stem of probable seventeenth century date.⁷ The top of the silt was at 30.95 m OD.

The silt was covered by dark sandy soil which had been tipped from the south and appeared to be the initial moat fill.⁸ This contained an L25 pipe bowl marked with a W and an illegible letter and an L20 bowl but nothing which need be later than the early eighteenth century. The top of this deposit was around 31.86 m OD.

It was overlaid by several layers of soil, sand and peg tile which were probably deposited in the mid to late eighteenth or early nineteenth century although there were few datable finds. These deposits were covered with top soil which included plastic and other obviously modern material.

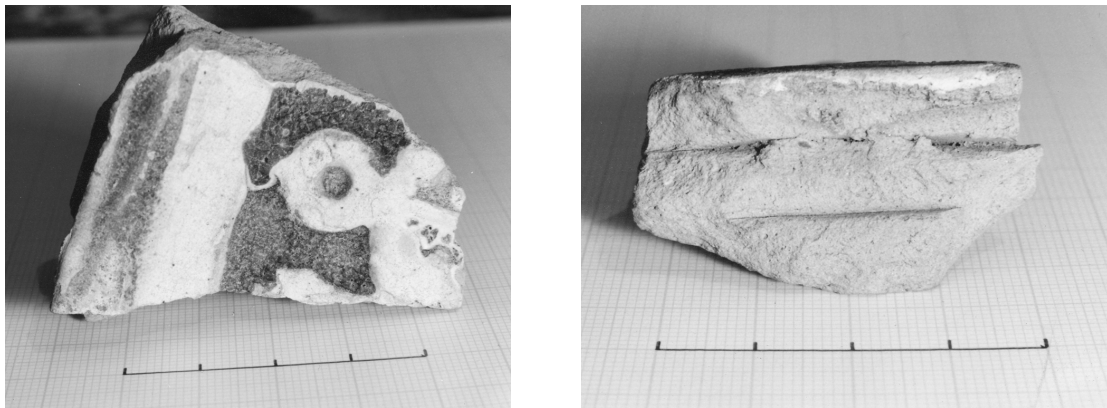
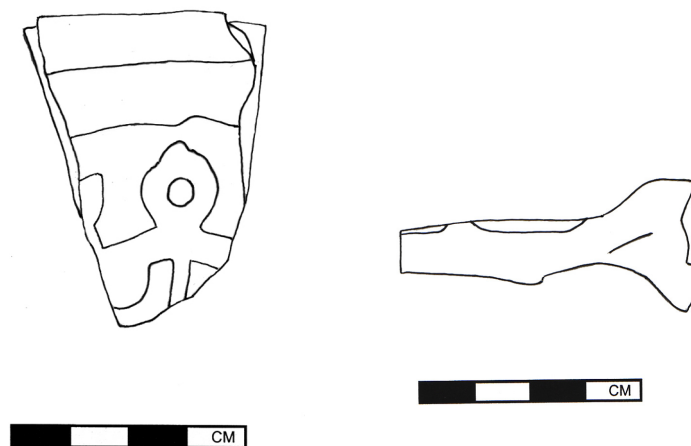


Figure 16. The high relief tile. Scale 8cm long photographed above and drawn below.



⁷ [CJ18].

⁸ Contexts [CJ11] to [CJ17].

The initial moat fill contained a piece of black sparkling mineral similar to the material from CW and a fragment of high relief tin glazed tile (figure 16).⁹

The body of the tile was made of red clay superficially similar to the local roof tiles. One side is decorated in high relief, covered with a white slip and then white or blue glaze. The back has wheel turning marks so it appears that the main part was made by pressing the clay into a rotating mould. An extra piece of clay was then added to make the edge. The addition has score marks on the back where a finger has been run along to work the edge into place. The surviving edge is straight but the decoration appears to be a roundel. The edge has a slot-like feature 11 mm wide and about 2 mm deep which appears to have been designed to lock to another tile or some other object.

3.4 The moat silt

In trench AJ near the southern end of the western moat and in the contractor's trench AC the bottom of the north moat was gravel overlaid by dark silt. Trench CA at the north east corner of the moat island did not reach the bottom of the moat but did find a layer of brown twiggy sand at a height which cannot have been much above the moat bottom. Deposits of sand like this can be found in the Wandle today.

3.5 The moat filling sequence

Several pieces of evidence suggest that the moat was filled in stages but it is not easy to establish the sequence.

The moat would fit uneasily with the baroque facing of the house which appears to have been carried out by the first baronet around 1710-12.¹⁰ It is therefore likely that at least the western and eastern arms, which crossed the front and the back of the house were filled by that date. The finds from trenches CG, CH and CI in the south west corner of the moat fill were consistent with this as the fill included rubble which probably came from the re-modelling of the house and there were no finds which need be later than the beginning of the eighteenth century.

The filling dates of the north and south arms of the moat are more problematic. The eastern end of the south arm of the main moat culvert butts up against a wall which appears to retain the fill of the east moat. The existence of this wall suggests that the eastern arm of the moat was filled before the southern one. The bonding break in the vault of the south moat culvert close to the south-west corner may mark a building break between the south and west moat culverts. The south culvert has a gravel bed which includes a good deal of pottery and other material. The majority of it consists of red wares, border wares, tin glaze and Chinese porcelain of early eighteenth century date. However, there was some material which certainly dated from the late eighteenth or early nineteenth century including pieces of creamware and a Wedgwood tea pot. This material could have been dumped into the culvert through one of several manholes but it seems more likely that it was thrown into an open channel from the adjacent kitchen. If so the south moat culvert may have been an open channel until 1818 when Ann Paston Gee remodelled the south wing.¹¹

⁹ Find <22> from [CJ14] and find <5> from [CJ13].

¹⁰ See section 14.2 below.

¹¹ Colvin 1995 p72

The finds from the contractor's trench AC in the north moat fill included a mallet type wine bottle which would suggest a filling date in the second or third quarters of the eighteenth century. The channel appears to have undergone a change of flow regime from running water depositing gravel to a still one depositing fine dark silt. The gravel contained an L25 pipe bowl marked WR suggesting that the fast water flow continued into the early eighteenth century and that the dark silt is later. The brown sand in trench CA at the north-east corner of the moat island was probably deposited when there was rapid water flow through the north moat. There was some mud over the sand but it was not dark and smelly so it was probably not the same deposit as the mud in trench AC. It seems likely that fill of the east arm of the moat extended beyond the northeast corner of the island and that the mud seen in trench AC was later. The north arm may have been narrowed before it was finally filled.

4 THE CENTRAL GARDEN

This extends eastwards from the house for about 290 m as shown in figure 17. It was lined with brick walls, parts of which are now missing. At the eastern end there was a lake with a cascade and a bank closing off the end of the garden. This arrangement appears to have been created in the early eighteenth century.

4.1 The boundary walls and gates

The central garden is bounded by walls which are largely made of soft red brick. They can be divided into a number of distinct sections which are shown in figure 17. All the walls are shown on the enclosure award map of 1820.

A gravelled walk ran from north to south across the garden 40 m east of the house. At the northern and southern ends of this there were gates for the walk to pass into the northern and southern garden areas.



Figure 17. The central garden area and its boundary walls from the from the 1st edition 25 inch Ordnance Survey map, 1868. NG North gate; SG South gate; P Pillar by Wandle

4.1.1 The northern gate

This is marked NG on figure 17. The gate disappeared many years ago and we have not seen any photographs of it. Two brick pillars survive with Portland stone caps and

bases shown in figure 18. The caps have the bases for an urn or other finial. The gate has been replaced by a brick wall capped by railings which are clearly no older than the late nineteenth century. There was a bond break in the walls close to both piers suggesting that the gate had been inserted into an existing wall.

The wall to the west of the gates bisected the site of a greenhouse shown on 1820 enclosure award and later maps. It is possible that the wall continued though the middle of the building which was in effect two lean-tos placed back to back. The wall appears to be of eighteenth or early nineteenth century date, although it had suffered from subsidence and had been subjected to a series of repairs and alterations which are not currently understood. The wall has recently been heavily repaired.



Figure 18. The north gates. Top left: the eastern pier, 1985. Above: the western pier, 1986. Bottom left, the capping on the western pier, 1985.

4.1.2 The wall between the north gate and the river Wandle

This section of wall ran from the eastern north gate pier to a brick pillar by the river Wandle (P on figure 17). It was of soft red brick bonded by lime mortar and was demolished by vandals in a few nights in May 1981.

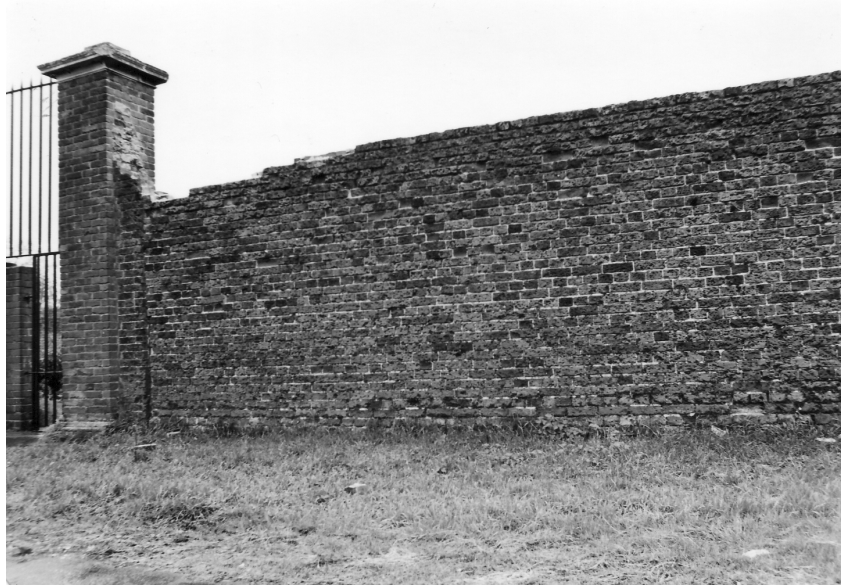


Figure 19. The remains of the wall between the north gate and river on 3 May 1981. Note the bond break adjacent to the gate pier.

4.1.3 The pillar by the river

This is marked P on figure 17. It stands by the river at the eastern end of the section of wall connecting to the north gate. It has so far survived the vandalism and is still standing. There is a scar where the pillar was bonded into the wall. It is not known if there was an adjacent bonding break.

The pillar is brick with Portland stone capping and base. Its plan is not square: the north and south sides are aligned with the wall along the north side of the central garden while the east and west sides are aligned with the adjacent river channel which is approximately north-south. At the northeast corner of the capping the angle between the two sides is 78 degrees.

The capping is made of three pieces of stone held together by iron cramps. The slabs are poorly fitted so that the east and west sides are not straight.

There are 16 mm deep slots cut into the top of the northwest and northeast corners possibly for iron stays to stabilise an urn or other finial, now missing.

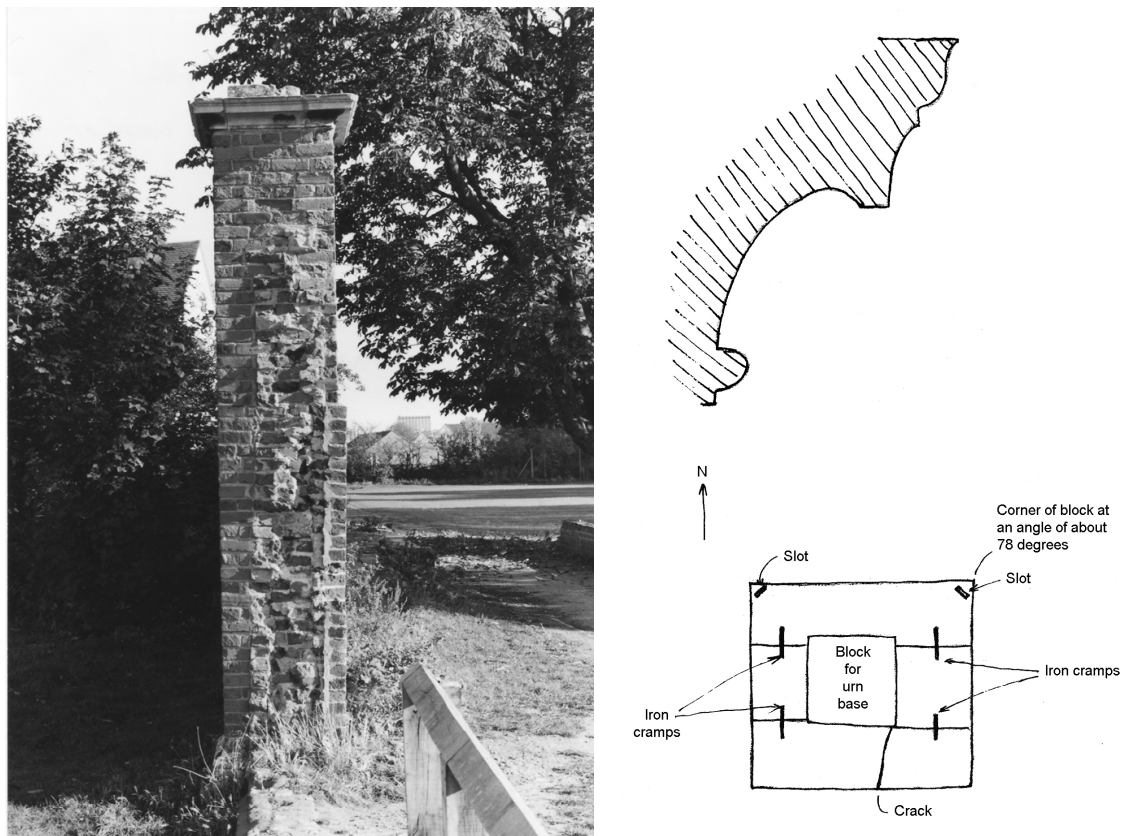


Figure 20. The pillar by the Wandle. Left: west side of the pillar with the scar from the missing wall. Top right: sketch of the moulding on the pillar top. Bottom right: sketch plan of the pillar top.

4.1.4 The wall between the river and the east end of the garden

This runs from A to B on figure 17. It is a fairly featureless wall of soft red brick which now separates the east end of the garden from the Crispin Crescent housing estate. At the western end the south side of the wall is covered with the scars from swimming pool changing cubicles built against it in the early twentieth century. There was a door through the wall about 26 m from the east end which is blocked with soft red bricks.¹²

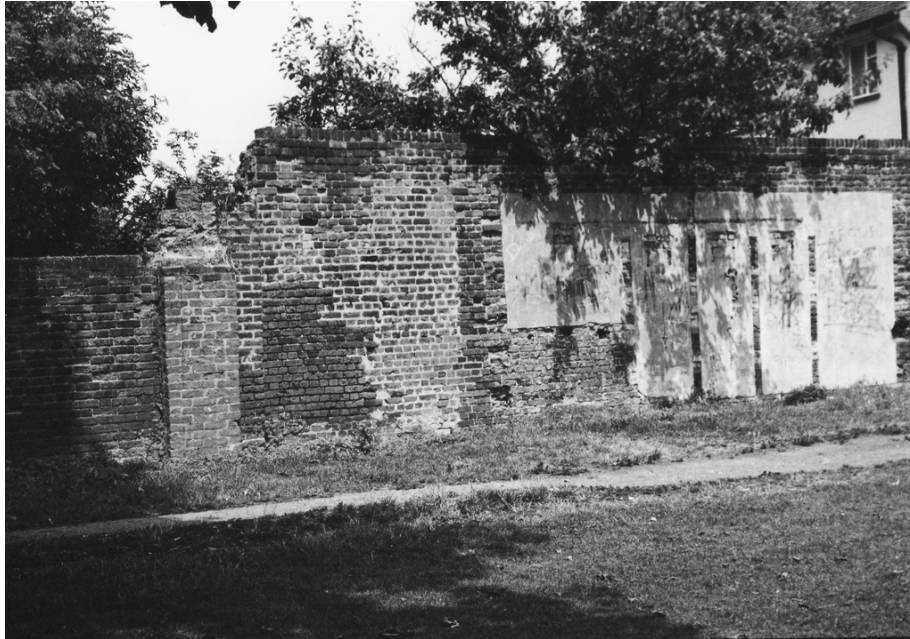


Figure 21: The west end of the north wall showing the remains of a pillar of uncertain date and the scars from the demolished swimming pool changing cubicles.



Figure 22. The north wall of the eastern end of the central garden in 1986 showing the blocked door.

¹² This section of wall is currently covered with ivy.

4.1.5 The walls and bank at the east end of the garden

The east end of the garden is closed by a curved gravel bank which was backed by a curved brick wall on the east side from points D to E on figure 17. The bank and curved wall did not run all the way to the north boundary so the gap was filled by the wall B-C-D on figure 17. This rather odd arrangement meant that the east end of the garden was not symmetrical. The implications of this are considered in conjunction with the east lake (section 4.6 below).

The walls appear to have been of soft red brick although the southern half of the curved wall has now gone along with section B-C. Parts of the rest have been rebuilt.

The river originally entered the garden through two culverts which passed below the centre of the curved wall and bank and flowed over a cascade (see section 4.7 below). In the late 1960s or early 1970s the river was diverted around the southern end of the bank destroying the boundary wall in this area.

4.1.6 Brick sizes

Two sets of brick measurements were made to find out whether wall sections B-C and C-D were the same date. One set (Bs12) was on the eastern side of B-C, the other (Bs19) was measured on the south side of C-D. The bricks in the northward running section of wall B-C are significantly thinner than those in the eastward running section C-D.

Bs 12

	Length	Height	Width
Number of measurements	49	100	50
25 th percentile	220	58	106
50 th percentile	222	59	107
75 th percentile	223	60	109

Bs19

	Length	Height	Width
Number of measurements	50	100	50
25 th percentile	218	65	105
50 th percentile	220	66	106
75 th percentile	223	67	107

4.1.7 The wall along the south side of the garden east of the Orangery

This section is marked E-F on figure 17. The eastern half of this has now gone along with a short section at the western end. The surviving parts are plain and of soft red brick without any obvious features. The wall cuts across the foot of a slope so the ground is higher on the south side than the north (central garden) side.

4.1.8 The Orangery wall

The ornamental north wall of the Orangery continues the line of the central garden wall to the southern gate. The Orangery is considered in section 5 below.

4.1.9 The southern gate

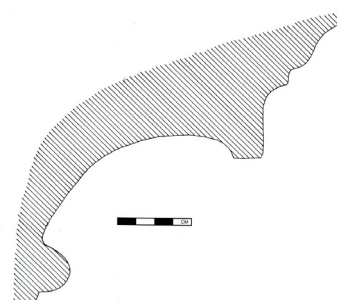
This gate (marked SG on figure 17) stood at the southern end of a north-south cross walk opposite the northern gate (section 4.1.1).



Figure 23. Above and below left: the south gates c.1900 (Sutton Local Studies Collection)



Below: moulding from the east pier cap.



The gates were photographed around 1900 when the Royal Female Orphanage Asylum owned Carew Manor (figure 23). They consisted of a pair of wrought iron gates set in a frame surmounted by a double monogram NC arranged so that it can be read from both sides.

There were railings on either side of the gates which connected them to columns at the end of the walls. The eastern column is visible in the photos which show that it was covered with stone and had an urn on the top. The base of the column still survives and has Portland stone mouldings. In 1985 part of the Portland stone cap survived on the ground near the east end of the Orangery wall. It has since disappeared but was drawn and photographed (figure 23). The photos show weathering on the side of the columns suggestive of Reigate stone. The opening for these gates was significantly wider and grander than the answering pair on the north side of the garden.

4.2 The cross track

The northern and southern gates were connected by a north-south cross track. This is clearly marked on the 1820 enclosure award and subsequent maps down to 1956 (figures 63 and 24). The line is now marked by a clear ridge across the lawn which turns brown in dry weather. This appears to be a late resurfacing: probing the grass shows that the gravel is wider than the ridge.



Figure 24. The cross drive burnt out on the east lawn. The site of the north gates in the background.

4.3 The axial track

In dry weather a burn mark can be seen running eastwards from the house along the axis of the central garden. Trenches CM and CN showed that there was a walk which originally had a gravel surface over a massive chalk foundation. (see section 4.11 below). A resistivity survey shows that the walk had a width of about 9 m.

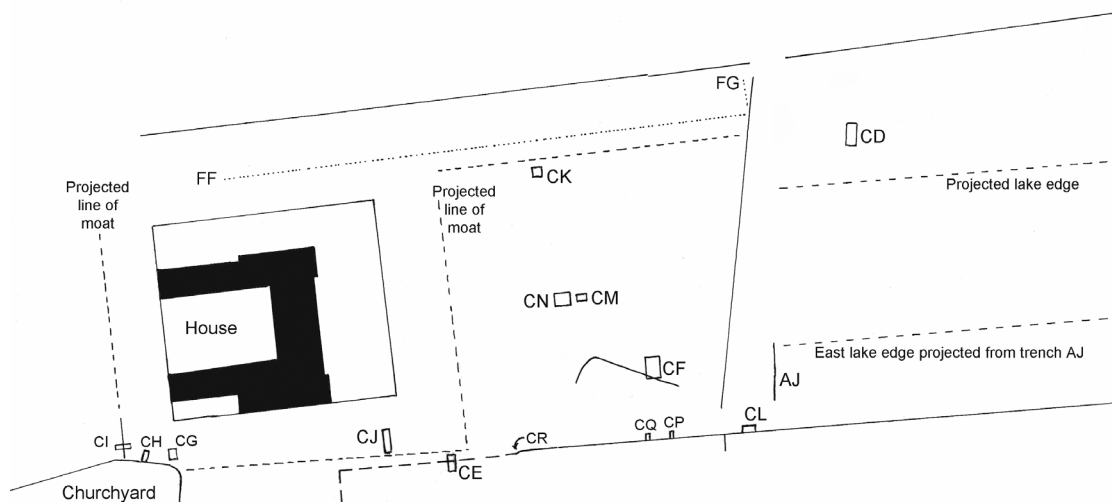


Figure 25. The location of the trenches. The dotted lines FF and FG are the projected lines of culverts seen in the flood alleviation work.

4.4 Trench CD

This was dug in 1993 towards the eastern end of the central garden in the position shown in figure 25. It was intended to find out if there had been a water course on the site and, if so, to examine the deposits forming the channel bed.

Layers [CD10] and [CD11], which formed the bottom of the trench, appeared to be water laid gravel which had been penetrated by plant roots. As there were no finds from either layer there was no dating evidence.

They were overlaid by gravel layer [CD8] which lacked plant roots and contained a small amount of earth. This may have been part of the material deposited when the water course was filled but the shape of the top of the layer was similar to the gravel bars and hollows found on stream beds. The hollows in the top of the gravel were filled with yellow clayey sand which could have been silt deposited in the pools on either side of the bar. The material is however, unusual at Beddington. It is also possible that during the process of filling a layer of gravel was dumped in the water course while it was still flowing.

The silt and gravel were overlaid by layers of dark stiff earth with a varying amount of flint.¹³ Two clay pipe bowls of mid-seventeenth century date and a piece of a cup rim with manganese speckled tin glaze were found in the upper part of these. The dark earth may have originated as top soil which was dumped in the water course when it was being filled.

This was overlaid by flint of mixed shape and size which contained a number of finds none of which need be later than the early eighteenth century.¹⁴ The position of the layer is consistent with dumped material used to fill the water course. There were two gullies in the top of this which did not appear to be cuts and were probably irregularities left on the surface of the gravel when it was dumped. There was clay in the bottom of the western gully which appeared to be too discontinuous to have been a lining and its significance was unclear.¹⁵ The few lumps of clay in a similar position in the eastern gully are equally enigmatic. None of the finds in the gully fill were datable but it seems likely that filling took place soon after the gravel was deposited so that the area could be restored as a garden.

There was top soil above this which contained many finds which appear to relate to the orphanage's occupation of the house (1866-1939).¹⁶ Photographs in Sutton Local Studies Collection show that the area was cultivated in the late nineteenth and the first half of the twentieth century.

4.5 The north water course

In 1990-91 the Environment Agency regarded the channel of the river Wandle as part of a flood alleviation project. They cut back the west bank of the river just upstream of the bridge at the corner of Crispin Crescent estate and exposed an east-west aligned culvert in the position shown on figure 25. Its centre line was located 14.25 m south of

¹³ Contexts [CD6], [CD7] and the upper part of [CD9].

¹⁴ Context [CD3].

¹⁵ Context [CD5]

¹⁶ Contexts [CD1], [CD2] and [CD4].

the wall which runs across the Crispin Crescent bridge. The sides and round vault consisted of a single thickness of soft red brick laid lengthways so both wall and vault were a single brick width thick. They were bonded with spotty mortar which contained lumps of lime or chalk. The sides consisted of four courses with a total height of 0.305 m. The inside of the arch rose 0.135 m above this so the total internal height was 0.44 m. The internal width was 0.36 m. The culvert walls rested on water laid gravel and the bottom 0.11 m of the culvert was also gravel filled. Above this 0.125 m of dark brown sticky silt which was overlaid by 0.055 m of fine sand. There was a thin layer of dark sticky silt above this and then an air gap of 0.135 m to the vault top. There was no sign of the culvert on the east side of the Wandle and it almost certainly started at the river. There was no sign of a construction trench for the culvert but the section around it was not cleaned and it could easily have been missed.

The culvert was more or less aligned with the culvert found in the contractor's trench AC in the north moat (see 3.3.2 above) and was of similar, although not identical, size. One is therefore likely to be a continuation of the other.

The culvert in the flood alleviation section was about 155 m east of the culvert in the laundry foundation trench and the difference in levels and resulting gradients were:

	Flood alleviation	Laundry trench	Difference	Gradient
Top of silt	31.2	30.76	0.44	1:352
Top of gravel in culvert	31	30.71	0.29	1:534
Bottom of culvert wall	30.89	30.69	0.20	1:775

The increasing difference in height from the bottom of the culvert wall to the top of the silt is consistent with the culvert slowly upgrading its bed.

It seems to have been a common practice to lay culverts in the line of former water courses presumably to ensure drainage when they were filled. There are several pieces of evidence to suggest that this culvert was laid in the bed of a water course:

- The bed of a river channel was found in trench CD 32 m east of the flood alleviation section (see section 4.4 above). The width of the channel is unknown as neither bank was seen. It appears to have been filled around 1700. The channel bed in CD was at 31.05 m OD. The gravel in the laundry foundation trench was at 30.67 m OD so the drop was 0.38 m over a distance of 187 m (gradient 1:492). The drop in the height of the gravel from trench CD to culvert in the flood alleviation section was 0.05 m over 32 m, a gradient of 1:640. These look fairly plausible for heights in a water course.
- Trench CK (see section 4.10 below) was dug in an attempt to locate the south bank of the watercourse. In this it was unsuccessful but subsequent auguring showed that the lawn to the north of it is underlain by sand which could be dug nearby and was often used at Carew Manor to make up earthwork deficits.
- The brown river sand found in the bottom of Trench CA at the north east corner of the moat island, and the water laid gravels in CW, suggest that the river flowed through the north arm of the moat in the early eighteenth century.

4.6 The east lake

The enclosure award map of 1820 shows a T shaped lake in the eastern end of the central garden. The Wandle entered the eastern end of the lake through a pair of culverts and left by a channel running northwards from the western end (see figure 63). In 1859 the area was described as a ‘shrubbery and lake’. The lake was still ‘T’ shaped when the first 25 inch Ordnance Survey map was made in 1868 but the lake narrowed thereafter and by 1913 it was little more than a river channel.

In March 1986 contractors dug a ditch which ran from the south boundary wall of the central garden 18.1 m east of the east end of the Orangery wall northwards to the river Wandle (see AJ on figure 25). The opportunity was taken to examine and draw part of the east side. The trench cut through a gravel walk and brick retaining wall which had clearly once formed the southern side of the east lake. These overlay earlier and more enigmatic deposits.

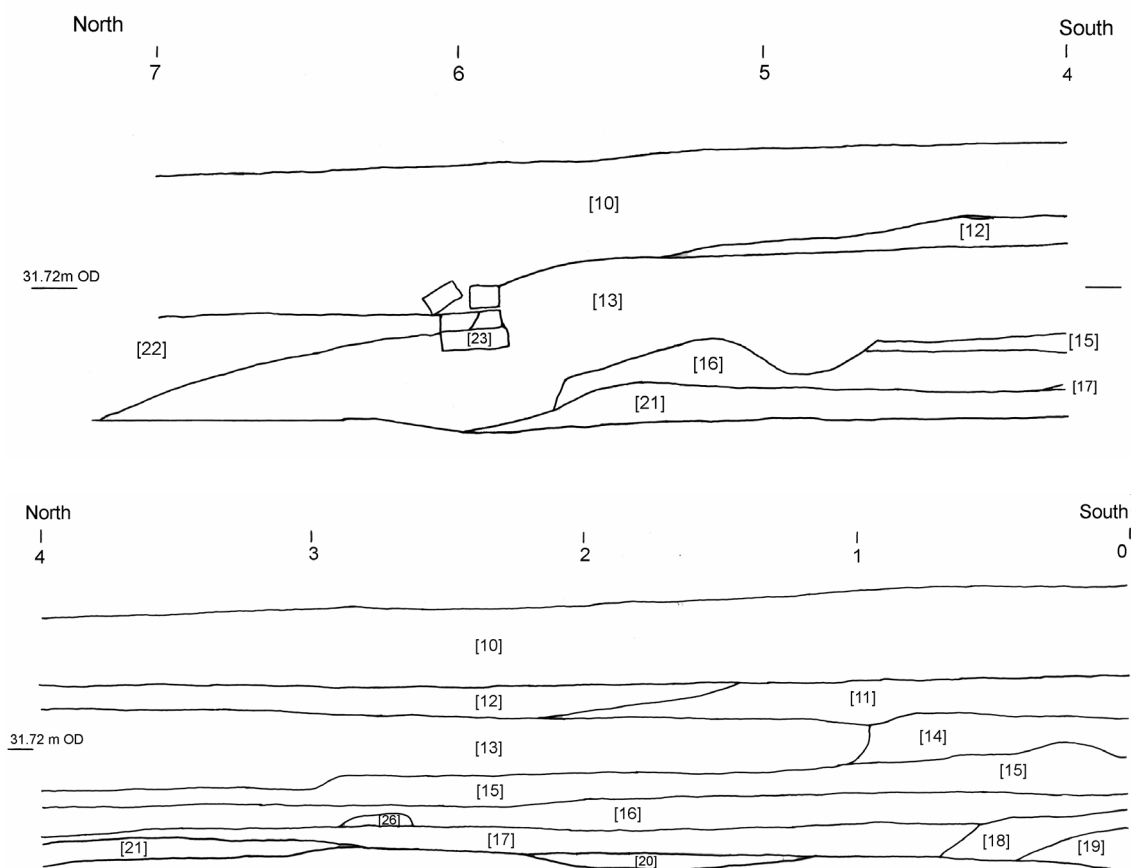


Figure 26. The east side of contractor's trench AJ. Northern part with wall of east lake above and southern part below. Scale along the top in metres.

The oldest layers in the drawn section (figure 26) were probably [AJ20] and [AJ21] which were only visible in a narrow band in the ditch bottom. [AJ20] consisted of sand with dark brown streaks. [AJ21] was also of sand which became coarse towards the north and had some steaks of small flinty gravel in it. Both layers appeared to be water laid. Their tops were at a similar height and it seems likely that they were two exposures of the same layer.

At the south end of the drawn section there was a layer of dark fine smelly sand-less silt [AJ19]. This was overlaid by [AJ18] which consisted of fine dark soil with sand in it. The significance of the two layers is unclear.

Layers [AJ20] and [AJ21] were all overlaid by layer [AJ17] which consisted of orange gravel in a sand matrix and it was not clear whether it was water laid or dumped. At the south end it terminated against and partly overlaid layer [AJ18] while to the north it thinned gradually and then disappeared.

Layers [AJ17] and [AJ18] were covered by layer [AJ16] which consisted of sandy clay. At one point there was a small lens of sand [AJ 26] between layers [AJ16] and [AJ17]. [AJ16] was in turn overlaid by [AJ15] which consisted of sandy loam mottled with iron stains. A pipe bowl of about 1700-70 marked WR was found in layer [AJ15] or [AJ16].

At the south end of the section [AJ15] was overlaid by [AJ14] which consisted of light grey sand. The northern part of this layer had been cut away and replaced by [AJ13] which consisted of coarse grey gravel. At the north end the upper part of the gravel was retained by a three course high brick wall [AJ23] which appeared to have formed the edge of a lake with the gravel making a walk 4.3 m wide along the side. The wall was 23.1 m north of the boundary wall along the south side of the central garden. The gravel extended to a greater depth as it approached the wall and overstepped layers [AJ15], [AJ16] and [AJ21] which appear to have been dug away to accommodate it, presumably when the lake was made. The top of the gravel dipped downwards to the east of the wall where it appears to have formed a lake bed.

Within the lake the gravel layer [AJ13] was overlaid by layer [AJ22] the southern end of which butted up against the brick wall. The top of the layer was fairly level so it thickened to the north. The layer consisted of fine light chalky looking silt which reacted very strongly in dilute hydrochloric acid.

At the south end of the trench layer [AJ14] and the southernmost part of the gravel walk [AJ13] were overlaid by [AJ11] which consisted of sandy soil with some small pebbles and flints. This layer tapered away to the north and was overlaid by layer [AJ12] which also rested on the walk [AJ13]. This consisted of green coloured sand. [AJ11], [AJ12], the top of the lake side wall and the lake fill [AJ22] were all overlaid by [AJ10] which consisted of dark soil which extended up to the surface.

The deposits close to the river to the north of the measured section were dark and peaty and contained many late nineteenth or early twentieth century finds. It was not clear whether the deposit accumulated naturally or was deliberate fill. If it was natural the river conditions had obviously changed radically since the fine white silt [AJ22] was deposited. It is possible that the river had become oxygen deficient through heavy pollution. In the 1870s Alfred Smee and other Wandle side land owners sued the Croydon Rural Sanitary Authority because of the polluted state of the river.¹⁷

The wall along the south side of the lake was also exposed in 1990-1 when a pond was dug as part of flood alleviation work. The recording was done in a watching brief under difficult conditions. Between one and three courses of the lake side wall

¹⁷ Smee 1872 p31-2, Crimp 1894 p191

survived over a distance of at least 30 m. Some sections of the wall had tipped over northwards into the bed of the former lake.

In June 1989 a very clear scorch mark appeared on the grass on the north side of the Wandle (figure 28). At the east end, close to the site of the former cascade, it was 17.5 m from the river.



Figure 27. The southern lakeside wall exposed during flood alleviation work in 1990.



Figure 28. Scorch mark on the grass on the north side of the river probably marking the walk along the north side of the east lake, June 1989.

There was a cascade at the eastern end of the lake. If it is assumed that the lake was symmetrical about the cascade the scorch mark would be a few metres south of the projected northern lake edge. It is therefore likely that the mark represents the northern edge of the lake with a gravelled walk similar to the south side. The lake would have been about 44 m wide.

The curved section of the eastern boundary wall from D to E in figure 17 appears to be more-or-less symmetrical with the cascade and lake. The east-west running section of wall C-D is similarly symmetrical with the southern boundary wall. Did it once continue further west or are the walls A-B and B-C survivors from some earlier arrangement?

4.7 The cascade

The east end of the garden was closed by a curving gravel bank. The river entered through the centre of this through two brick culverts and then flowed over a cascade. Each culvert was 1.25 m wide and about 0.78 m high. Photos from about 1900 show that the cascade was a fairly simple structure with two short drops followed by one longer one (figures 29, 30 and 31).

The culvert exits and part of the northern side of the structure are still visible (figure 31). The north wall was 4.45 m from the centre line between the two culverts suggesting that the original width of the cascade was about 8.9 m.



Figure 29. The cascade around 1900 (Sutton Local Studies collection).



Figure 30. The cascade on 15 January 1901.



Figure 31. The cascade culverts in 1987.

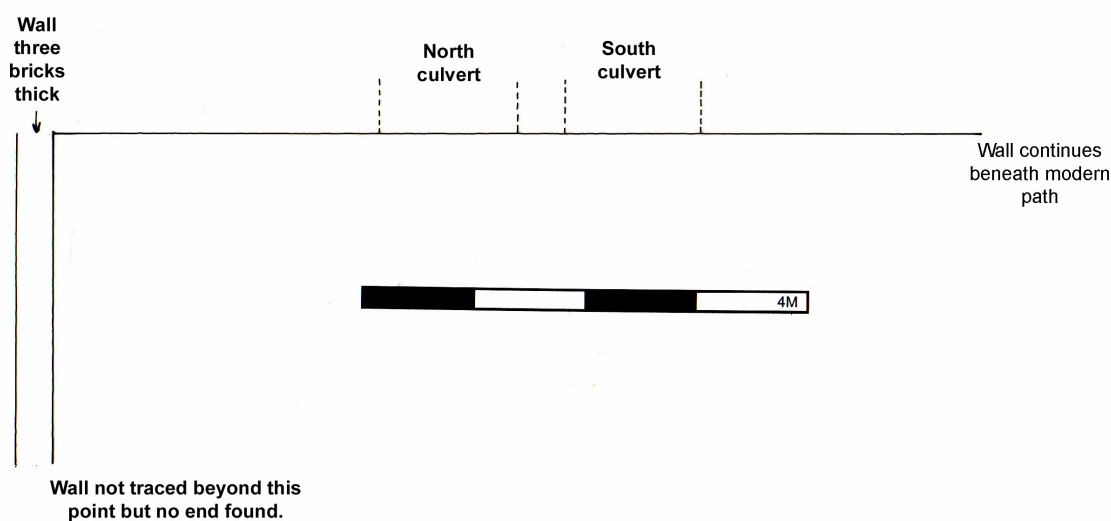


Figure 32. Plan of the cascade.

4.8 The east lake and the north watercourse

The material dumped in the watercourse in trench CD consisted of a lower layer of gravel followed by dark stiff soil and then more gravel. The dark soil layers may once have been the top soil from the area of the east lake. This would have been excavated and dumped first and would have been followed by the underlying gravel. If this interpretation is correct the watercourse seen in trench CD was filled as the east lake was constructed.

4.9 Trench CF

This was excavated in the south east corner of the east lawn in the position shown in figure 25. The trench was dug to investigate a suspected watercourse indicated by a hollow on the grass.

The earliest feature in the excavation was a deep watercourse (figure 33). This had a flat bottom about 0.9 m wide at 30.45 m OD about 1.48 m below the grass. The northeast side of the channel was a steep gravel slope with a vertical step between 31.03 m and 31.17 m OD.

Only the lower part of the south-east bank was exposed in the excavation. This consisted of irregular flints in a matrix of grey-brown silty sand. This contained three pieces of pottery of which two were identifiable. One was a rim shard from a Kingston ware jug, the other was a base angle shard possibly from Earlswood.

There was a small deposit of organic material on the bottom of the north side of the channel. Above this it was filled with fine light grey silt which was probably largely calcium carbonate precipitate as it reacted strongly with dilute hydrochloric acid. This had a total depth of 1.16 m and appeared to have been deposited over a very long period. The upper part contained soft orange brick including many overburnt pieces. Almost all of the brick had a smooth surface and was no earlier than the late seventeenth century. There was also some roof tile, mortar, a few pieces of Reigate and other stone and some nails and flat glass. The latest pottery consisted of a few scraps of tin glaze, a piece of post medieval redware and a shard from an early to mid-seventeenth century bellamine. There were four pieces of clay pipe stem and some bone and oyster and snail shells. The upper part of the layer had clearly been deposited in, or after, the seventeenth century.

These finds tailed away with depth and the lower part contained only one tiny scrap of probable brick. There was some peg-tile and a few pieces of Reigate stone. The latest pottery in the lower part was a large part of a Cheamware jug dating from the second half of the 14th century. There were 23 pieces of bone and some shells. There were three pieces of pottery at the base of the deposit none datable more closely than mid-12th to 14th century.

The northeast side of the channel sloped upwards to a gravel surface at around 31.61 m OD. The surface was rough and uneven with some projecting stones and no real sign of a smoothed or trodden surface which would be expected if it had formed a path. The layer contained a piece of Surrey whiteware cooking pot and some brick, tile and nails. The presence of the brick suggests that the layer was post medieval despite the lack of later pottery. The layer rested on another gravel deposit. The top of this was fairly smooth with small gravel and pea size mortar in brown earth. Below this the layer consisted of rounded and sub-angular gravel of mixed size up to 10 cm in a matrix of brown sand with much rounded chalk up to pea size. There was a small amount of mortar which was also rounded and had presumably been transported in water. A sample of 392 flints above 2 cm in size were examined. Sixty-two of these (16%) had mortar on them. There were twelve pieces of medieval pottery mostly of a central medieval (approximately thirteenth century) date. There were four pieces of Roman tile and a number of pieces of flat roof tile but there was no pipe stem, and only one tiny scrap of brick. It seems likely that the latter is contamination and that the layer dates from the thirteenth or early fourteenth century.

There was a thin layer of the channel silt across the top of the upper gravel deposit suggesting that the site became more or less flooded.

All these deposits were covered with a thin layer of broken, crushed and cut brick including pieces with mouldings that could be paralleled in the Orangery wall 15 m to the south. There was very little mortar in the layer and almost all the brick was

unmortared. This material appeared to be waste left by the workmen making the cut and rubbed brickwork for the Orangery.

The brick was overlaid by orange brown soil with occasional flint pebbles and a little brick. The latest finds were two pieces of glass of probable nineteenth century date. This was covered by top soil with many finds of late nineteenth or early to mid-twentieth century date.

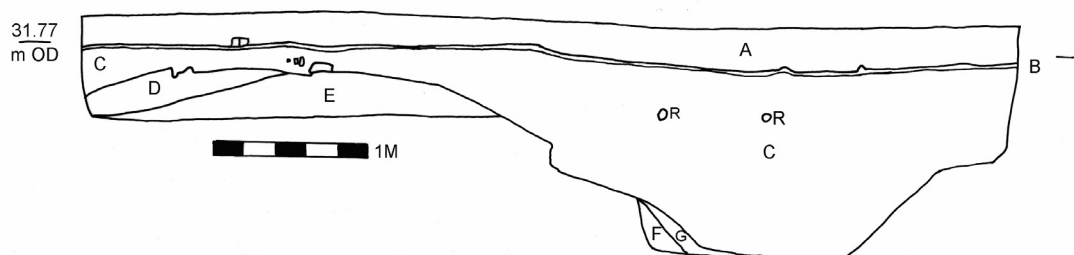


Figure 33. The east side of trench CF.

A = Brown top soil; B = Crushed brick; C = Light brown sandy silt; D = Gravel in brown earth matrix; E = Yellow sand with flint and patches of small chalk pebbles; F = Flint in Green sandy matrix (natural Thanet beds?); G = dark very humic silt; R = tree root.

4.10 Trench CK

Trench CK was excavated in 1993 towards on the northern side of the east lawn in the position shown in figure 25. It was intended to examine the edge of the suspected north watercourse but the trench turned out to be south of it.

The top soil, which contained much nineteenth century and later material rested on a layer of gravel which was probably deposited in the eighteenth or early nineteenth century. This was underlain by a further layer of soil which contained some post medieval material. Below this there was a spread of flint and chalk with a good deal of peg tile and a very small area of rammed chalk floor. This is very tentatively interpreted as the remains of a building with flint and earth walls or footings and a tile roof. The associated pottery suggests a provisional date in the late twelfth or early thirteenth century. The underlying deposits consisted of gravel and chalk marl which appeared to be natural.

4.11 Trenches CM and CN

This pair of trenches were excavated in the centre of the east lawn in 1995 and 1996. The two trenches were only 1 m apart, on the centre line of the house, CN being 69.98 m from the east front (figure 25). Trench CM was 3 m square and was dug to examine a rubble deposit which had been detected by augering. The excavation produced a substantial amount of rubble which appeared to have come from a garden related structure so a second trench, CN, was dug on the west side of the first one in the hope of finding the foundations of the structure in situ. This was 4 m north-south by 5 m east-west.

4.11.1 The stratigraphy

The stratigraphy of the two trenches was similar. In both trenches the topsoil rested on patches of gravelly soil, which was in turn underlain by a mass of densely packed

broken chalk and flint about 0.3 m thick. This was obviously the foundation of a path or walk which, in a dry summer, can be traced as a parch mark on the grass. The mark is about 9 m wide and runs eastwards across the garden on the centre line of the east front of the house and must have been part of the eighteenth century garden.

In both trenches the chalk foundation rested on several layers of dumped material which in turn rested on gravel. In trench CM the dumped material could be divided into four broad groups. From top to bottom these were:

- Layers [CM8], [CM9], [CM10] and [CM13] the main components of which were broken mortar, flint with mortar on it, orange clay with some chalk, brick and other rubble. There were deep ruts across the top of these deposits, presumably made by the carts used to transport and dump the material.
- Layer [CM11] which consisted of loosely bound mortar, with large lumps of mortared flint, some tile and occasional brick. This material probably came from a demolished garden structure and is described below.
- Layer [CM14] which consisted of a thin deposit of dark brown soil with many well rounded flint pebbles, some sub-angular flint and occasional brick.
- Layer [CM15] which consisted of broken mortar with much brick, tile, chalk, flint and Reigate stone. There was a pocket of broken stone towards the west side. This consisted of small pieces of Reigate and occasional oolitic limestone. Many pieces had fragments of Tudor mouldings. There were also a few fragments of the window mouldings used on the early eighteenth century house.

These deposits rested on layer [CM16] that consisted of rounded gravel in a stiff dark silty matrix – probably the bed of a pond.

The upper part of trench CN had the same general stratigraphic sequence as CM, with soil, gravel and a densely packed chalk track foundation. The chalk rested on a layer of orange clay with some chalk and flint. The clay was absent from a strip about 0.5 m wide along the north side of the trench where it was replaced by dark brown soil. Elsewhere there were three layers below this: [CN14] that consisted of loose rubble with chalk, brick, broken mortar, Reigate stone and some flint and [CN12] and [CN13] that both consisted of grey-green sand and silty sand. All of these rested on dark silty gravel which appears to have formed the bottom of a pond or stream as in trench CM.

Any cut through the chalk track foundation would have been easily identified so the material below it was exceptionally well sealed. The dating of the deposits below the chalk rests on the following:

- It was sealed by the chalk foundation which ran along the axis of the early eighteenth century garden.
- Layer [CM15] contained many small fragments of Reigate stone. Some had Tudor mouldings on them and a few pieces were scraps from the early eighteenth century window mouldings. This material was most likely mason's waste generated when the house was refaced around 1710-12 (see section 14.2 below).
- There were no finds that need be later than the early eighteenth century.

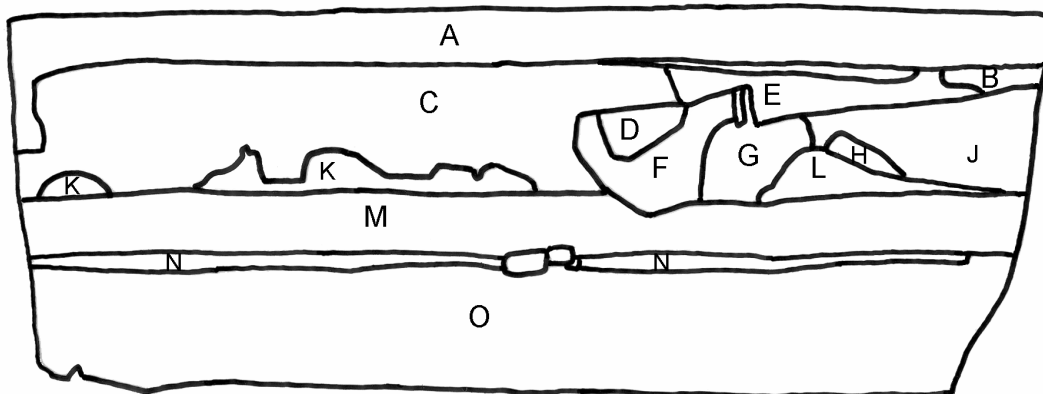


Figure 34. Section drawing of trench CM.

A	Dark brown soil.	H	Small broken chalk in medium brown soil.
B	Small gravel	J	Broken chalk in sparse grey-brown matrix. Occasional flint.
C	Broken chalk in sparse grey-brown matrix. Occasional flint.	K	Orange clay with scraps of chalk.
D	Crushed chalk in sparse grey and light brown matrix.	L	Medium brown soil with chalk fragments.
E	Broken chalk in brown soil. Occasional flint.	M	Flint, chalk and mortar including rubble from demolished garden structure.
F	Broken chalk – very little earth.	N	Brown soil.
G	Crushed chalk in sparse grey to light brown matrix.	O	Rubble, Reigate stone, brick, chalk, tile.

4.11.2 The garden related rubble from trenches CM and CN

The material from the upper rubble deposit [CM11] consisted of mortar, chalk and flint with peg tile, some Reigate stone, Kentish rag stone and occasional brick.

There were several types of mortar. The most common type was white and exceptionally fine incorporating a small amount of small chalk and flint. The other mortars contained more broken chalk and flint and often used coarser brown sand.

Apart from the mortar, the greater part of the material consisted of flint and chalk. Much of the flint was large and knobbly with an intact cortex and, in some cases, attached chalk. It had clearly come from a quarry rather than river gravel.

A high proportion of the peg tile had mortar on both the surfaces and fractures which showed that broken tile had been used in a mortared structure rather than on a roof. A number of broken pieces were found embedded in mortar sometimes with several fragments forming a rough course. In one case the ‘course’ was at least three tiles thick.

The deposit also contained Reigate stone and Kentish rag. Two pieces of Reigate stone were of particular interest. One had a U shaped slot in it that could have held a lead water pipe with an external diameter of about 18 mm. The other had a handle-like shape that must have come from a weathered high relief carving.

Unfortunately there is very little evidence for the surface finish of the structure. The Reigate stone 'handle' hints at the use of high relief carving. There were also a number of pieces of coarse yellow ceramic several of which were encrusted with hard grey limescale.¹⁸ The rubble contained very little brick and no moulded stone from windows or other building fenestration.

Many pieces of rubble had patches of limescale of varied colour including yellow, white, light grey and occasionally dark grey and brown. The presence of limescale showed that the rubble had been part of a wet structure such as a grotto or fountain. Much of the limescale had been deposited in cracks showing that the structure was in a very poor state when it was demolished. In some cases yellow calcite overlays white suggesting that organic material was becoming increasingly common as the structure grew older. This would be consistent with the structure not being cleaned of weeds as it gradually decayed.

The finds from below the chalk track foundation in trench CN included part of a slab of grey marble, a piece of pink granite, a piece of pink marble with a squared face and two pieces of tropical coral. The marble was covered with limescale and, again, had evidently been part of a wet structure.

4.11.3 Spotty tin glazed tile

Trenches CM and CN produced four pieces of tile decorated with spotted white, green, yellow, ochre and dark brown tin glaze (figure 35). The fabric is unusually fine, pale brown with occasional sparse quartz and grog-like grains that range in colour from pale red to dark purple. The original thickness was probably 16 mm but the backs of most of the pieces have been rubbed, presumably to reduce them to a desired thickness. The largest piece is 9 mm thick along one edge and thickens to 13 mm. At fifteen times magnification parts of the surface look smooth and worn and a few small areas of glaze worn through. Near the longest edge, parts of the glaze are covered with a thin discontinuous layer of white material, probably limescale. This suggests that the tiles were used in a wet garden feature but they are more strongly associated with rubble from the house than the garden. The function and date of the tiles are uncertain although their presence below the foundations of the central track shows that they predate the 1710-12 rebuilding.

¹⁸ Yellow stock brick is uncommon in the Beddington area before the 19th century.



Figure 35. Spotty tin glazed tile find <6> from [CN14]. Background is 2mm graph paper.

5 THE ORANGERY

The southern edge of the western end of the central garden is bounded by a high ornamental brick wall which was the north side of an Orangery.

5.1 The history of the Orangery

The Beddington Orangery is generally thought to have been developed from trees that were bought by Sir Francis Carew when he visited Paris in 1561-2 but the earliest unequivocal mention of a building is on 10 January 1608 when a man called Sadler was paid for half a day spent sweeping the snow off it.¹⁹

In May 1611 a gentleman accompanying the Landgraf Otto of Hessen-Kassel visited Beddington and his diary entry mentions:

a great number of figgs, oranges, lemons - all trees which were bearing fruit at the time. Item Taxum, Laurocerasum, Pomum Adami, cuius folia melissi odorem fere habent. Nerion vel Rododendron with beautiful red flowers, it is, however, poisonous.²⁰

The oranges were clearly part of a larger collection of southern European plants (see section 11.16 below).

Sir Francis Carew died on 16 May 1611 and the house and garden passed to Sir Nicholas Throckmorton who took the name Carew. He was a son of Sir Francis's sister Ann and Sir Nicholas Throckmorton. He owned Beddington until his death in 1644. His son Sir Francis backed the Royalist side in the civil war and was heavily fined when they lost.

¹⁹ SHC G6/3/1

²⁰ Quoted from Strong 1990.

He also lost much money through gambling. He died in April 1649 and by 1650 the house, park and garden had been leased to the Earl of Warwick who submitted accounts for various repairs that he had carried out including work on the orange house:

Jan: 14 th 1652 for fo[?] severall bills for re= pairs of the old Stoves in the orange house & the repairs of the fountain house as may appear by their bills	7-0-0
Paid Thom. ^{Nich} Constable ye Carpenter for building of a new orange house Jan 18 th 1652	60-0-0
[Marginal note says: Allowed to Nich Constable for repayr ^s of the orange house 60l out of my Lds rent by M ^r Raleigh] For two new Iron Stoves for the said orange house being made so much bigger than it was before that the old stoves would not serve the turn	15-0-0
[Marginal note here says: 2 new stoves sett up by my Ld but of little use] ²¹	

The Orangery was mentioned by several writers in the second half of the seventeenth century. The first is John Evelyn whose diary entry for 27 September 1658 notes:

To Beddington that antient Seate of the Carews, a faire old hall, but a scambling house: famous for the first Orange garden of England, being now over-growne trees, & planted in the ground, & secured in winter with a wooden tabernacle & stoves: This seate is rarely watered, and lying low invirond with sweet pastures &c: The pomegranads beare here: here is also a fine parke.

This was followed by an otherwise unknown J Gibson in 1691:

Beddington Garden at present in the hands of the duke of Norfolk, but belonging to the family of Carew, has in it the best orangery in England. The orange and lemon trees there grow in the ground, and have done so near one hundred years, as the gardener, an aged man, said he believed. There are a great number of them, the house wherein they are being above two hundred feet long; they are most of them thirteen feet high, and very full of fruit, the gardener not having taken off so many flowers this last summer as usually others do. He said, he gathered off them at least ten thousand oranges this last year. The heir of the family being but about five years of age, the trustees take care of the oranges, and this year they built a new house over them, but they look not well for want of trimming. The rest of the garden is all out of order, the orangery being the gardener's chief care; but it is capable of being made one of the best gardens in England, the soil being very agreeable, and a clear silver stream running through it.²²

²¹ SRO 2152/1 p13.

²² Hamilton 1794

The 1695 edition of Camden's *Britannia* says:

To the north-east is Beddington, where not only the orchards and gardens in general (as our Author has observ'd) but particularly its Orange-trees, deserve our mention. They have now been growing there more than a hundred years, and are planted in the open ground, under a moveable Covert during the winter months. They were the first that were brought into England by a Knight of that noble family; who deserves no less commendation than Lucullus met with for bringing cherry and filbert trees out of Pontus into Italy: for which we find him celebrated by Pliny and others.²³

Evelyn visited the garden again on 20 September 1700:

I went to Bedington, the antient seate of the Carews formerly & in my remembrance, a noble old structure, capacious, & in forme of the buildings of the Age in Hen:8 & Q. Eliz: (time) & a proper for the old English hospitality, but now decaying with the house its selfe, heretofore adorned with ample Gardens, & the first Orange trees that ever were seene in England, planted in the open ground, & secured in Winter onely by a Tabernacle of boards, & stoves, removable in summer; thus standing 120 yeares large & goodly Trees & laden with fruite, but now in decay as well as the Grotts & other curiosities, cabinets and fountaines in the house & abroad, thro the debauchery & negligence of the Heires, it being now fallen to a child under age, & onely kept by a servant or two from utter delapidation. The Estate & Parke about it also in decay: the negligence of a few years, ruining the elegances of many.²⁴

These accounts tell a fairly consistent story. The orange trees were planted in the ground and were covered in the winter by a wooden shed heated with stoves. Gibson says that the building was over 200 ft (60.96 m) long and that the trees were 13 ft (3.96 m) high. Gibson and Evelyn both say that the garden was in poor repair at the end of the seventeenth century. This fits well with the family history. Sir Francis Carew (d.1649) was followed after a minority by his son Nicholas who died in 1687. His son Francis died just over two years later in September 1689 leaving a child heir, Nicholas (later first baronet), who did not come of age until 1707. In the 18 year minority there were disputes about the custody of the estate and it seems likely that little was spent on maintenance.

The timber Orangery seems to have survived into the early eighteenth century as it is mentioned in Aubrey's *History of Surrey* which was published in 1718:

The house ... having before it neat Gardens, not yet finished, with several canals, and orchard; but what more particularly deserves our notice, is the fine Orangerie, where are several orange trees, (transplanted from the warmer breezes of Italian air, into our more inclement climate) planted in the open ground, where they have throve to admiration for above a whole century; but are preserved, during the winter season, under a moveable covert. They were brought from Italy

²³ p165.

²⁴ *Diary* 20 September 1700

by Sir Francis Carew, Knt. (who built the old Mansion House) and it was the first attempt of this kind that we here of.²⁵

John Aubrey collected material for a history of Surrey but the work was left incomplete when he died in 1697. The surviving manuscript in the Bodlian Library does not contain any Beddington material so this must have been assembled by Richard Rawlinson who filled the gaps in Aubrey's manuscript and edited it for publication. Rawlinson is known to have visited Beddington to collect material in May 1717.²⁶ His account contains information about the garden not known from other sources so it seems likely that it was based on direct observation.

The wooden Orangery is also mentioned in Colen Campbell's *Vitruvius Britannicus* (1717)²⁷ and John Macky's *A journey through England* (1732).²⁸

The subsequent history of the Orangery is heavily dependent on the various editions of Defoe's *Tour*. The first edition, published in 1724 still refers to the wooden orange house:

the orange trees continue, and are indeed wounderful; they are the only standard orange trees in England, and have moving houses to cover them in winter; they are loaded with fruit in the summer, and the gardeners told us, they have stood in the garden where they now grow above 80 years.²⁹

The 1738 edition more or less repeats this:

The Orange-trees continue, and are the only ones in England that grow in the natural Ground: They had moving Houses to shelter them in the winter from the Inclemencies of our Climate; and are loaded with Fruit in summer The Gardeners told us, that they have stood in the Ground where they now grow, near 100 Years.³⁰

The 1742 edition also repeats the previous one³¹ but the 1748 edition tells a different story:

The Orange-trees continue, and are the only ones in this Country, which have been, for any Number of Years, growing in the natural Ground. They had moving Houses to shelter them in the Winter from the Inclemencies of our Climate; but a few Years since, the Owner was at the Expencc of erecting a fine Greenhouse, with Sashes in Front; the Top of the House to take off in Summer: since which time the Trees have been constantly decaying; for, standing as it were in a narrow Alley, between two Walls, when the Top is taken away, the Current of Air is so great, as to Break the Branches, and prevent the Growth of

²⁵ Aubrey 1718 v.2 p159-160

²⁶ Enright 1956.

²⁷ Cambell 1717 vol.2 p2.

²⁸ Macky 1732 p137-8.

²⁹ Defoe 1724 v.1 p.158

³⁰ Defoe 1738 v1 p231-2

³¹ Defoe 1742 v1 p224

the Trees. They have stood in the Ground, where they now grow, above an hundred Years.³²

This is repeated in the 1753 edition³³ but the 1762 edition says that the trees had died:

The orange-trees, which were formerly growing here in the open ground are now dead. They had moving houses to shelter them in winter from the inclemencies of our climate; but a few year since, the owner was at the expense of erecting a fine greenhouse, with sashes in front; the top of the house to take off in summer: since which time the trees have been constantly decaying; for, standing as it were in a narrow alley, between two walls, when the top is taken away, the current of air is so great, as to break the branches, and prevent the growth of the trees. They stood in the ground above 100 years, and produced great quantities of fruit.³⁴

This is repeated in the 1769 and 1778 editions.³⁵

This suggests that the brick Orangery was created by Nicholas Carew 2nd baronet who owned the house from his majority in 1741 to his death in 1762. This is however contradicted by Lyson's History of Surrey which says that the trees died in the winter of 1739-40.³⁶ The first baronet, also seems a more likely builder as he is known to have made extensive changes to both house and garden. He died in 1727, probably in deep financial trouble (see section 14.1 below). His son was still a minor so the estate was run by trustees and it seems unlikely that they carried out any major building work.

The Second Baronet died in 1762. His probate inventory mentions a 'Summer house and the Room at the End of the Green house in the Garden' which contained:

A brass front wind Stove with iron cheeks and back and fendor
poker tongs and brush six Windsor painted Chairs and a Cussion a
canvas floor cloth painted black and white check &c a bell and
mathematical pull - a iron harth and fendor rivitted. Eight
Windsor painted chairs 3-6- -³⁷

This might refer to the room at the eastern end of the Orangery which survived as a shed into the twentieth century.

By 1820 the Orangery had been demolished leaving only the north wall.³⁸

The Carew estates were sold up in 1859 and the house and grounds were acquired by the Lambeth Female Orphanage Asylum.

³² Defoe 1748 v.1 p.255

³³ Defoe 1753 v1 p237-8

³⁴ Defoe 1762 v1 p240

³⁵ Defoe 1769 v1 p252-3 and 1778 v1 p217-8

³⁶ Lysons 1792 vol. 1 p57.

³⁷ SHC 281/3/1

³⁸ Enclosure award map, 1820.

The first edition 25 inch Ordnance Survey map of 1868 shows a building against the south side of the eastern end of the wall.

The Orphanage minute book contains two interesting references to the Orangery.³⁹ On 12 November 1874 the 'Ctee directed that the roof of the Orangery should be converted ... so as to form a lean to'. This can only refer to the building at the east end of the wall, parts of which are still standing. On 22 February 1877 the minute book records:

Mr Currey's plan for altering the shed (the old orange house) and adding thereto to provide stabling for one horse and room for drying and storing earth for closets etc. was approved. Mr Dawson's estimate for the work, which was ordered to be done, at 114-10-0 was accepted.

This probably marks the construction of the second block of building shown on the 1897 Ordnance Survey map to the west of the one on the 1868 map.

The 1913, 1933 and 1941 Ordnance Survey maps show the same details as the 1896 map.

The top of the wall appears to have suffered some damage in the Second World War when a flying bomb landed on the Orchard Works site a short distance to the east. When the wall was inspected by FH Healey of the London County Council he said:

I understand that a V1 dropped not far away & the blast may have moved some of the capping. There is also a certain amount of disturbance of the ornate brickwork around the doorway in the eastern most bay. Some bricks have dropped out and many are loose and ready to fall.⁴⁰

In the last 50 years the wall has suffered from vandalism and much of the architectural detail has been severely damaged.

5.2 The structure

5.2.1 The north side

The north side of the wall is divided into nine bays by ten pilasters of rubbed brick (figures 36, 37 and 38).⁴¹ The pilasters are 0.75 m wide above the base and each bay is 5.44 m wide from pilaster edge to pilaster edge apart from the east most which is 7.3 m. The total length is 59.37 m. The pilaster heads were linked by a cornice below the top of the wall. The bricks are laid in Flemish bond with many dark bricks between the pilasters although these are not placed in any particular pattern. Each bay is decorated with two blind round headed arches with prominent projecting 'keystones'. The arch heads and 'keystones' are of rubbed brick. A four brick high string course connects the shoulders of the arches across the bay. There is a plinth across the bottom of the bay about four courses above the ground.

³⁹ Sutton Archives D2/2/1.

⁴⁰ Manuscript report of a visit on 5 November 1948. The report was in the files of the London Division of English Heritage in March 1986.

⁴¹ The bays are numbered from the east end.

The eastern most bay is an exception as it is wider and there is a door in the centre which is surrounded by Doric pilasters with a pediment above (figure 37). These are made of rubbed brick. The door disappeared many years ago but is shown in a photograph dated 1951 and in a drawing in the Victoria County History.⁴² The door was rectangular and has eight panels formed by one vertical frame bar and three horizontal ones. There were a pair of small panels at the bottom, then a larger pair, a smaller pair and a larger pair. The semi-circular space above the door was filled by two wooden panels divided by a vertical bar. The panels had raised rectangular centres with the edges tapering towards the frame. It seems likely that the door was original.

There are two blind arches on either side of the door similar to the ones in the other bays. However, in this bay each arch contains a segmental headed blind window. When the fill of these was demolished by vandals in 1984 and 1988 they exposed holes for pegs to secure window frames, so the blockings were later additions.

The whole wall is in poor condition but enough survives to reconstruct the mouldings which are shown in the following figures.

The wall is capped with slabs which are a mixture of Portland stone and some artificial material. It seems likely that the latter dates from the repair of the wall after the flying bomb damage in the Second World War. The capping slopes southwards so the rain would have drained towards the inside of the Orangery.



Figure 36. The north side of the Orangery wall from the west end.

⁴² There is a copy of the photograph in the Sutton Local Studies Collection. The drawing is in The Surrey VCH vol. 4 p172.

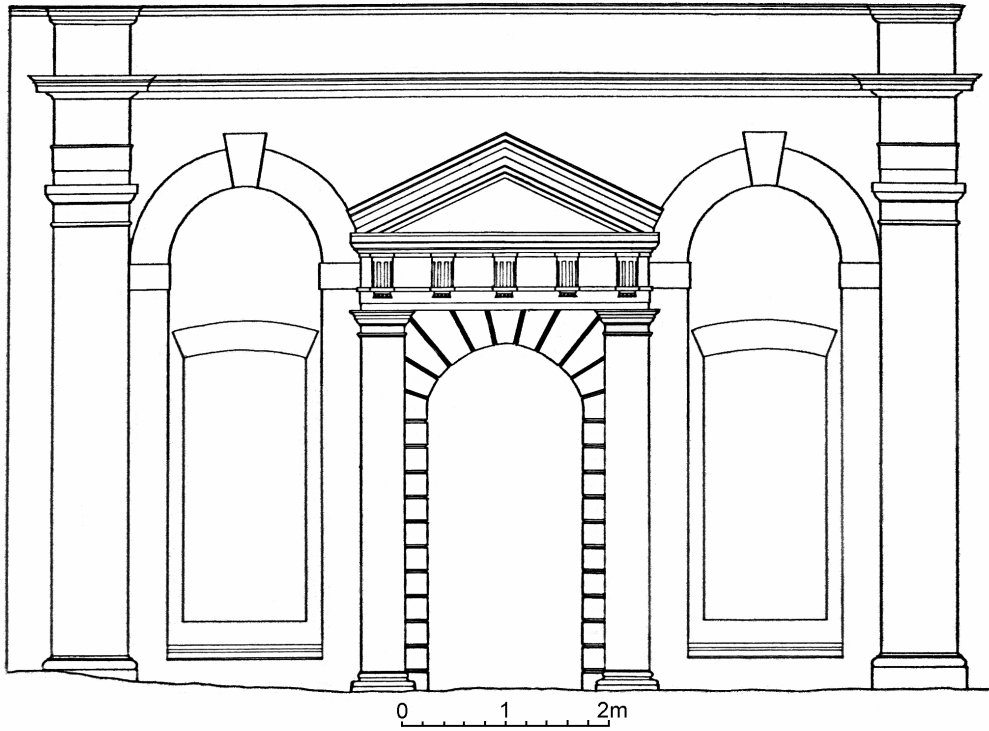


Figure 37. Reconstruction drawing of the Orangery wall bay 1.

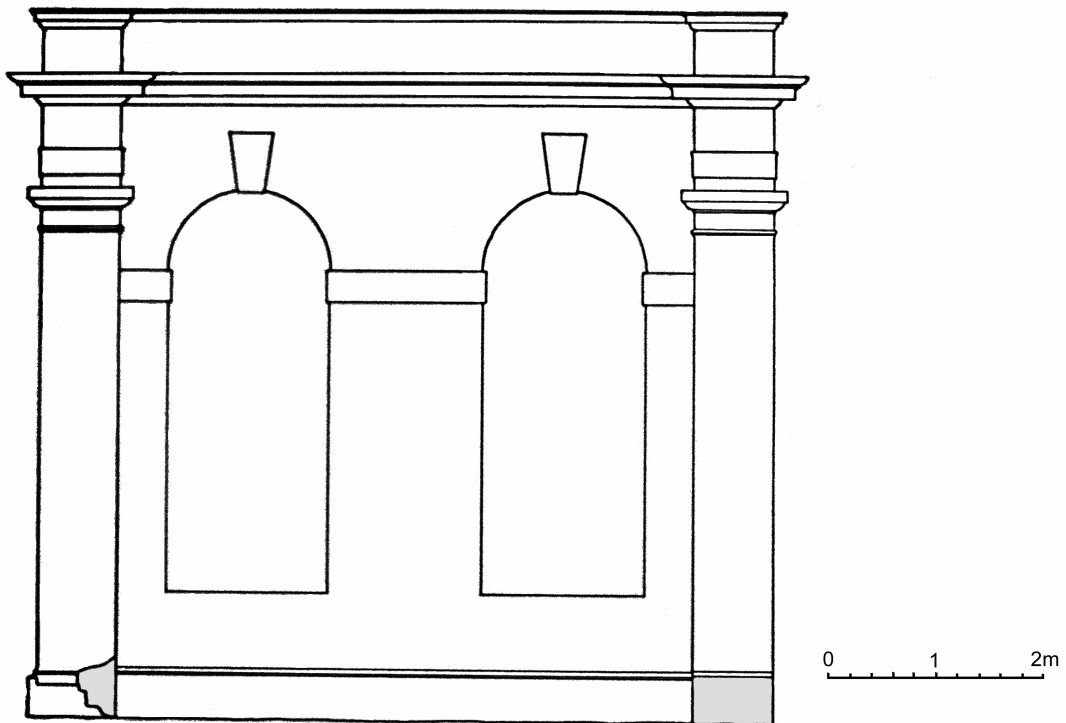


Figure 38: The Orangery wall bay 7. The grey areas are damage or poor repairs.

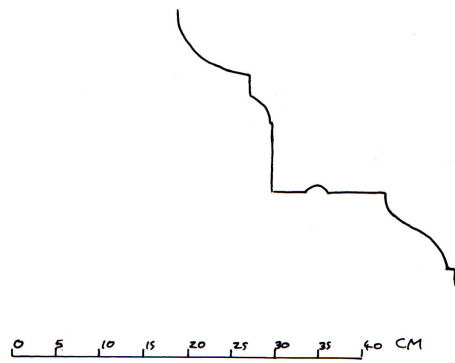


Figure 39. The Orangery wall bay 7, profile of the cornice.

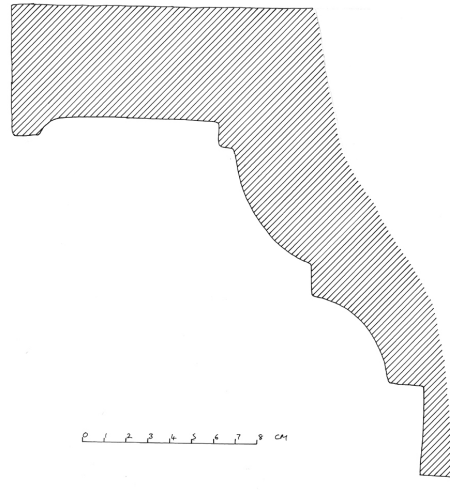


Figure 40. The Orangery wall bay 1, the moulding on the bottom of the pediment over the door.

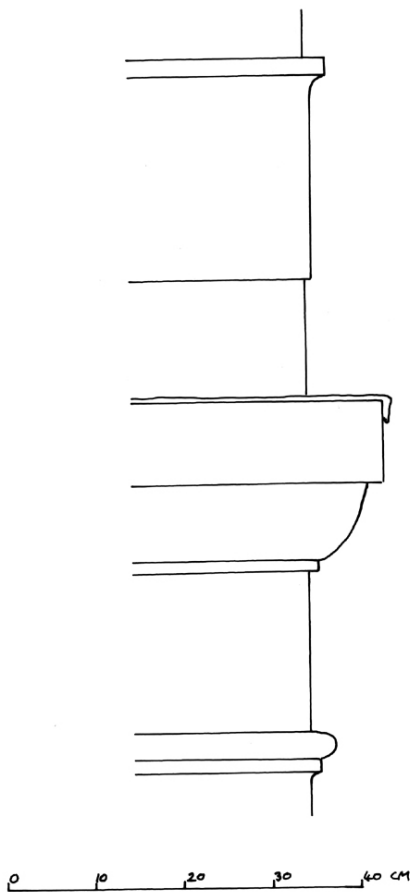


Figure 41. The Orangery wall, capital moulding on pilaster 1.

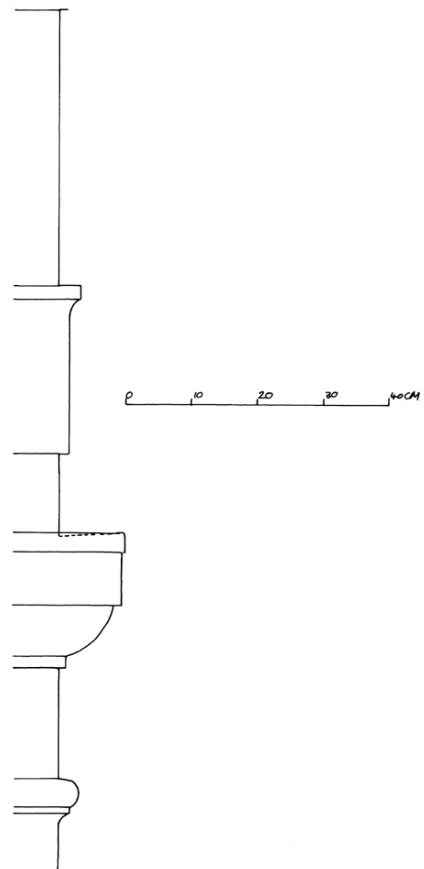


Figure 42. The Orangery wall, the moulding at the top of pilaster 7.



Figure 43. The top of pilaster 2.



Figure 44. The east end of the wall.



Figure 45. The south side of the east end of the wall on 10 January 1988. The blocking of the western window has been demolished.



Figure 46. The head of the western window.



Figure 47. East side of the western window.

The western window on 10 January 1988 after the blocking had been removed by vandals.



Figure 48. Head of the western window.



Figure 49. The fireplace and flue in the north-west corner of the building at the east end of the wall.



Figure 50. Looking west along the top of the Orangery wall from the second pilaster, 1985.

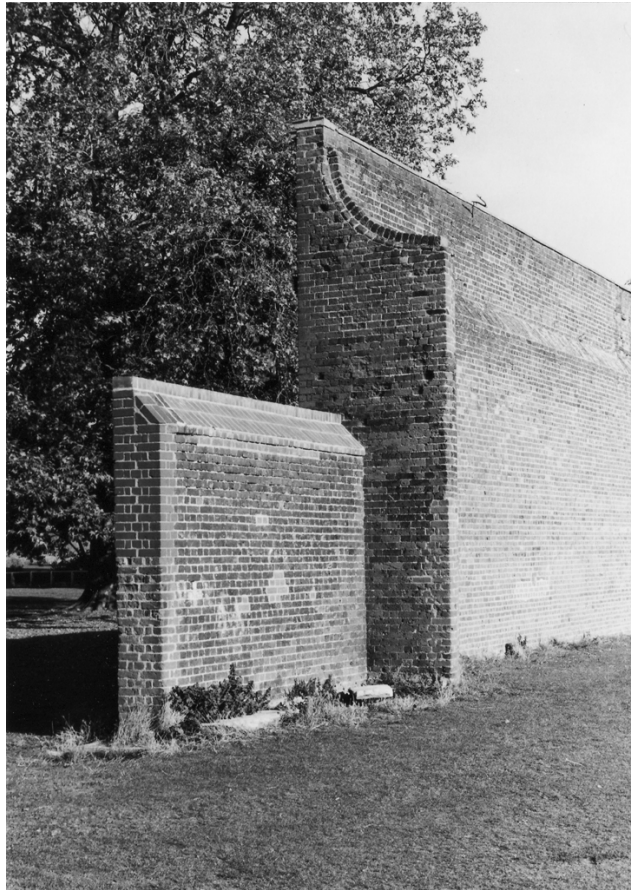


Figure 51. The west end of the Orangery wall and the stub wall.

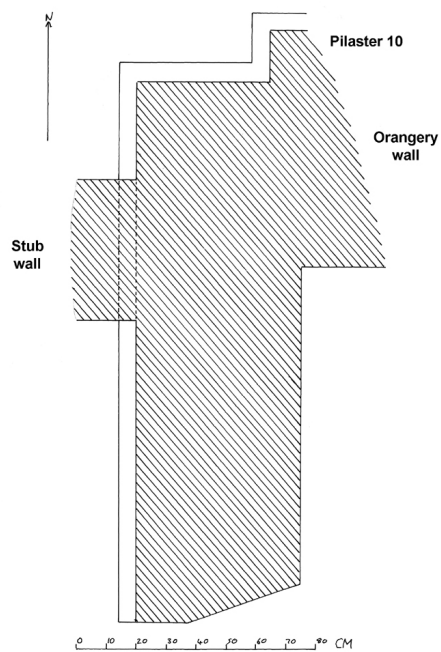


Figure 52. Plan of the west end of the Orangery wall.

5.2.2 The south side

The south side is essentially a plain brick wall which rises to a height of 4.7 m. Above this the wall slopes inwards and then rises vertically to stone capping about 6.7 m above the ground. The bricks are laid in English bond. There is a short southward projecting stub at the western end (figure 52). This has a bevelled end which was once the side of a window showing that the stub is a surviving part of the western wall of the building.

There is a blocked rectangular opening immediately to the east of the stub wall. The top is formed by a slab 0.07 m thick 4.48 m above ground level and two brick courses below the sloping section of the wall. There is a square opening in the wall capping above this with a shaft leading down through the wall. It seems likely that this was a flue which took the fumes from a stove around the Orangery's temporary roof.

At the end of the nineteenth century there were two buildings against the eastern end of the wall. The eastern most building appears on the 1820 map. It probably originated as a room at the eastern end of the Orangery. The elaborate door in the centre of bay one opened into it and it would have been lit by the two windows to the left and right of the door which are now blocked.

The building's eastern wall (figure 44) was made of soft red brick and is obviously part of the original brick Orangery. It is at an angle to the main Orangery wall and respects the alignment of the north-south section of the river on the northern side of the garden. There is a tall blind window on the outside. The west side of the room was marked by a stub of wall which projected 2.46 m south of the main wall. There was a fireplace set into the northwest corner of the room with an opening above it which ran into the wall and upwards to an opening in the capping (figure 49 and 50). The room had a floor of blue bricks. There are traces of a first or mezzanine floor on the north and east walls above the window heads. This must have been the room converted into 'stabling for one horse and room for drying and storing earth for closets' in or about 1877.

The second structure was a lean-to which was built against the main Orangery wall to the west of the first building. The Ordnance Survey maps show that it was erected between 1868 and 1897. It has now gone, leaving little trace apart from one blue bull-nosed brick projecting from the wall.

5.3 Excavations on the north side wall, 1998

The excavations aimed to:

- Examine the footings of north side of the Orangery wall to see if there was any evidence for its Tudor predecessor or an earlier garden wall.
- Examine the relationship between the foundations of the Orangery wall and the eighteenth century 'stub wall' which runs from its western end.
- Look for a water course which appears to be shown running along the north side of the Orangery wall on the first edition one inch Ordnance Survey map.

5.3.1 Location of the trenches

Three trenches were dug against the north side of the Orangery wall.

Trench CP was 2 m north - south by 0.5 m east - west. The east side of it was 6.90 m from the east end of the Orangery wall (figure 25).

Trench CQ was 2 m north - south by 0.5 m east - west. The east side of it was 13.1 m from the east end of the Orangery wall (figure 25).

Trench CR was in the corner between the west end of the Orangery wall and the stub wall. The trench was rather irregular about 0.5 m north - south by 0.65 m east - west. The south side was formed by the stub wall and the east side by the Orangery wall.

5.3.2 The stratigraphy of trench CP

The contexts in the upper part of the trench contained finds which showed that they had been deposited or disturbed by cultivation after c.1850. Layer [CP7] below these consisted of fairly hard light brown sandy soil with flecks of chalk and occasional flint pebbles. There were many pieces of clear window glass at the south end close to the Orangery wall. It was of slightly blue green, lightly patinated glass which was mostly between 1.3 mm and 1.7 mm thick although some was 1 mm and some 2 mm thick. The latest objects in layer [CP7] were two joining sherds of white straight sided stoneware mug or jar decorated with low raised bands which was probably Staffordshire, c.1720-70. However, the layer also contained pink mortar, slate and coal shale. The last two are common in nineteenth century deposits but are rare at Beddington in the eighteenth century which suggests that the layer may have been deposited or perhaps cultivated in the nineteenth century.

Layer [CP7] rested on layer [CP10] which consisted of light brown sandy soil with more chalk and small broken brick than the overlying layer and about 10% sub-angular flint. The layer was mostly loose and soft although there were some clayey patches. The deposit contained rough Tudor-type brick, peg tile, Reigate stone and bone.

Layer [CP10] rested on layers [CP11], [CP12] and [CP13] which occupied the floor of the trench from south to north. Contexts [CP11] and [CP12] nearest the Orangery wall were excavated together due to the lack of space. They consisted of light brown soil with large quantities of broken brick, chalk and mortar and occasional peg tile. One of the bricks had a rounded frog 33 mm wide and 11 mm deep coming to within 10 mm of the end of the brick.⁴³ It had doubtful traces of white calcite on it. There was unequivocal calcite on five other pieces of rubble.

Layer [CP13] at the north end of the trench consisted of rounded and sub-angular flint of mixed size up to 6 cm in a pale brown slightly green sandy matrix. There were many small flecks of chalk and a little larger chalk up to 2 cm in size. There were no finds.

Layer [CP13] and [CP11] and [CP12] rested on [CP14] which consisted of fine dark silt with tiny pieces of chalk and snail shells. The layer contained a mortared flint,

⁴³ Find CP <11>.

some pieces of peg tile and Reigate stone. Some of the latter was worked and most pieces were burnt and sooted and had yellow stain on the fracture. There were no closely datable finds.

Layer [CP14] rested on [CP15] which consisted of chalk and flint in fine dark silt. There were no finds.

Layers [CP11], [CP12] and [CP15] all rested on [CP16] which consisted of sand with small rounded chalk pebbles. When the top of the layer was cleaned there were several patches of fine dark brown silt which were initially thought to be stake holes. However, they changed shape on trowelling and appeared to be irregular inclusions. The main trench ended near the top of [CP16] but a small probe hole was dug down to 30.81 m OD. [CP16] became gravelly with depth but the gravel was still in a matrix of sand and chalk pebbles. There were no finds.

5.3.3 The stratigraphy of trench CQ

The upper two layers consisted of soil with finds of late nineteenth or early twentieth century date. Below them layer [CQ3] also consisted of soft medium brown soil with patches of rubble. There was some cut soft red brick which must have come from the Orangery wall but no other datable finds.

Layer [CQ3] rested on [CQ4] and [CQ5]. Layer [CQ5] formed a metre wide strip next to the Orangery wall while [CQ4] was away from the wall to the north. Layer [CQ5] overlaid [CQ4] which passed underneath it and covered the whole area of the trench.

Layer [CQ5] consisted of light brown sandy earth without any finds.

Layer [CQ4] consisted of brown earth with large lumps of brick, chalk and tile and a few pieces of Reigate stone. It contained eighteenth century type soft red brick with calcite on it. There was peg tile, some with calcite, some rather doubtful pieces of pantile and a piece of medieval floor tile, fragments of Reigate stone, some worked, some burnt and some with some yellow stain.

When [CQ4] had been removed a line of stone blocks was exposed as shown in figure 53. There were five main blocks, all of Reigate stone, forming a line along the west side of the trench and a number of small pieces of Reigate stone and chalk to the west and north of them [CQ5]. The deposit around them consisted of crushed chalk and earth [CQ6]. Two pieces of white ware were found in [CQ4] close to the line of Reigate stone blocks. The first <1> was on the top of the second block from the Orangery wall. It was from the base angle of a pot with a distinctive pale pink fabric with pink quartz. There were splashes of yellow glaze on the base and sides which had gone green around the edges of bubbles and defects and there were also prominent throwing ridges on the interior. The sherd had been slightly burnt and there was some soot on the bottom but it had not been heated enough to damage the glaze. The second piece <2> was found immediately east of the third block and level with the top. It is a wall sherd. The fabric was similar to <1> and with a splash of yellow glaze but no sign of heating. The fabric and glaze appears to be identical with an alembic top found in trench CF. The fabric is locally uncommon and it seems likely that they all came from a set of distilling equipment.

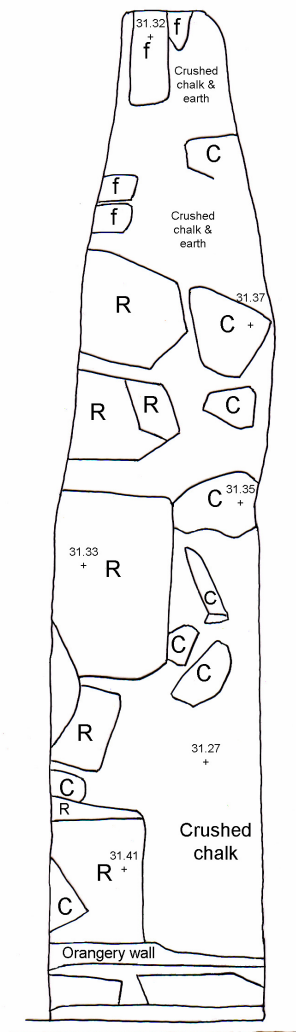


Figure 53. The stone on the bottom of trench CQ.
 C = chalk, f = flint, R = Reigate stone. Heights in m OD

5.3.4 The stratigraphy of trench CR

Layer [CR1] below the turf, consisted of rubble in brown soil including soft red brick, yellow stock brick, a London Brick Company Fletton, concrete, Reigate stone, chalk and some clay. There was modern window and bottle glass. [CR1] rested on [CR2] which consisted of very soft brown soil.

Layer [CR2] covered a small drain [CR3] (figure 54). The roof and floor of the drain consisted of peg tiles laid with their lengths across the channel. The walls consisted of two courses of brick stretchers. The drain had an internal width of 0.17 m and a height of 0.15 m. The bottom of the channel was at 31.46 m OD.

The drain was aligned at an angle of about 18 degrees to the end of the Orangery wall. The channel was inspected with a mirror. To the south it was blocked by an earth fall

after about 0.5 m. To the north the channel curved gently towards the east.⁴⁴ A tape was inserted to 3 m and the channel curved out of sight beyond this. There was a thin layer of earth and scraps of chalk on the channel floor.

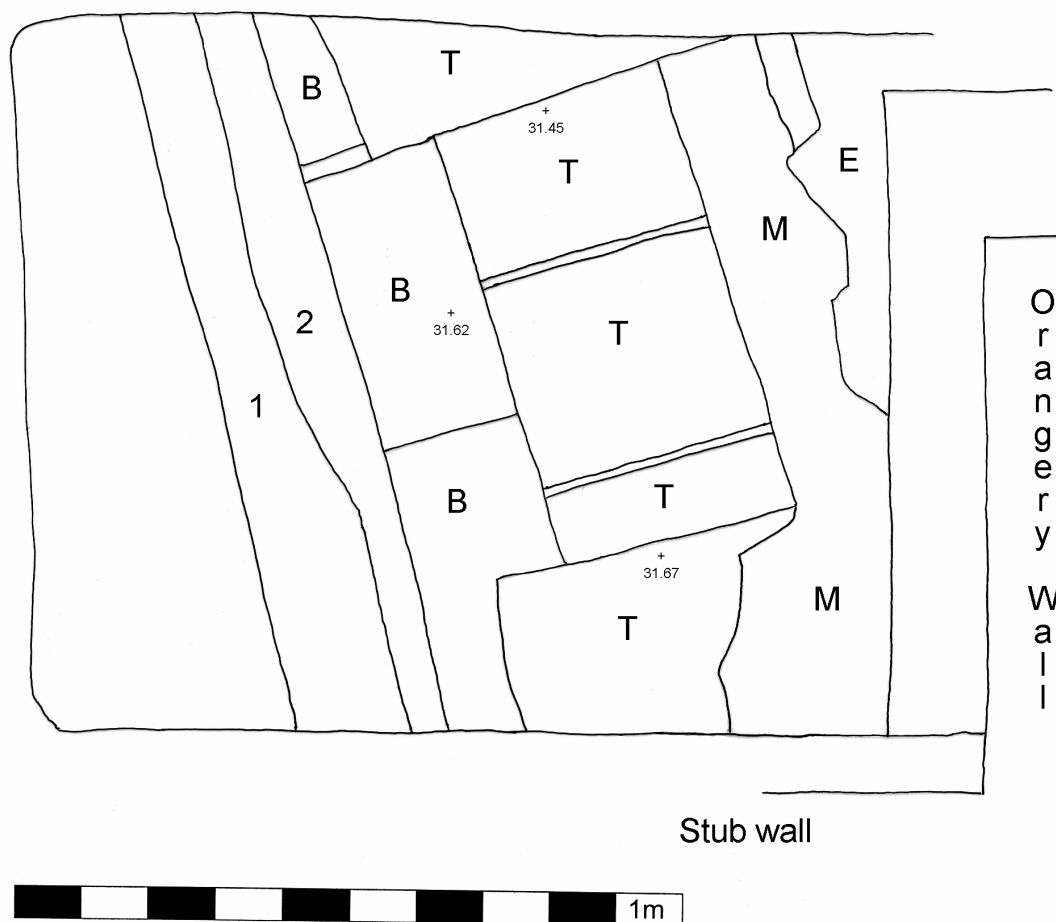


Figure 54. The top of the drain in trench CR.
 B = brick, E = earth, M = mortar, T = peg tile
 1 = Brown soil with occasional flecks of chalk
 2 = Slightly darker brown soil.
 Heights are in m OD. North at the top.

5.3.5 Discussion of trenches CP and CQ

These small trenches provided a very limited view of features and their context so that any conclusions must be of a tentative nature.

The earliest deposit in trench CP appears to represent the sand and gravel bed and the overlying silt of a pond or slow flowing watercourse.⁴⁵ The only finds were from the silt layer. These consisted of a mortared flint, a number of pieces of peg tile and Reigate stone including some worked pieces and some which were burnt and had yellow stain. The peg tile shows that the silt is medieval or later.

The silt appears to extend beneath the Orangery wall as it was found in an auger hole sunk near the fireplace on the south side of the wall. The top of the silt here was at

⁴⁴ The notes made on site say that it curved to the east but my recollection is that it bent westward.

⁴⁵ Layers [CP14] to [CP16].

about 31.99 m OD and the silty gravel was a further 0.9 m down at 31.09 m OD. The top of the silty gravel in the south end of CP was at 31.07 m OD which agrees with the height in the auger hole. The highest point on the silt in CP was at 31.34 m OD 0.25 m below the top in the auger hole. This suggests that the silt in CP was partly cut away.

A deep silt filled watercourse was found in trench CF to the north of CP. The top of the silt in this was at 31.61 m OD which was very close to the height of the top of the silt in the east lake (31.64 m OD). The silt in the CF watercourse and the east lake was pale brown and consisted of a mixture of calcium carbonate and fine sand and it must have had a very low organic content. This is very different from the dark silt in CP which suggests that the two features were unconnected.

The bottom of trench CQ was at about 31.3 m OD where there was a layer of stone and crushed chalk. It is not known if the silt layer extended under this.

Dark silt was also found in trench CJ in the south-east corner of the moat around the house. The top of the silt in CJ was at about 30.95 m OD 1.04 m below the top of the silt in the auger hole south of the Orangery wall.

At the north end of trench CP away from the wall the silt was overlaid by rounded and sub-angular flint in a pale brown slightly green sandy matrix [CP13]. This looks like material from the Thanet beds which was presumably dumped to fill the water feature. The deposits at the south end of the trench next to the Orangery wall ([CP11] and [CP12]) consisted of light brown soil with much broken brick, chalk and mortar. This must be the fill of the construction trench for the Orangery wall so the watercourse was filled before the wall was constructed. The rubble in the construction trench included a brick with a narrow semicircular frog.

In trench CQ the stone and chalk deposits were overlaid by brown soil with large lumps of brick, chalk tile and some Reigate stone. Some of the rubble had calcite on it. This appears to be the same as the fill of the Orangery wall construction trench in CP. The deposit of flint and greenish sand at the north end of CP was absent from CQ.

The sand and the fill of the Orangery wall construction trench were covered by a layer of light brown sandy soil.⁴⁶ This may be the same as the deposit which covered the Orangery wall construction rubble in trench CF. It must have been deposited to form the top soil in the early eighteenth century garden. In CP the upper part of the deposit contained part of a Staffordshire stoneware mug of c.1720-1770. The upper part of the deposit contained coal and a piece of pink mortar which may be signs of nineteenth century cultivation. The layer also contained a large amount of window glass, the significance of which is unclear.

The deposits in the upper part of CQ were similar to those in CP. The Orangery wall construction trench was covered with soil which contained some rubble including cut brick from the Orangery wall. This deposit was covered with soil, rubble and coal ash which contained nineteenth and twentieth century finds.

⁴⁶ Layers CP (7) and CP (10).

5.4 The footings of the Orangery wall

5.4.1 Trench CP

The wall footings in trench CP are shown in figures 55 and 56. The wall foundation widened by an offset was at 32.04 m OD about two courses of brick below the surface. There were 12 courses of brick below this with a total height of 0.92 m. The foundation widened by a further four irregularly spaced offsets of varying width as shown in drawing 55. The brick rested on broken chalk and mortar at 31.12 m OD. This went down a further 0.11 m and rested on dark silt. The brickwork above the top of the offset was tuck pointed. There was no pointing below this and the bricks were carelessly laid.

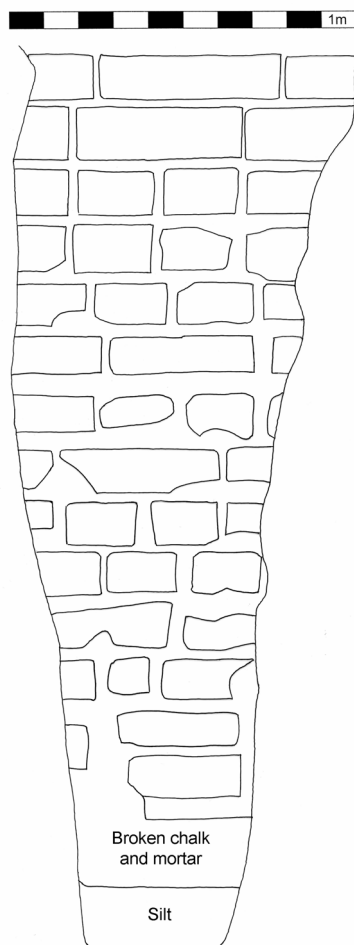


Figure 55. The foundations of the Orangery wall in trench CP.

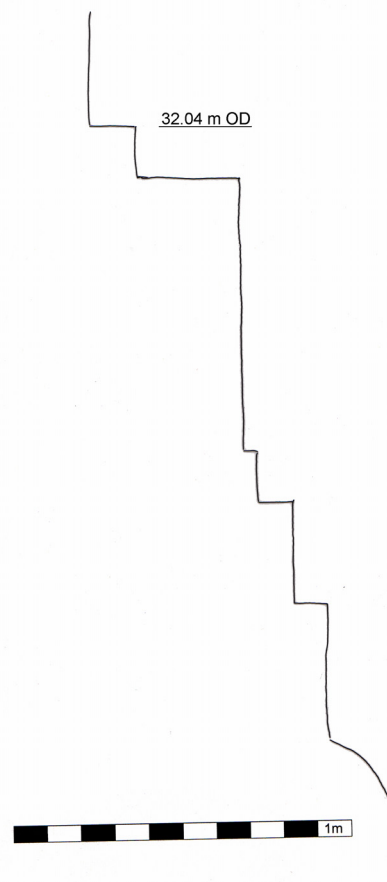


Figure 56. Section of the foundation of the Orangery wall in trench CP

5.4.2 Trench CQ

The foundation widened by an offset at 32.02 m OD two courses below ground level. There were mortar and brick impressions on the top of the offset which showed that it had originally been at least one course higher. There were seven courses of brick below the offset followed by a projecting course of mortar about half a brick thick. The top of this projection was at 31.43 m OD 0.59 m below the first offset. The top of the crushed chalk [CQ6] (see above) was at 31.29 m OD which was below the bottom of the foundation.

5.4.3 In trench CR

The trench exposed the foundations at the junction between the Orangery wall and the stub wall which runs west from it. It was intended to reveal the relationship between them. The drain [CR3] (see above) passed under the stub wall. There were seven courses of brick above the drain and there was then an offset which was close to ground level.

The stub wall bricks were firmly mortared to the top of the drain and looked contemporary with it. The drain was mortared to the Orangery wall. Above ground level the stub wall meets the Orangery wall in a butt joint.

On the west side of the drain a rough hole had been knocked through the foundation at some time in the past. The top of the break started in the off set course which was damaged. Below this the original foundation had gone and a soldier course of bricks has been inserted. This rested on three flints. Below this there was soft brown earth. There was no evidence for the date of the break.

5.4.4 Discussion of the foundations

In trench CP the Orangery wall foundation went down 12 courses below the first brick offset while there were only 7 in CQ. In CP the foundation widened by four additional offsets while there were none in CQ. This suggests that the builders of the wall were aware that the west end rested on the soft silts of a former watercourse and strengthened the foundations accordingly.

The drain [CR3] was mortared onto the Orangery wall and was below the stub wall which runs west from it. This suggests that the stub wall is later than the Orangery although the difference in date is probably slight as the bricks are very similar (see section 18). It was impossible to be certain about the point as the key part of the stub wall foundation had been destroyed in the past.

The brick and tile drain at the west end of the wall is most likely to have collected rain water from the roof. It may have emptied into culvert F53 which has been crawled from the culvert in the former moat around the house to a collapse close to the west end of the Orangery wall.

5.5 Trench CT south of the Orangery wall

5.5.1 The location of the trench

In 1999 a trench 7 m long from north to south by 2 m east to west was excavated against the south side of the Orangery wall. The west side of the trench was 19.37 m east of the stub wall on the south side of the west end of the wall.

5.5.2 The stratigraphy

The top layer [CT1] consisted of turf and top soil which covered the whole area of the trench. It rested on layers [CT2], [CT3], [CT4] and [CT5].

Layer [CT2] occupied the south end of the trench. It consisted of crushed brick, rounded and angular flint pebbles with occasional larger flint and stone. The top was level and appeared to be the surface of an east – west aligned track which can often be seen as a burn mark on the grass. The north edge of the track was defined by a line of

10 stone blocks of various sizes with some smaller stone.⁴⁷ Most was Portland stone with clear signs of reuse. There was some nineteenth or early twentieth century brick and tile at the west end of the layer. On the west side of the trench there was a further line of four boulders parallel to the first line.⁴⁸ From west to east these were:

- White oolitic limestone rubble.
- Pale brown oolitic limestone with a smooth face to the north and fractures on the other sides.
- A rounded red-brown sandstone boulder.
- A rounded grey granite boulder with a flattish facet.

There was a nineteenth or twentieth century brick lodged against the west side of the gap between the oolitic limestone and sandstone boulders and a piece of asbestos cement resting against the east side of the granite block. There were pieces of stone and brick beneath these which seem to have been used as packing to hold the blocks in place. The blocks may have been inserted in a cut in the underlying layer but, if so, there was no sign of it.

The track surface [CT2] rested on layer [CT6] which consisted of small tightly packed rounded and sub-angular orange gravel with a patch of brick in the north-west corner of the trench. The gravel was of mixed shape and up to 50 mm in size although most was 10 to 20 mm. There was enough sand to ensure that the layer was densely packed and it was hard to mattock. This was clearly the track foundation.

The northern edge of the track sloped downwards and extended northwards as a thin layer to a point 2.82 m from the Orangery wall. On the west side of the trench the northern edge of the deposit thickened as shown in figure 57. The area above and to north of the gravel deposit was filled by layers of soil with several ill defined patches of sand and some modern pottery.⁴⁹

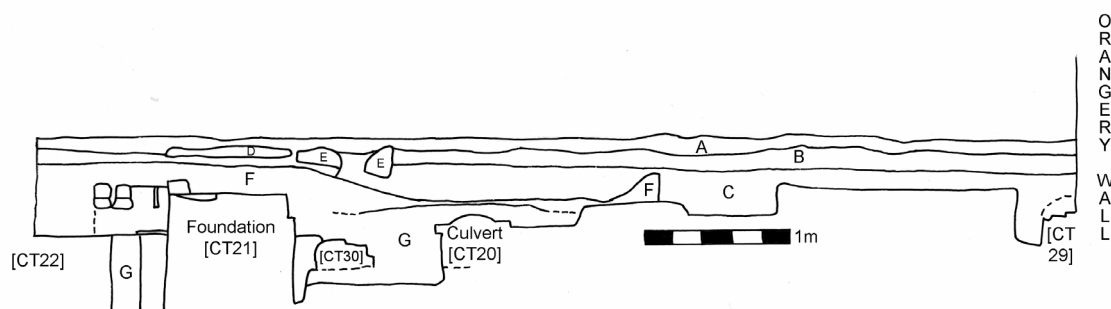


Figure 57. The west side of trench CT. A = Top soil; B = Soil; C = Soil; D = Ceramic building material; E = stone; F = Gravel; G = Dark silty soil.

⁴⁷ [CT3]

⁴⁸ [CT4]

⁴⁹ Contexts [CT5], [CT8], [CT9], [CT10], [CT11] and [CT12].

The north edge of the gravel track was marked by a vertical cut line in layer [CT9].

When the gravel track was removed a substantial east – west brick foundation [CT21] was uncovered. This divided the trench in to two areas, one to the north of the foundation and the other to the south.

5.5.3 The deposits between the foundation [CT21] and the Orangery wall

On the north side of the wall there were five deposits forming parallel east – west strips across the trench as shown in figure 58. From south to north these were:

- [CT17] Brown silty soil with occasional flint chalk and brick.
- [CT15] A thin layer of crushed brick and green (Reigate?) stone dust with patches of soil showing through.
- [CT14] Same as [CT17].
- [CT16] Thin layer of crushed brick.
- [CT18] Medium brown soil with about 5% chalk flint and brick. The deposit was less silty than [CT14] and [CT17] and contained less rubble.

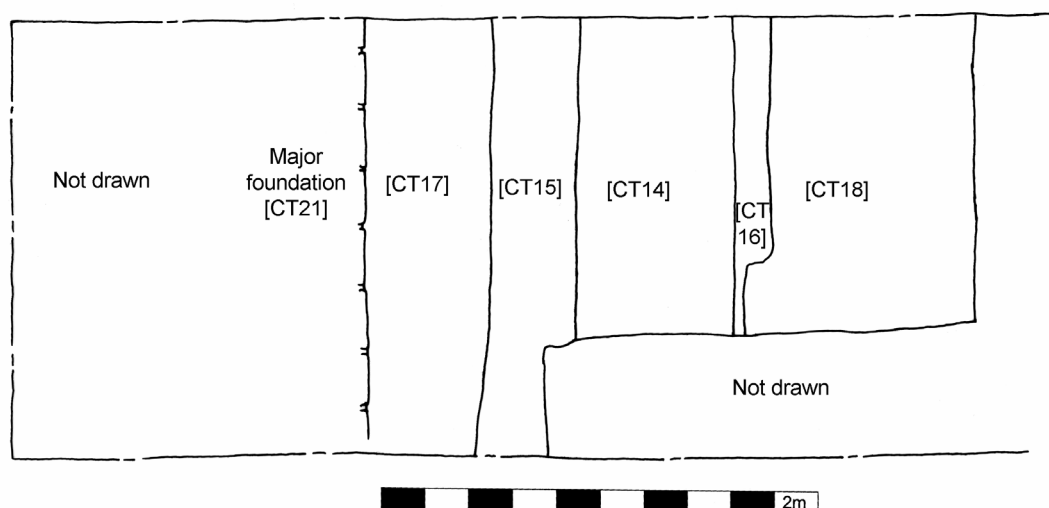


Figure 58. The deposits within the Orangery above the culvert [CT20] and the wall [CT30]. North to the right.

Layers CT (15) and (16) were only a few millimetres thick and were very similar apart from the stone content of CT (15). They could originally have been one deposit which later had a cut across it. When the two deposits had been removed and the layers below were excavated a cut was not detected but one almost certainly existed as a brick culvert [CT20] was found beneath [CT14]. The two thin deposits of brick and stone may have been created when the wall [CT21] was demolished.

[CT17] rested on [CT28] which consisted of dark brown soil with occasional mortar and chalk.

5.5.4 Deposits to the south of foundation [CT21]

The removal of the gravel track exposed three deposits to the south of the foundation [CT21] as shown in figure 59. There was a deposit of loose crushed mortar and brick

with flint pebbles [CT23] which filled a narrow gap between foundation [CT21] and a second less substantial foundation [CT22] to the south described in section 5.5.6). To the south of these was layer [CT24] which consisted of crushed chalk and small gravel in a sparse orange clay matrix.

Layer [CT24] rested on layer [CT25] at around 32.04 m OD. This consisted of dark sandy silt with some areas of lamination where dark and light silt alternate. It looked similar to layer [CT17] on the opposite side of the foundation [CT21].

There was a rectangular cut within the deposit which was filled by [CT26] which consisted of mortared brick rubble and one large flint in a matrix of pale brown soil. The top of [CT26] was at about 31.69 m OD while the bottom of the cut was at 31.57 – 31.58 m OD.

The deposit within the cut contained 19 part bricks with the following median sizes:

	Median size	Number
Height	60	19
Width	105	5

A small probe hole was dug in the bottom of the cut. It passed through dark silty soil and reached gravel at 31.2 m OD.

5.5.5 The major foundation [CT21]

This brick foundation was aligned east – west as shown in figure 59. The top had a width of 0.74 m. There was a 0.06 m offset on the north side 0.16 m below the top giving a total width of 0.9 m. The top of the southern side of the foundation consisted of a line of headers. To the south of this the wall had a thickness of 1½ stretchers made up of bricks and half bricks. The top of the offset consisted of stretchers

The south side of the wall was faced with two courses of peg tiles which had been mortared to it. Most of the tiles were broken parts rather than whole ones. The mortar fixing the tiles to the wall was of two types. The upper course of tiles, and the upper part of the lower course, was bonded with very soft grey mortar containing chalk and charcoal. The lower part of the lower course was fixed with soft light brown mortar. The junction between the two types of mortar was wavy and irregular. The bottom course of tiles rested on a layer of mortar similar to the upper mortar. Below this there is a mixture of orange brown and dark brown soil with mortar and brick. This filled a gap between the wall and the soil layer [CT25] to the south of it. Layer [CT25] was 0.15 m wide at the east side of the trench and 0.1m at the west. The top was between 31.82 m and 31.84 m OD. The deposit was followed down the face of the wall to the bottom.

On the south side of the trench the main brick foundation [CT21] rested on rubble at 31.29 m OD.

The bricks were soft reds similar to those used in the surviving Orangery wall. Their median dimensions were

	Median size	Number
Length	230	15
Height	69	10
Width	104	18

The mortar was pale grey, fairly hard, with chalk inclusions mostly 1 – 2 mm in size.

5.5.6 The southern rough foundation CT (22)

This foundation lay on the south side of the main foundation [CT21] as shown in figure 59. It consisted of two courses of brick and was one stretcher thick. However, most of the bricks are halves so there is little cross bonding between the two sides. The bricks were of the following size:

	Median size	Number
Length	220	1
Height	65	25
Width	105.5	22

5.5.7 The northern rough foundation [CT30]

This was aligned east-west and lay 0.08 m north of the main foundation [CT21] as shown in figure 59. It consisted of two courses poorly and irregularly laid of soft red smooth finished brick. At the west end the centre and west end was bonded with medium grey brown mortar. The mortar on the outside was browner, softer, and not spotted with chalk.

5.5.8 The brick culvert [CT20]

The culvert was aligned east – west with its southern edge 0.96 m north of the main brick foundation as shown in figure 59. A short section of the top was removed to allow internal inspection. The culvert had an internal width of 0.22 m to 0.23 m. The sides consisted of three courses of brick. The top course was stepped outwards to form a ledge to support the roof. This consisted of a very flat ‘arch’ made of four bricks set on edge and laid lengthways along the culvert. The floor was of bricks laid flat across the culvert. The floor was at 31.75 m OD and was covered with a thin layer of fine silt. The inside was examined with a mirror and a steel tape was run out to give some idea of distance. To the west the culvert started to bend gently to the north after about 3 m. To the east the culvert appeared to be straight for the 6 m to 8 m it was possible to see. There were pieces of mortar hanging down from the joints between the bricks which showed that the ‘vault’ was constructed without any formwork.

The bricks were soft reds with clear diagonal stacking marks. The median thickness of 10 measured bricks was 65 mm (range 63 – 69 mm). The mortar was grey-brown with large chalk inclusions very similar to the mortar in the core of foundation [CT30] immediately to the south.

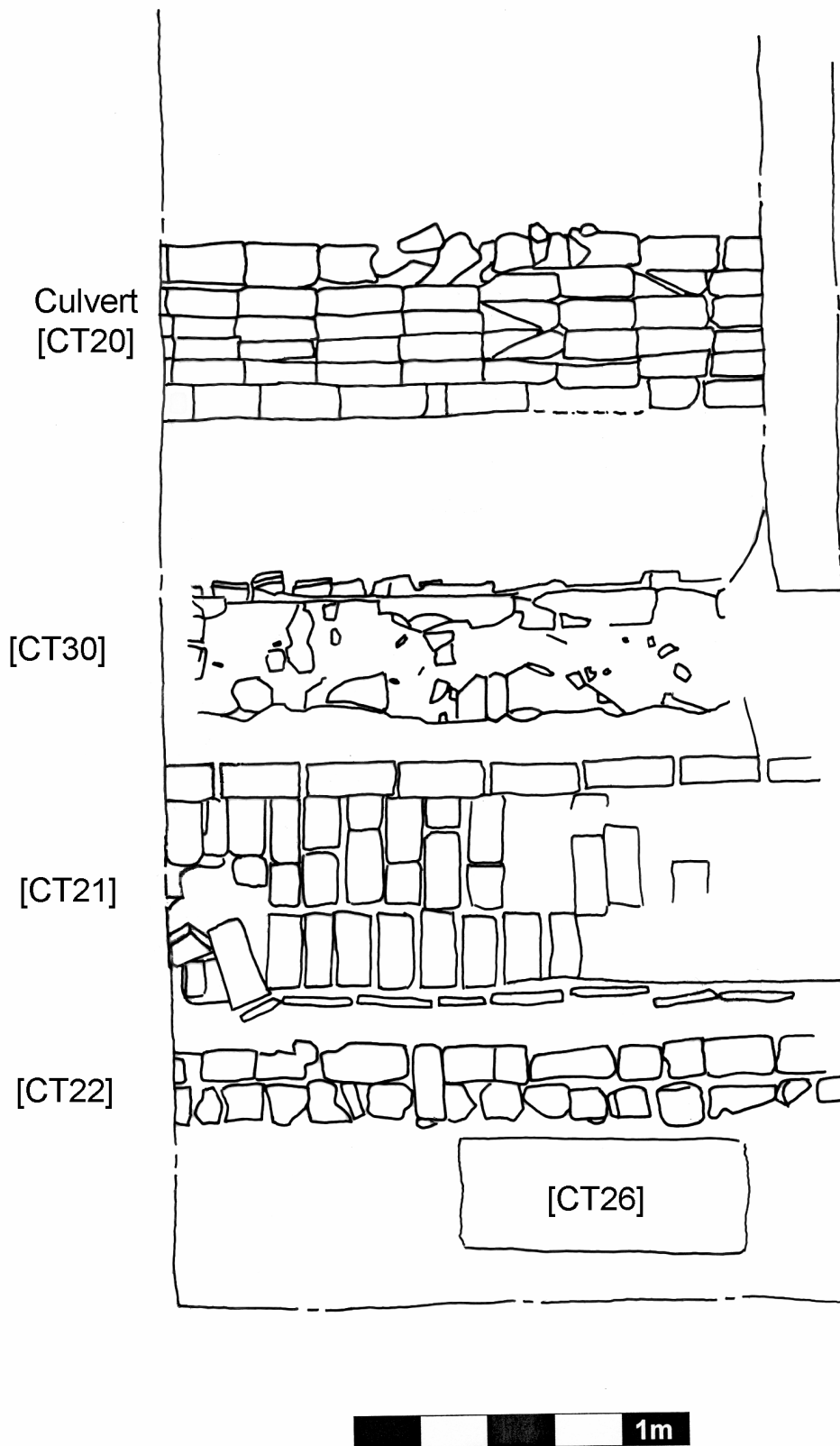


Figure 59. The south end of trench CT showing the foundations and culvert top.

5.5.9 Foundation [CT29] next to the Orangery wall

This ran east-west by the south side of the Orangery wall as shown in figures 60 and 61. Only a short section was excavated for safety reasons. This consisted of chalk with the remains of brick on the top. The brick was bonded with grey slightly chalky mortar. There was a marked crack between [CT29] and the brick offset from the Orangery wall.

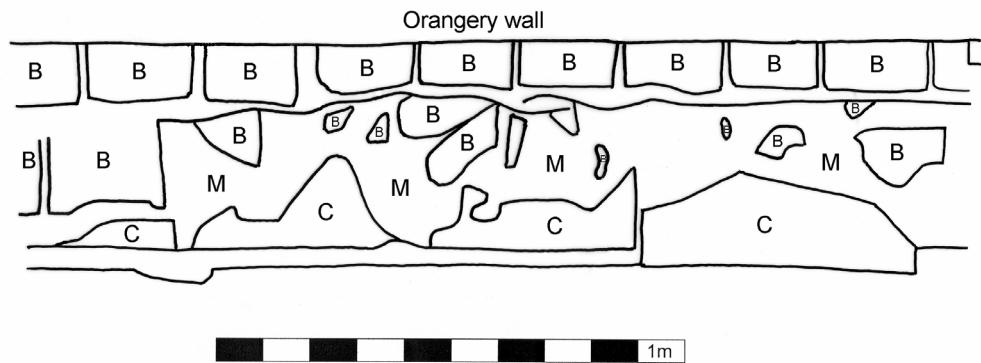


Figure 60. Plan of foundation [CT29] on the south side of the Orangery wall.
B = Brick; C = Chalk; M = Mortar.



Figure 61. The foundation [CT29] on the south side of the Orangery wall.

5.5.10 A comparison of brick sizes

The median brick sizes from the structures are:

Structure	L	H	W
[CT20] The culvert	222.5	65	103
[CT21] Main wall foundation	230	69	104
[CT22] Southern rough footing	220	65	105
[CT26] From the pit fill	-	60	105

The bricks fall into three groups:

1. The thick long bricks from the main wall foundation.
2. Thin bricks from the pit fill [CT26]
3. A group of intermediate thickness from the southern rough footing and the culvert.

The first group are similar in size and appearance to the bricks used in the Orangery wall. This would fit with this foundation being for the south wall of the Orangery which is consistent with its size and the quality of construction.

The bricks associated with the earliest stages of the eighteenth century garden had a thickness of around 60 mm and a rather rough finish. It seems likely that the second group belong to this period.

The third group are more difficult to parallel. However, the southern wall footing partly overlies the construction cut for the main foundation [CT21]. It must therefore postdate the construction of the Orangery. The rough work makes it hard to see it as contemporary so it must be either a modification or something post dating the demolition of the Orangery. The stratigraphy suggested that culvert [CT20] also post dated the Orangery.

5.6 Discussion of trench CT

The soil in this area is dark silty sand. The lamination seen in [CT25] suggests that it was hill wash.

The earliest structure appears to be the chalk and brick foundation [CT29] next to the Orangery wall. The north side of it may have been cut away during the construction of the Orangery wall. It may be the footings for the Elizabethan Orange house (see section 5.1) or it may be the remains of the chalk boundary wall seen in trench CE beyond the west end of the Orangery (see section 6.2 below).

The next feature appears to be the construction of the main brick foundation [CT21]. This must be the south wall of the eighteenth century brick orange house described in the 1748 edition of Defoe's *Tour* (see section 5.1). If so the eighteenth century Orangery had an external width of 6.76 m⁵⁰ and an internal width of 5.34 m.

⁵⁰ At ground level excluding the pilasters on the north side of the wall.

The thin deposits of crushed brick and stone [CT15] and [CT17] could relate to either the construction or demolition of the eighteenth century brick Orangery. The former seems rather unlikely. If the trees were planted in the Orangery, as contemporary descriptions suggest, the ground within the building would surely have been disturbed by cultivation which would have dispersed the two thin layers. The gap between the two deposits coincides with the position of the brick drain [CT20]. This suggests that the drain was constructed in a cut although the cut line could not be seen in the underlying layers. If so the drain [CT20] post dates the demolition of the eighteenth century Orangery. The same argument would apply to the northern rough brick foundation between the culvert and the main foundation. The two structures are also linked by their mortar.

The function of the northern rough foundation [CT30] and its companion [CT22] on the southern side of the main foundation is unclear. They may have supported a greenhouse or some other plant cover constructed against the south side of the Orangery after the demolition of the eighteenth century south wall.

The culvert [CT20] was not lined with limescale, had little silt in it and no gravel. This suggests that any water in it came from rain or ground drainage rather than the river and also that it did not drain a gravelled surface.

These features were all overlaid by the wide gravel track which must be the one shown on the enclosure award map of 1820 (figure 63). The north side of this track was subsequently dug away to narrow it and make a wider strip of soil between the track and the Orangery wall. The maps suggest that this happened between 1868 and 1896. The lines of stone along the south edge of the narrow track appear to date from the twentieth century.

The date of the brick filled pit on the north side of the northern rough foundation is uncertain. The bricks probably date from the early eighteenth century but they may well have been reused. It may perhaps be a small soak-away connected with the rough foundation.

6 SOUTH GARDEN

6.1 Former extent

Roque's mid-eighteenth century map of Surrey shows the garden extending along the north side of Church Lane from the Churchyard wall almost to Guy Road (figure 62). A building shown in the corner of Church Lane and Guy Road must be the Old Post Office, a large timber-framed building, which survived until the 1940s. A small area of trees to the north of it might belong to the Old Post Office or be part of the Carew gardens.

To the west of this the garden is shown divided into three areas. There is a fairly narrow open space to the south of the Carew Manor house next to the churchyard. To the east of this two formal garden areas are both divided into four by cross walks.



Figure 62. The garden on Roque's map of Surrey c.1750



Figure 63. The garden from the Beddington and Bandon enclosure award, 1820

This can be partly reconciled with the depiction of the garden on Beddington and Bandon enclosure award map of 1820 (figure 63). This shows a distinct area immediately south of the main house which had a number of trees, some of which are still there today. The westernmost formal garden can be equated with the area south of the Orangery wall. It is bounded by a north-south wall which forms the eastern boundary of the present south garden and may also have marked the limit of the garden in 1820 as there is no sign of the second formal garden to the east of it in the plot numbered 63. The Old Post Office (plot 67) appears prominently on the corner of Church Lane and Guy Road on the 1820 map. On the face of it the garden had contracted between c.1750 and 1820. There are, however, some reasons for doubt:

- There is a remarkable lack of access to the eastern formal garden area from the rest of the grounds. There is one small blocked door close to the eastern end of the Orangery wall and possible traces of a wide gate and walk at the south end

of the east boundary wall of the present south garden (see section 6.3 below) but there is no known connection through the north wall into the central garden although much of the wall has now gone.

- An excavation of the Orchard Works site in the eastern garden area did not find any evidence for a formal garden although the investigation was fairly limited (see section 6.7 below).
- A cottage in Church Lane, to the west of the Old Post Office, appears on the 1820 map and is still standing (figure 64). It is a double pile building with a brick front. The eaves are decorated with a line of dentilated brickwork. In Surrey this was fashionable in the seventeenth and the first half of the eighteenth century and again in the early nineteenth century especially the 1820s and 1830s.⁵¹ The facade is of soft red brick which was becoming unfashionable in the early nineteenth century although it was still in use. If the cottage does date from the first half of the eighteenth century in shows that the garden did not extend into the area when Roque's map was made c.1750.

A similar situation exists on the north side of the gardens where Roque shows garden areas but there is evidence that none existed (see section 9.7 below).



Figure 64. 12 and 14 Church Lane. The two cottages in the background may be of early eighteenth century date. The section in the foreground is clearly a Victorian addition.

⁵¹ Howard 2001 p6 and 8.

6.2 Trench CE

In 1990 a trench was excavated to locate the southern side of the moat near the south-east corner (figure 25). However, the trench missed its target and was dug into the ground south of the moat. It straddled the boundary wall between the central and south gardens just west of the site of the gate at the southern end of the cross drive.

A wall aligned roughly east - west projected 1.31 m into the trench from the east side. The western end of it was rough and it had clearly once extended further west but had been robbed out at some time.

The upper part of the wall was of brick which survived to a maximum height of three courses. The brick was supported by a substantial foundation of mortared chalk rubble.

The chalk foundation is shown in figure 65. It was about 0.33 m deep on the south side and 0.36 m deep on the north. It was 0.46m wide at the top and thickened to about 0.57 m at the base. At least one chisel mark on the exposed part of the top ran across two chalk blocks showing that the upper surface had been levelled after construction.



Figure 65. The foundation in trench CE.

The original brick wall was about 0.37 m thick which was narrower than the top of the foundation, the difference being made by a ledge on the south side. Two courses of brick and part of a third survived which was enough to show that the walls were laid in English bond. They were of the following size:

	Length	Height	Width
25th quartile	234	57	105
50th quartile	238	58	107
75th quartile	240	61	112
Sample size	7	21	13

At some point a rather rough extension had been added to the north side of the wall to thicken it. The extension was about 0.22 m thick and was not bonded into the main wall. The southern edge of it rested on the ledge at the base of the brickwork on the north side of the original wall while the northern side rested on the soil. This uneven support had caused it to subside northwards away from the wall. Only two courses of the extension survived and both were rather roughly made. The lower course consisted of a mixture of flint and orange brick with one yellow brick which may possibly have come from Clack's brick works about 200 m south east of the excavation. The second course consisted of a mixture of various types of pink and orange brick. The overall impression is of a rather slipshod and fairly recent attempt to prevent the original wall subsiding to the north where it was on the edge of the fill of an old ditch. If the yellow brick was from the Clack's works it must postdate 1900.

There was a good deal of rubble in the upper layers of soil immediately adjacent to the north side of the wall. There was a much more extensive rubble spread to the south and it appeared that the majority of the debris fell this way when the wall was demolished or collapsed.

A search was made for evidence of a construction trench along the sides of the wall. None was found and there was no evidence of one in the section. However, any traces would probably have been destroyed by the cultivation which appears to have been carried right up to the face of the wall on both sides.

The western end of the surviving foundation was rough and it was clear that the wall had at one time continued to the west. The structure had been robbed out but the line clearly marked by a pocket of rubble which appeared in the western side of the trench.

A feature, which may have been a post hole, cut into the top of layer [CE12] beneath the robber trench. It was located just beyond the end of the surviving part of the wall. It was more or less square with rounded corners about 0.29 m north to south, 0.28 m east to west and 0.9 m deep. The fill [CE10] consisted of small crushed mortar and brick with some flint and brown earth. This was very similar to the fill of the robber trench above which suggested that the hole had been filled when the robber trench was created. The hole might possibly have held a large vertical post which was built into the original wall. If this was the case it is hard to see what purpose the post might have served particularly as it would have weakened the wall at this point.

The deposits to the north and south of the wall had been heavily disturbed by cultivation. They contained many residual pottery sherds which ranged in date from prehistoric to the early fourteenth century. There was an east-west aligned ditch to the north of the wall which was probably of medieval date.

The south end of the trench cut into the gravel walk shown on the 1820 map.

6.3 The east boundary wall

A large part of this has been demolished and replaced by a wire fence at some point in the past. Parts of the remaining sections are hidden by fruiting ivy. The surviving parts of the central and southern sections of the wall are of brick with shallow pilaster-like buttresses which look late eighteenth or early nineteenth century. The section at the north end has no buttresses. There is no sign of Tudor brick.



Figure 66. The north end of the east boundary wall of the present south garden with the Orangery wall in the background. Note the blocked door at the north end of the wall.



Figure 67. The blocked door at the north end of the east boundary wall of the present south garden. East side of the wall.



Figure 68. The north end of the east boundary wall of the present south garden. Looking south.

About 13.2 m north of the southeast corner of the garden, the wall curves out westwards and the foundation drops by at least 0.53 m. Immediately south of this curve, the wall rests on a mass of chalk rubble which might have been the foundation of an east-west running drive along the south edge of the garden. A few metres north of the curve, the wall rests on a foundation of chalk and Reigate stone blocks.

The bottom of the brickwork over the 'drive' is at 34.74 m OD. The bottom of the chalk foundation is at 34.27 m OD.

A trial hole was dug against the east side of the wall 14.9 m south of the northeast corner of the Orangery wall. The wall was brick down to 32.19 m OD which is 0.44 m below the foundation offset.

6.4 The south boundary wall

The south boundary wall separates the south garden from Church Path. The wall has a sloping top on the south side with two lines of dentilated brickwork as shown in figure 69. Parts of the wall are made of thin roughly-finished Tudor style bricks but there have clearly been many repairs over a long period.



Figure 69. The south boundary wall looking east down Church Path.

The wall has a significant lean to the south and has been reinforced by seventeen irregularly spaced buttresses which, judging by the bricks, date from the nineteenth and twentieth centuries.

6.5 The hazel and other trees along the south boundary

There are a number of trees in the garden along the north side of the Church Path wall. Measured from the Church Paddock Court wall they are:

0 m	Beech
3.7	Beech. Girth 3.18 m.
10	Lime
17	Sycamore
26	Sycamore - an overgrown stool.
33.5	Hazel coppice stool.
35.75	Hazel coppice stool.
40.75	Large hazel coppice stool. Diameter about 1.68 m.

A yew in the south east corner of the area has a girth of 0.95 m.

The yews at Hampton Court had a mean radial growth rate of 1.32 mm a year.⁵² On this basis the yew would be:

$$(950/\pi)/1.32 = 229 \text{ years or } 1770.$$

⁵² Pigott 1995

On the basis of half an inch girth per year the 3.18 m (10 ft 5 in) beech will be around 250 years old - 1747 - perhaps suggesting that both trees were planted around the middle of the eighteenth century.

The large hazel stool about 1.68 m (5.5 ft) across must be of some antiquity. In *Ancient Woodland* Rackham says:

Unlike most ash and maple stools a hazel stool is usually underground. Neglected stools often have a 'self-coppicing' mechanism: stems die after thirty to fifty years and are replaced by new shoots. It is thus very difficult to tell the age of a hazel. The stools often reach 6 ft (1.8 m) in diameter but rarely much more. By analogy with other species this should represent an age of at least 300 years. It is possible that they cease to grow beyond a certain size, and they may even get smaller by underground decay.⁵³

On this basis the hazel stool was growing in the garden in the first half of the eighteenth century, perhaps before.

6.6 Ground levels

The ground drops by around 0.25m immediately inside the Church Path boundary wall. A photograph dated 1924 in the Sutton Local Studies Collection shows the area from the air looking south-east when it was still cultivated. Part of the wall is visible and there is no clear sign of the drop. This suggests that the ground was levelled to create the football pitch which now exists in the south garden. This was most likely done in the late 1940s or 1950s.

6.7 The Orchard Works evaluation

In 1999 the Museum of London Archaeology Service excavated six evaluation trenches on the site of Orchard Works prior to its redevelopment as Church Paddock Court.⁵⁴ Trench 6, near the northeast corner of the site, cut into the fill of the channel from Beddington Ford to the east garden.

The other five trenches did not produce any evidence of a garden although the work was carried out under difficult conditions after heavy machinery had been used to demolish the factory. None of the trenches were on the edge of the site adjacent to the structure found in trench CW and none lay on the line eastwards from this.

6.8 The channel from the Wandle to the south garden

The Beddington and Bandon Enclosure Award map of 1820 shows a watercourse leaving the Wandle about 80 m below Beddington Ford. It ran westwards just south of the boundary wall of the central garden. It divided into two 15 m east of the Orangery wall. One channel – probably a spillway – seems to have run northwards into the east lake. The other channel ran southwest. It entered the garden about 38 m south of the Orangery wall, passed under a walk running along the inner side of the garden wall and flowed into a channel running west across the garden. The channel flowing into the garden was slightly south of the channel entering the garden under the wall.

⁵³ Rackham 1980 p209

⁵⁴ Saxby 1999.



Figure 70. The enclosure award map of 1820 showing the channel from Beddington Ford to the south garden.

The Tithe award map of 1840 and the first edition 25 inch Ordnance Survey of 1868 show a similar arrangement although the walk along the wall had disappeared by 1868 and the entrance and exit channels are aligned. The channels are also shown on the 1897 Ordnance Survey map except that the west end of the watercourse within the garden had been filled. There is a line across the channel just down stream of the culvert exit which might be the penstock mentioned in the orphanage minute book of 10 July 1873. If so this is a rather odd place for a penstock as the water would have to back up to the spill way into the east lake. There is a similar line across the channel just before it disappears underground at the western end. The channel within the garden is still shown on the 1913 Ordnance Survey map but the south-west running water course to east of the garden had disappeared and had presumably been culverted. The channel within the garden is not shown on the 1933 Ordnance Survey map and had presumably been filled. The channel appears to have flowed into culvert F53 which took the water northwards to the south moat culvert (figure 6).

6.9 The channel gradient

It was 397 m along the Wandle and the channel from Beddington Ford to the garden wall and about 405 m to the culvert exit in trench CU. The ford has now been turned into a bridge and the river has been regraded but old maps suggest that the water level at the ford was around 33.8 m OD.⁵⁵

At the culvert exit in trench CU the centre of the channel bottom was at 31.31 m OD, the top of the gravel at 31.52 m OD and the top of the silt at 31.75 m OD (see 7.5 below). If we assume that the water at Beddington Ford was 0.3 m deep then the channel gradients were:

⁵⁵ The first edition 25 inch Ordnance Survey has a spot height of 111 ft on the road by the ford. The 1966 OS has a spot height of 112 ft on the road just north of the bridge. It seems likely that the water level at the ford was close to 111 ft (33.8 m) OD.

	Drop m	Drop m / km
Ford to CU channel floor	2.27	5.60
Ford to top of gravel in culvert	2.06	5.08
Ford to top of silt in culvert	1.83	4.52

In 1999 the Museum of London Archaeological Service excavated the Orchard Works site (now Church Paddock Court) prior to development. They found a watercourse in the north-east corner of the site 128 m upstream of the culvert entrance in trench CU. This had the following silting sequence.⁵⁶

OD to top.	Thickness	Deposit
32.70	0.5	Dark brown clay silt
32.20	0.25	Fine gravel
31.95	0.25	Dark brown silt with occasional fragments of tile.
31.70	0.15	Mid grey clay silt and gravel.
31.55		Bottom – 1.4 m below 32.95 m OD

If the all the surveying is correct the channel bottom drops 1.64 m between this trench and CU which is more than two thirds of the drop from Beddington Ford in just over a third of the distance. The channel drop from Beddington Ford to the Orchard works trench is 0.63 m over a distance of 277 m or 2.27 m per km. It seems that there was an intention to concentrate fall where the channel entered the garden, presumably for a water feature.

7 THE ORNAMENTAL STRUCTURE AND CULVERT

Trench CU was excavated in 1999 where the watercourse from Beddington Ford entered the south garden. It uncovered the exit from a brick culvert which had a fairly complex construction history. The gravel at the culvert entrance contained many pieces of decorative mineral and rock which had clearly come from an ornamental garden structure. Trench CW was therefore excavated immediately upstream in 2001 to 2004. It uncovered a fragment of an ornamental garden structure, along with more details of the culvert and the surrounding stratigraphy. Only one corner of ornamental structure survived with part of the east and south walls. The finds from this excavation are still being processed and the interpretation and dating of the stratigraphy and structures may be subject to significant revision. This section is therefore rather more ‘interim’ than much of the rest of this report.

7.1 The ornamental structure

The ornamental structure consisted of several distinct parts as shown in figures 71 to 78:

1. A foundation of green sandy mortar and flint cobbles which underlay the east wall and the east end of the south wall. It projected into the interior of the structure where it appeared to have been capped by a layer of peg tile and

⁵⁶ Saxby 1999. Trench 6. The watercourse was 1.4 m deep. I have assumed that this is the depth from the surface which was at 32.95 m OD.

brown mortar. A single brick 52 to 53mm thick was set across the south-east exterior corner at the top of this foundation. The western end of the foundation was quite rough and it coincided with a marked crack in the south wall. This end looked like a demolition surface so the foundation might once have extended further west.

2. The east and south walls above this foundation. These were much thinner and were made of grey mortar. They include some flint cobble and peg tile with a great deal of large knobbly flint, ferrous conglomerate, a little tufa and other decorative material set into the inner face. On the outside this section projects about 30 mm to 40 mm from the foundation suggesting that it has been displaced to the east and south on the line of a marked horizontal crack.
3. The foundation of the south wall to the west of section 1 and 2 was thinner and the inside was largely covered with decorative material. We do not know whether it was made of grey or green mortar as the inside was largely hidden by the decoration and the outside was probably covered with a thin layer of limescale.
4. The wall above section three appears to be similar to the section 2. It was fairly thin and the interior is decorated with flint, ferrous conglomerate and a little tufa. This section of wall ends 1.06 m west of the corner.
5. The foundation at the west end of the south wall. From both outside and inside this appears to be continuous with foundation section 3 to the east of it. There was no clear sign of an overlying wall unless the piece of ferrous conglomerate on the top of the centre of the foundation was the remains of one.
6. The lower part of the interior of the structure consists largely of brown mortar unlike the other mortars in the structure.

The rough west side of the foundation (section 1) looks as if it was left by demolition. To the west the lower parts of the interior have a different character – they look like placed boulders rather than a constructed wall. This change of character is not immediately reflected on the outer (southern) side, as wall section 4 is similar to section 2. It is possible that the structure was made in two phases. The earliest parts are sections 1, 2 and 4. At some point the western end was demolished and the west end of the foundation cut back on the inside. Sections 3 and 5 were then added. The brown mortar (section 6) may be contemporary with this or a still later addition.

7.1.1 Detached pieces of the structure

Several pieces of the upper part of the wall were loose and became detached in the excavation. The most significant were:

Find <1082> which consisted of grey mortar with one rounded flint cobble size 70 mm. The thickness varied from 18 to 82 mm. The outer (south) face was more or less flat and was largely covered with grey and white limescale including a few plant casts. The inner (north) side was more uneven and was covered with yellow limescale. There was no sign of stalactite formation on an overhang at the bottom of the piece. There was yellow limescale on the top which is presumably an old fracture.

Find <1083> which consisted of pale grey mortar with fine black spots. One side and parts of the fractures are covered with yellow limescale. The other side has grey and white limescale. In places the white appears to rest on the grey. There is a cast of a root on this side. A few – but not all – of the cavities cut by the fracture have yellow limescale in them.



Figure 71. The ornamental structure, south wall exterior.



Figure 72. The interior of the ornamental structure.

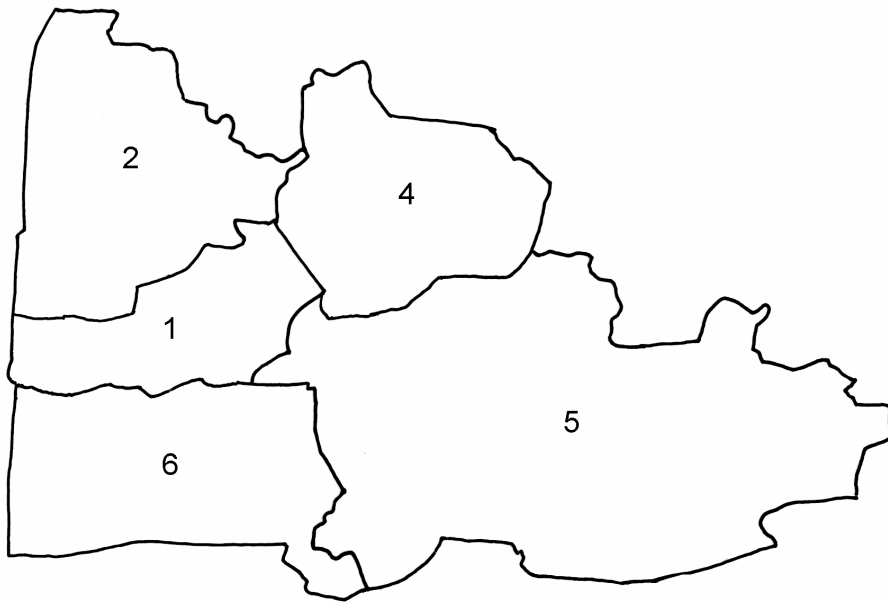


Figure 73. Diagram showing the subdivisions of the interior of the south wall of the ornamental structure (see section 7.1 for a key to the numbers and figure 73 for details of the wall).

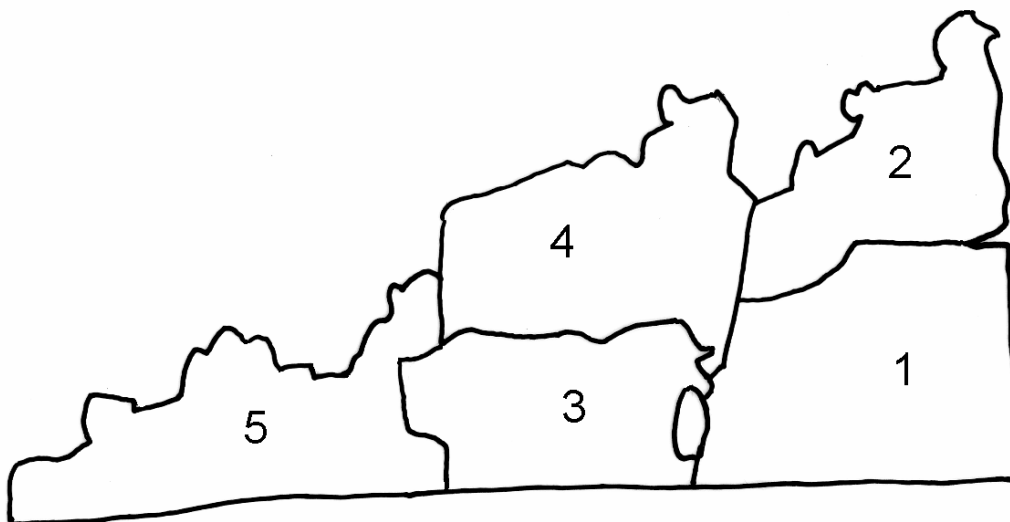


Figure 74. Diagram showing the subdivisions of the exterior of the south wall of the ornamental structure (see section 7.1 for a key to the numbers and figure 77 for details of the wall).

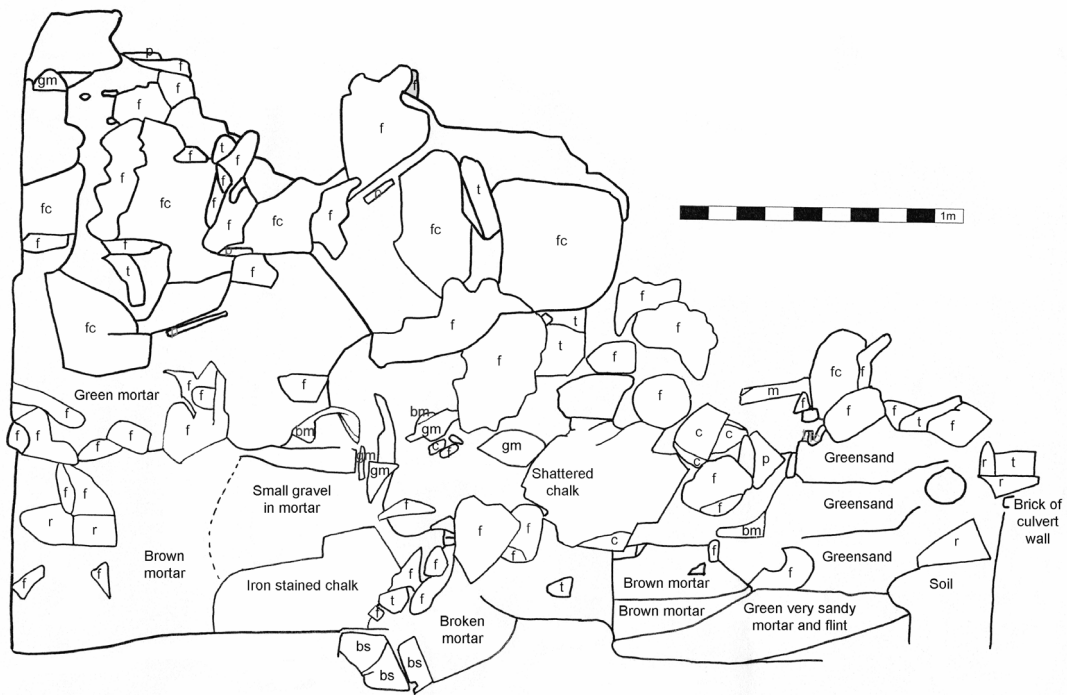


Figure 75. Drawing of the interior south wall.

Key to figures 75 - 78

- bm Black amphibole
- gm Granite-like gneiss
- t Tufa / siliceous sinter
- fc Ferrous conglomerate
- f Flint
- c Chalk
- r Reigate stone
- p Peg tile
- a Abalone shell
- m Red marble
- br Brick
- bs Pale brown stone

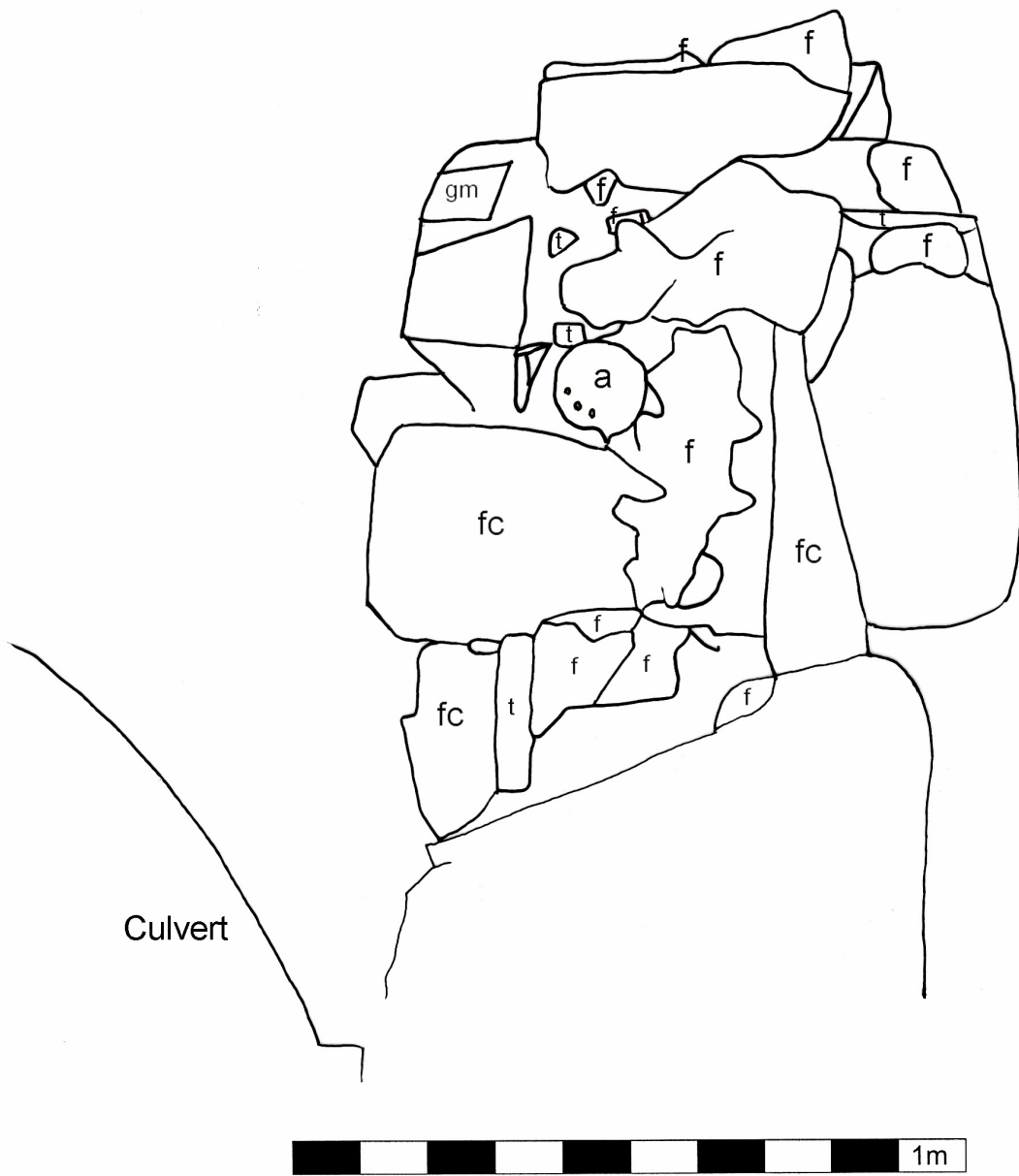


Figure 76. Drawing of the interior east wall.

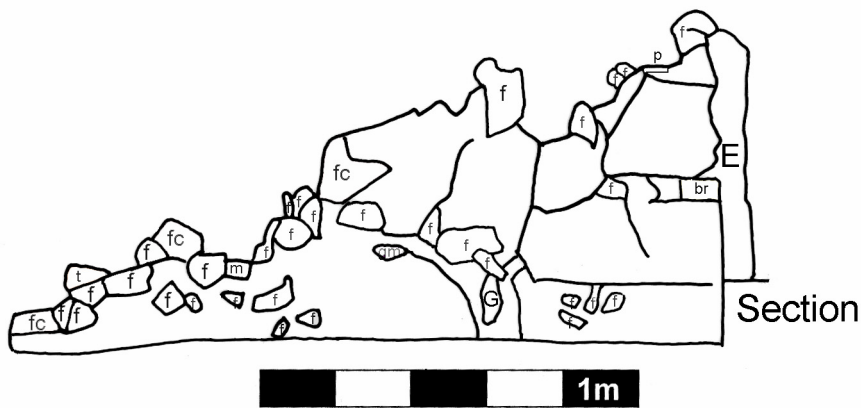


Figure 77. Drawing of the exterior south wall. E = East wall; G = Gap in wall.

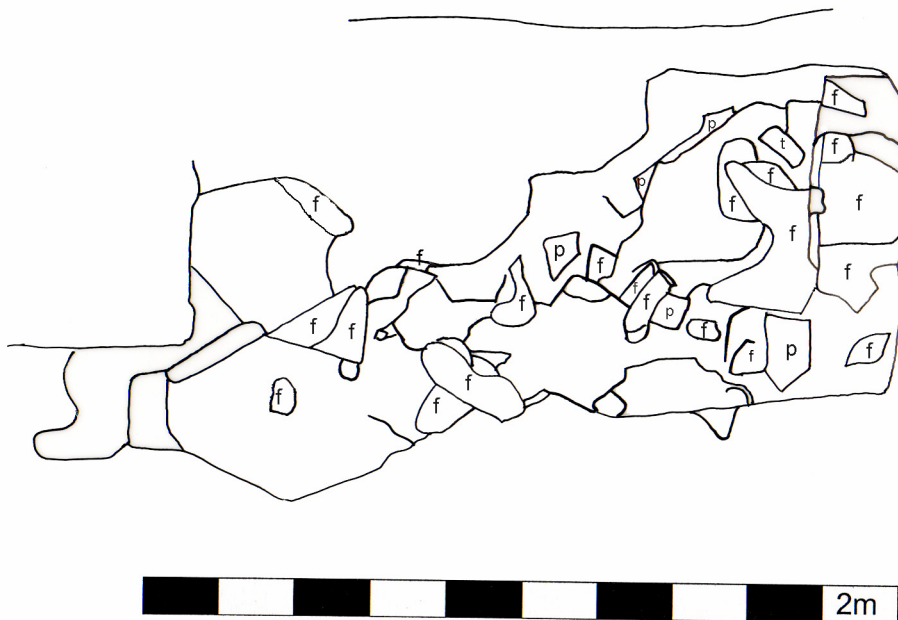


Figure 78. Plan of the ornamental structure [CW27].

7.2 The *in situ* decoration

The following decorative materials have been identified in the interior of the structure based on the drawings, photos and notes.

Section 1

The green mortar foundation at the east end. This contained no decorative material. The piece of red granite on the west side of the foundation appeared to be set in brown mortar. There was a piece of dark brown calcite-like material and piece of grey granite-like rock near it but it is not clear what they were fixed to.

Sections 2 and 4

These upper walls are mostly decorated with large knobbly flints and ferrous conglomerate. There is a scatter of other materials:

Section 2: east wall

- Tufa, 3 pieces
- Abalone shell, 1 piece
- Grey granite-like gneiss, 1 piece
- Black amphibole, 1 piece

Section 2: south wall

- Tufa, 1 piece

Section 4: south wall

- Tufa, 2 pieces

Sections 3 and 5

The western end of the foundation contained:

- Tufa, 7 pieces
- Red granite-like gneiss, 3 pieces
- Black amphibole, 2 pieces
- Red and grey marble, 1 piece
- Ferrous conglomerate, 2 pieces

There was a piece of grey gneiss visible on the exterior of section 3.

Section 6

The brown mortar

- A spiral shell

There was no coral, tropical shell or glass in the surviving structure.

7.3 The culvert structure

The culvert was divided into five sections by bonding breaks as shown in figure 79. Going upstream from west to east they are:

1. The exit retaining wall
2. Culvert section 1
3. Culvert section 2
4. Culvert section 3
5. Culvert section 4

In 1999 the whole culvert was crawled and was examined by the light of a torch. The main dimensions were measured and the major features were noted but there was not enough time to make a detailed survey. Working conditions were difficult and the bricks were covered with limescale so that it was hard to make accurate measurements.

In 2004 a detailed record was made of culvert section 2 as it was dismantled. After this had been done culvert sections 3 and 4 were re-examined under better conditions with more light.

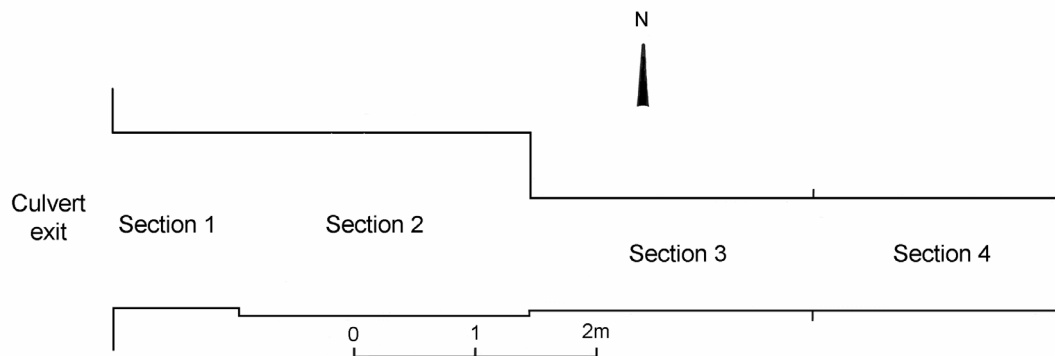


Figure 79. Plan of the culverts in trenches CU and CW.

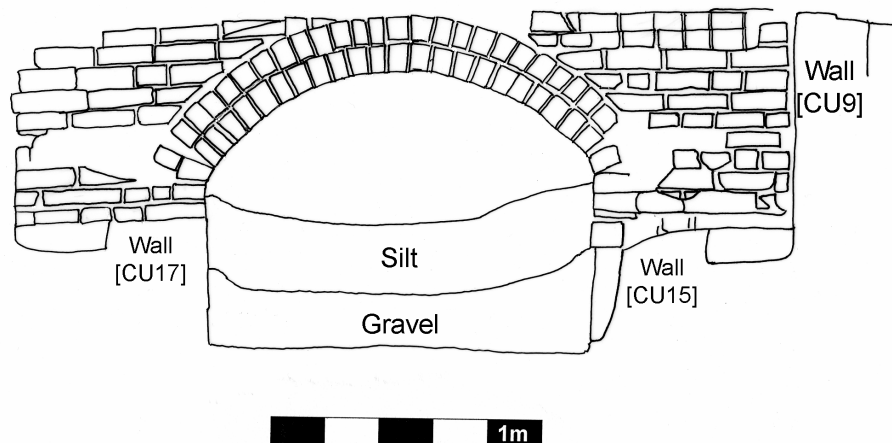


Figure 80. The culvert exit retaining wall.

7.3.1 The exit retaining wall

The culvert emptied through a brick retaining wall (figure 80). The exit arch was 1.42 m wide and rose 0.4 m above the low side walls. The entrance retaining wall was aligned at 6 or 7 degrees west of magnetic north in 1999. The demolished wall top survived to a height of 0.2 m above the underside of the arch top. The south side extended 0.73 m from the edge of the culvert and ended in a butt joint against the outer channel side wall [CU9]. On the north side it extended to a maximum of 0.72m from the side of the culvert where it ended in a fracture. The main part of the wall was of hard coarse red bricks. Several had shallow frogs which were visible where they were exposed along the top of the wall. The face of the retaining wall was covered with a white deposit – perhaps whitewash or mortar.

7.3.2 Culvert section 1

There was a bonding break across the crown of the arch, one stretcher from the exit. This was also visible on the top where the bricks in the retaining wall arch did not exactly align with those in the culvert roof. The bonding break did not extend into the lower parts of the arch or the sidewalls.

The culvert beyond the bonding break had the same profile as the entrance. The sidewalls were of red brick with at least one diagonal stacking mark. The bricks in the arch are different and are probably the same as those in the exit retaining wall. The sides are bonded with dark brown mortar while the arch mortar was grey.

The eastern (upstream) end of the section was paved with brick and there was a brick lined slot in the floor at the start of the section (see below). Here the sidewalls had 4½ courses of brick above the paved floor. The stream had undermined the sidewalls immediately downstream of the floor. The northern sidewall probably had a total of 6 courses of brick. At the east end the culvert was 1.35 m wide at floor level and had a height of 0.7 m.

7.3.3 The slot in the culvert floor

At the junction of culvert sections 1 and 2 the floor was paved with red bricks. There was a slot in this at the entrance to section 1 which was 0.1 m deep and 0.13 to 0.14 m wide. It is lined with brown mortar, perhaps Parker's Roman Cement or tarras. The bricks forming the floor on the upstream (east) side of the slot were laid on their face (figure 81). There was a bonding break across the floor one brick length from the slot. Beyond this there was a rather ragged line of part bricks ending in an irregular edge about 0.7 m upstream of the slot. The bricks are partly covered with mortar and may originally have been wholly covered. The bricks on the downstream side of the slot were laid on their side. They ended in an uneven edge about 0.8 m from the edge of the slot.



Figure 81. Plan of the slot in the floor at the beginning of culvert section 1. S S S = slot. Grey = mortar.

7.3.4 Culvert section 2

This started 1.06 m from the exit and was separated from section 1 by a bonding break. The culvert widened on the south side by 0.06 m.

When culvert section 2 was dismantled on 9 August 2004 the arch was found to consist of two courses of stretchers with a straight mortar joint between them and no cross bonding. The inner course consisted of hard yellow stock bricks with frogs. About 10% had black overburnt cores. The upper layer consisted of a mixture of yellow stock and soft red brick. The yellow stocks were common along the top of the arch. The reds were more common lower down especially on the north side where they predominated. A fair number of the soft reds had whitewash on them showing that they had been reused. Both courses were bonded with the same grey slightly brown soft mortar.

The southern sidewall was divided into two sections by a bonding break 0.52 m from the junction with culvert section 1.

To the west of the bonding break at the top of the wall was a soldier course consisting of five bricks laid on their side. Below this the wall is of soft red brick. At the west end two stretchers connected to a southward projecting stub wall. One of these overlay the end of the soldier course as shown in figure 82.



Figure 82. Detail of the south side of culvert section 2 [photo D1064].



Figure 83. The top of the south side wall of culvert section 2 showing the brickwork cut to fit around the 'grotto'.

To the east of this break the wall consisted of five courses largely of yellow stock brick.

Top course: Yellow stock brick stretchers. The back course was yellow and red stretchers which are cut to fit around the grotto as shown in figure 83.

2nd course: the culvert face was of headers with one stretcher and a part stretcher. Behind this there was a mixture of red and yellow bricks some broken bits and some stretchers. The mortar was the same right through.

3rd course: the culvert face consisted of stretchers and two part stretchers. Behind this there were headers and part headers mostly yellow stocks with a few red ones.

4th course: the culvert face consisted of headers with one part header. Behind this there were part bricks both red and yellow.

5th course: the west end of the culvert face had three yellow stretchers. The rest was yellow headers apart from a red half brick at the east end. Behind this there was a mixture of yellow stretchers, red and yellow part bricks, chalk and mortar.

The second course from the bottom stepped out by about 10 mm.

The northern side wall from west to east

The top course consisted of a line of yellow stock headers. At the east end there was a line of four stretchers against the north side of the wall.

The 2nd course: the front consisted of 2 red headers, 6 yellow stretchers, a yellow half brick. The course then turned through an angle and there are 4 yellow headers filling the corner between culvert sections 2 and 3. The back row contained 2 red half bricks, three red $\frac{3}{4}$ headers, 8 red headers and a red half brick.

The 3rd course: the front consisted of two thirds of a red stretcher, a red half, a red stretcher, 4 yellow headers, a red header and 10 yellow headers. The angled section consisted of $1\frac{1}{2}$ yellow stretchers a $\frac{1}{2}$ a red behind. The back row consisted of a $\frac{1}{2}$ red, a $\frac{1}{2}$ red, chalk, earth, stone, 3 small bits of red brick, mortar, $\frac{3}{4}$ of a red stretcher, 4 red stretchers.

The 4th course: the front consisted of 4 red stretchers, a $\frac{1}{2}$ red, 2 part laterally split bricks to make up the thickness above mortar mass [CW234], 7 yellow headers and three roughly cut red bricks behind the angled section. The latter consists of $2\frac{1}{2}$ yellow stretchers and a bit. The back row consisted of chalk blocks, the mortar mass [CW234] more chalk, $4\frac{1}{2}$ yellow stretchers and some small bits. There appeared to have been a second back row at the west end but this was not fully uncovered.

The 5th course: the front consisted of 2 red headers, 1 red stretcher, 2 red headers, a $\frac{1}{2}$ red. At this point the brick was interrupted by mortar mass [CW234]. The back row consists of a red header, a $\frac{1}{2}$ red, another $\frac{1}{2}$ red and chalk. Like the front it was interrupted by mortar mass [CW234]. To the east of [CW234] the front consists of 10 yellow headers and the angles piece consisted of 4 roughly shaped yellow bricks. The back row east of [CW234] consisted of 2 yellow stretchers, a red stretcher, a yellow stretcher and $\frac{1}{2}$ a yellow brick.

To the west of mortar mass [CW234] courses 4 and 5 consisted red bricks and chalk bonded with green sandy mortar. To the east yellow stock bricks were common and the mortar was different. This repeats the pattern on the south side of the culvert where the lower part of the wall west of the bonding break was also of red bricks.

7.3.5 Section 3

This starts 3.45 m from the exit and is separated from section 2 by a bonding break. At its junction with section 2 the south side narrowed by 0.07 m and the north side by 0.48 m. The crown of the arch of section 3 was 0.33 m higher than section 2.

In 2004 culvert section 2 was dismantled and it was possible to examine the western end of section 3. The arch was round. The top appeared to be constructed in two layers. The outer one was rough, included several pieces of chalk and did not extend down to the top of the sidewalls. Yellow stock bricks had been used to repair the crown of the inner arch at the western end. The side walls were rather roughly constructed with a Reigate stone block on each side at the bottom. The bottom of the northern block was at 31.37 m OD. On the north side, the wall stepped inwards immediately above the stone block. It stepped in again on both sides just above the top of the silt fill (figure 84).⁵⁷ The channel between the stone blocks was 1.16 m wide while the arch was only 0.92 m wide so it appeared that the culvert arch had been added to an earlier, wider channel.

Within, the culvert had a width of 0.87 m to 0.91 m at the top of the silt. On the north side the brick rested on a line of flint at about silt level. On the south side there were two courses of red brick below the silt, both covered with yellow limescale rather than black deposit. They may have rested on tile and possibly flint.

The first three courses above the silt fill were covered with black deposit which appeared to have formed over bumpy calcite. Some of the bricks above this also had black deposit on them although it was patchy, some bricks had it and some not. The arch was covered with bumpy limescale right up to the top including most of the bricks along the crown. This implies that for at least part of its history the culvert was filled with water to the roof. The bricks are fairly rough with an uneven shape and a thickness mostly between 50 mm and 60 mm. No diagonal stacking marks were seen. The several bricks were measured in 1999 in difficult conditions:

Length	Height	Width
230	51	-
230	61	-
229	63	-
-	54	-
-	53	-
-	55	-
-	53	-
232	-	-
-	58	106

In 2003 several brick heights were also measured in good conditions on the jagged western end of culvert exterior. Bricks that were in obvious repairs were excluded:

⁵⁷ Photo D1098.

Height	
54	
54	
57	
58	
58	
59	
68	Overburnt

The two groups of measurements have thicknesses in the 50s and low 60s with the exception of the overburnt brick 68 thick.



Figure 84. The west end of culvert section 3.

7.3.6 Section 4

This starts about 5.78 m from the culvert exit. The arch has the same profile as section 3 but the lower parts of the side walls were of mortared flint topped with a course of peg tile. On the north side the brick of section 3 was inter-bonded with the flint. The flint rose 0.28 m above the silt on the north side and 0.26 m on the south. It is angular and was probably knapped off to make a neat finish. There was a crack across the arch in section 3 close to the boundary with section 4. It was clearly a fracture rather than a bonding break as several bricks had joined across it. Section 4 appeared to have dropped by about 20 mm relative to section 3.

A small hole was dug down the face of the flint wall. It passed through soft silt and encountered gravel at a depth of about 0.3 m. It was difficult to see the side of the culvert but there was at least one piece of brick among the flint. It was 0.66 m from the top of the silt to the crown of the arch, so it was about 0.96 m from the arch crown to the top of the gravel.

The bricks were in the 50 to 60 mm range and at least one had a diagonal stacking mark. One brick, on the south side at the east end, had a triangle scored into it. In 1999 three bricks were measured under poor conditions:

Length	Height
230	57
226	53
215	54

Section 4 ended with a rough uneven break about 7.85 m from the entrance.

7.3.7 Section 5

This section of culvert turned towards the north-east and ended in a collapse after a short distance. There were signs of recent damage to the roof which is likely to have been caused by the machinery being used for building on the Orchard Works site. The culvert was about 1.2 to 1.25 m wide but it was very difficult to measure the width accurately. The bricks looked modern.

7.3.8 The channel walls at the culvert exit

The inner channel walls [CU15] and [CU17]

This pair of foundations appeared to be the north and south retaining walls of a channel that ran from the western end of the culvert. The channel width was 1.45 m, effectively the same as the culvert entrance.

The southern wall [CU15] is shown in figures 85 and 86. It was fairly roughly constructed of brick and chalk. There were five surviving courses on the channel side. The lowest was largely of chalk, the second of brick stretchers, while the next two were of chalk with some brick. The wall had a maximum surviving height of around 0.32 m and a width of around 0.4 m. The top course was brick but very fragmentary.

The northern wall [CU17] was more neatly made (figures 87 and 88). There were five surviving courses. On the channel side the lowest consisted of chalk blocks. Above this there were stretchers with a single header, then a course of headers, and another of stretcher with two headers. The course above was damaged but may have consisted of headers. The maximum surviving height was 0.41 m and width of around 0.37 m. The bricks on the southern (culvert) side were 90% covered with a white deposit, probably calcite. Both walls were bonded with soft green sandy mortar which contained flecks of chalk.

The bricks from [CU15] had the following sizes:

Length	Height	Width
220?	60	108
	61	112

Those from [CU17] were:

Length	Height	Width
223	60	108
227	55	108
		117

The bricks appeared to have a rough finish and were thought to be Tudor but they were too thick. The courses of headers suggest English rather than Flemish bond.



Figure 85. The southern channel wall at the culvert exit [CU15]. North side.



Figure 86. The southern channel wall at the culvert exit [CU15] from above.



Figure 87. The northern channel wall at the culvert exit [CU17]. South side.



Figure 88. The northern channel wall at the culvert exit [CU17] from above.

7.3.9 The outer southern retaining wall [CU9]

This ran west from the south end of the culvert exit retaining wall. The bricks were laid in English bond with alternating courses of headers and stretchers. A total of ten courses or part courses survived with a height of 0.79 m. The thickness was 0.23 m. The lowest course appeared to rest on [CU14]. The thickness of the bricks ranged from 60 to 70 mm with a median of 66 mm.

7.4 Fragments from a demolished culvert arch

The fill of a cut above culvert section 2 contained a number of clumps of brickwork which had clearly come from a demolished culvert arch. The water face of this culvert was covered a white calcite deposit with a bumpy surface which was often covered with a black deposit.

The bricks in these clumps had the following sizes:

	Length	Height	Width
Sample	29	54	47
25 th quartile	227	63	107
50 quartile	230	65	109
75 quartile	232	65	111
Largest	240	70	119
Smallest	224	56	102

The layers also contained a number of individual bricks with this type of limescale and some had the black deposit without the limescale. Taken together these bricks had the following heights:

	Length	Height	Width
Sample	23	136	127
25 th quartile	228.00	60.00	105.00
50 quartile	229.00	63.00	110.00
75 quartile	230.50	65.00	111.00
Largest	238	69	115
Smallest	223	55	98

These two groups of bricks do not appear to be significantly different.

The deposits did not contain any bricks thinner than 55 which suggests that it did not include any rubble from the demolition of the western end of culvert sections 3 and 4.

The black deposit suggests that the culvert was still intact in the mid-nineteenth century when the river was heavily polluted.

7.5 The culvert deposits

7.5.1 Deposits on the culvert floor

The deposits on the culvert floor and in the channel from the exit can be divided into two groups: gravel below and sandy brown silt above.

The gravel was quite clean and must represent a fairly rapid flow that was upgrading the stream bed. The deposit contained many pieces of ornamental material. The sandy silt above it suggests a slower flow and the darker colour suggests that the water quality may have deteriorated.

7.5.2 Deposits on the roof and walls

The brickwork forming the inside of the culvert was generally covered with a thin layer of grey limescale which often had a bumpy surface. The deposit was also found on many loose bricks and on the fragments of the demolished culvert arch.

The limescale was often covered by a thin black film which was found on the culvert walls, areas around the culvert into which water has penetrated and on some finds. Limescale never rested on the black film. This suggests that water conditions changed. This is likely to have happened when the river became polluted in the nineteenth century. At this time the population of Croydon, about 2 km upstream of the garden, rose rapidly and the centre of the town became very unsanitary with much sewage flowing directly into the Wandle. A Local Board of Health was formed in 1849. They attempted to improve the situation by constructing a sewage works at Pitlake, upstream of the garden. This filtered and deodourised the water but it did not prevent the river becoming polluted to a 'fearful extent; nausea and sickness were the result of its feculent scum, and numerous actions and injunctions against the Board arose from those who had property in the drainage valley below the town'.⁵⁸ The legal actions forced the Board to look for another solution and they constructed a sewage farm on the northern part of the Carew's former deer park. This started working in 1860 and the outflow from it entered the river well below the garden.⁵⁹

7.6 The culvert: discussion

The development of culvert sections 3 and 4

The channel of culvert sections 3 and 4 appears to be contained by, or pass through, some sort of flint and mortar structure. In section 4 this can clearly be seen on both sides of the culvert but it also appears to have been present in section 3 below the top of the silt fill. The Reigate stone blocks at the bottom of the walls at the western end of section 3 are possibly part of the same structure although the overlying culvert wall was of brick rather than flint. It is tempting to see the fragment of ornamental structure as part of this flint and mortar structure. However, the bottom of the culvert was around 31.31 to 31.37 m OD significantly lower than the base of the south wall of the ornamental structure at about 31.74 m OD. On the northern (inner) side of the ornamental structure the gap between the base and the culvert base was covered with brown mortar as shown in figure 75. This suggests that the culvert builders cut through the ornamental structure and lowered the water level. If so the ornamental structure must be earlier.

The flint wall in culvert section 4 was traced to about 0.3 m below the silt top but we do not currently know if the flint structure was as deep as the Reigate stone blocks at the west end of section 3. It is possible that there was some form of weir or drop in the culvert floor which is now hidden below the silt.

⁵⁸ Anderson 1882 p228-235.

⁵⁹ Crimp 1894 p168-173.

The brick arch of culvert section 3 had been built over slightly wider channel side walls which rested on Reigate stone blocks. This suggests two phases: an earlier – possibly open – channel and a later brick arch.

It is odd that the culvert arch is narrower than the underlying wall as it means that the inner edge of the arch is unsupported and potentially unstable. The arrangement would make more sense if the channel was filled with gravel at the time that the arch was constructed so that its brickwork rested partly on the sidewalls and partly on the gravel. The top of the gravel is some distance below the bottom of the arch. However, if there was a small weir immediately downstream, gravel would have built up behind this. If the weir was then removed the gravel might be washed away leaving the inner edges of the arch unsupported.

The bricks in the arch of sections 3 and 4 are mostly less than 60 mm thick but have at least one diagonal stacking mark. It seems likely that they have a similar date to the bricks used to construct the mansion house at Stone Court, Carshalton, around 1700. At Carew Manor there was a minority between 1689 and 1707 when Nicholas Carew, later first baronet, came of age. The house and garden seem to have been neglected at this time and it is unlikely that any significant work was done on the garden. It would therefore be logical to date the brick arch of culvert sections 3 and 4 to the early part of the first Baronet's majority – perhaps about 1707-10.

The construction of the west end of culvert section 3 is similar to the construction of the older lower parts of section 2, and the side walls at the culvert exit. These all have a brick channel face with a rather rough mixture of brick and chalk behind. However, culvert sections 3 and 4 had grey rather than green mortar.

Culvert sections 1, 2 and the channel at the culvert exit

The lower parts of the side walls of section 2 can be divided into two, one at the east end, the other at the west. On the south side of the channel the sections were separated by a bonding break 0.52 m from the junction with section 1. On the north side the break was marked by a mass of mortar [CW234] which started 0.82 m from the junction with section 1 and continued eastwards for 0.26 m. The lower part of the culvert side walls to the west of the bonding break and the mortar mass were faced with soft red brick bonded with green sandy mortar while the back of the walls were a mixture of brick and chalk. The side wall foundations at the culvert exit were the same distance apart as section 2, on the same alignment and made in a similar fashion with brick, chalk and green mortar. They were separated by culvert section 1 which was only inspected from the inside where the bricks were covered with limescale. However, at least parts of the side wall were of soft red brick and they may well be the same date as the walls up and downstream. The lower parts of culvert section 1, the western part of section 2 and the exit channel walls [CU15] and [CU17] are therefore probably part of the same structure.

Six bricks were retained from the west end of the north wall of culvert section 2. All were of uneven size and rough finish and two had a mould mark on the top. This suggests that they are Tudor. However, at their thickest points the bricks measured 55, 60, 65, 68 and 68 mm. At least one of the facing bricks in this area had a diagonal stacking mark. The thicknesses and stacking mark strongly suggest an eighteenth century date despite the rough finish.

There was a gap 1.46 m to 1.9 m wide between the eastern end of this structure and the western end of culvert section 3. On the south side this gap was filled by the ornamental structure. The western end of the ornamental structure (sections 5 and 6 and the inner side of 3) appear to be additions (see section 7.1 above) and may well have been constructed to adapt the surviving fragment of the structure to its new role as a decorative channel wall. There is no evidence for any covering over this area and it is likely that at least this part of the structure was open to the sky, possibly as a cold bath.

The brown cement on the lower part of the 'grotto' may have been an addition made when the structure was converted to form the side of the pool. Mortar mass [CW234] may be a surviving fragment of a similar structure on the opposite (northern) side of the channel.

Many of the Wealden marble slabs were found in the culvert bed suggesting that it was closely associated with it. If the culvert had been adapted to make a cold bath the slabs could have been used to floor it. One slab had a full surviving width of 300mm.⁶⁰ Culvert section 2 had a width of about 1.4 m to 14.3 m which would be about 4.6 to 4.75 slabs wide so they would not fit exactly even if an allowance is made for bonding between them.

The brick lined slot in the channel floor could have been the base of a sluice or similar structure which retained the water within the bath. The slot was also lined with brown cement.

It would be hard to build a sluice above the slot if it was covered by the arch of culvert section 1. It is therefore likely that the culvert arch is a later addition and that the channel was originally open to the sky. The lower part of the vault of section 1 appeared to be of soft red bricks bonded with brown mortar while the upper part had harder red bricks in grey mortar – both similar to the retaining wall at the culvert exit. The open channel was culverted by 1820 when the enclosure award map was made.

The brickwork forming the sides of eastern end of section 2 adjacent to the 'grotto' contained many yellow stocks even in the lowest courses. They are not essentially different from the arch of section 2 and are almost certainly of late date as yellow stock bricks are not commonly found at Carew Manor before the nineteenth century. The finds from the fill of the overlying cut included two sherds from a bowl or jug marked W.B. COBR... probably for William Brownfield of Cobridge, Staffordshire. This suggests that vault was rebuilt in or after the second half of the nineteenth century. It is curious that the bricks in the southern wall were cut to fit around the remaining fragment of the ornamental structure which could more easily have been demolished. There is no obvious explanation for this.

This section of culvert was almost certainly a replacement for an earlier one as the enclosure award map of 1820 does not show an open channel at this point. A number of fragments from the arch of a demolished culvert were found in the fill of the cut. The culvert was made from soft red bricks bonded with grey mortar. The inside of the arch was covered with limescale which often had black deposit on it suggesting that

⁶⁰ It was found in three pieces CU <11>, <12> and <17>.

the culvert had been in place in the mid-nineteenth century when the Wandle was heavily polluted.

The bricks had a median thickness of 64 mm suggesting a date of c.1715 or later (see section 18 below).

7.7 The deposits below the structure and culverts

The natural was green sand, almost certainly the base of the Thanet beds. This was exposed in the bottom of the culverts but in other areas it was overlaid by gravel, presumably an old terrace of the River Wandle.

7.8 The deposits north of the culvert and structure

The top of the natural in this area [CW24] may well be the base of a cut associated with the construction of the culvert. There was a rubbly deposit above it which may have been debris associated with the culvert⁶¹. This is overlaid by hard orange-brown soil with a gravel 'track foundation' on the west side. The foundation is probably the same as structure as gravel deposit [CW115] in the south-west corner of the trench. The track was overlaid by two layers of later soil.

7.9 The deposits south of the culvert and structure

This area contains the following overall sequence from bottom to top:

- Natural gravel
- Several cuts and fills which appear to be truncated at the top of the gravel.
- Three deposits of material from east to west separated by rather ill defined cuts or tip lines.
- A deposit of orange sandy soil which appears to rest unconformably on the deposits below unless the ill defined boundaries in the lower deposits were not detected in the upper ones.
- The western side of the above which was largely covered with gravel and soil. Part of the gravel overlay the top of the ornamental structure.
- Above this there was a further deposit of orange brown sandy soil.
- Top soil.

7.10 The cuts above the culverts

7.10.1 Above section 2

A deep cut [CW37] extended from the base of the top soil to the top of culvert section 2. A number of cuts around the edge of [CW37] showed that it had been a re-cut at least once. The fill of [CW37] consisted of brown earth with a great deal of loose rubble including soft red brick, some yellow stock brick, peg tile, flint cobbles and knobbly flint, mortar, chalk and numerous fragments of decorative rocks, shells and a few pieces of coral. The deeper parts had less rubble and more soil. There were also a number of fragments from a demolished culvert arch (section 7.4 above).

The deposit contained a number of finds of Victorian or early twentieth century date. These include two joining sherds from the base and side of a blue porcelain bowl or

⁶¹ [CW35] and [CW36].

jug marked 'W.B. COBR...'. probably for William Brownfield of Cobridge, Staffordshire who was working in the second half of the nineteenth century.

7.10.2 Above section 3

The east side of trench CW showed a clear cut above culvert section 3 (figure 89) although it is possible that this was the edge of the trench dug for the repair of culvert section 2.

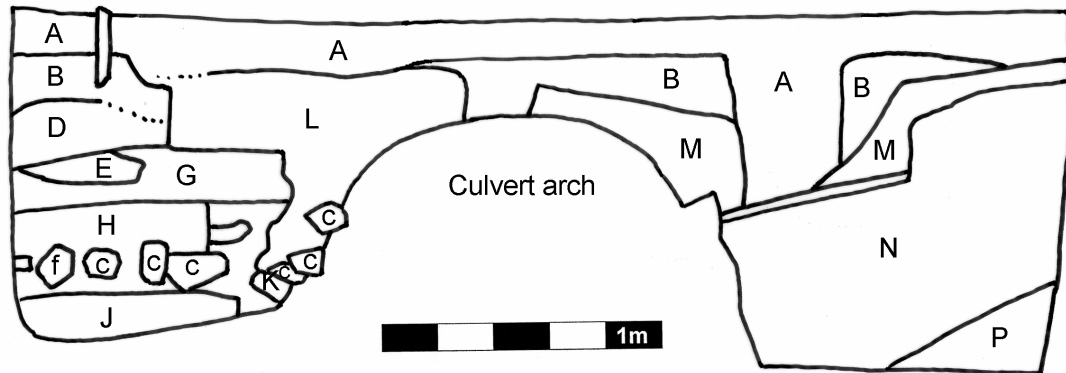


Figure 89: The east section of trench CW

A = Brown soil with scattered flints; B = Orange clay with rounded and sub-angular flint; C = Chalk; D = Grey sand mottled with orange clay and a little brown soil; E = Crushed chalk and some flint in grey brown very sandy soil; f = Flint; G = Pale grey brown sand with scraps of chalk and a scatter of knobbly and sub-angular flint; J = Densely packed angular and sub-angular flint; K = Crushed brick; L = Brown sandy soil mottled with clay, small scraps of flint and some larger flint; M = Orange clay like soil with scattered brown soil; N = Hard brown sandy soil; P = Orangey clayey soil.

8 THE FINDS

The deposits in trenches CU and CW around the ornamental structure, and especially the filled cut above it, produced many pieces of rock, mineral, shell, coral, marble and some metal which were clearly decorative. This section is an overview of this material with reference to other relevant material from around Carew Manor. This is very much an interim statement as the material has not yet been fully catalogued and identification and sourcing is still in progress. The quantification of the material poses particular problems. The decorative material (even scraps) and the more interesting structural fragments have been given special numbers either at the time of excavation or during processing. However, these do not give a reliable guide to the quantities as some pieces are minute and others large. The obvious approach would be to weigh each type but some fragments consist of several different materials joined by mortar and cannot be separately weighed without destroying them. However, it is clear that some materials are common and others rare and this will be indicated below.

8.1 Flint

Flint was used in the surviving fragment of ornamental structure both decoratively and as a filler. The decorative material consisted of large knobbly often elongated flints which sometimes had chalk on them and had obviously been brought directly from the quarry where they had no doubt been specially selected. Many pieces of this material were found in the fill of the cut over the culvert. The filling material was

mostly rounded cobbles which were used in the cement in the ornamental structure and were also found in the cut fill.

8.2 Tufa / sinter

There were several pieces of a tufa-like stone in the ornamental structure and many more in the cut fill and other contexts. The colour varies considerably from pale brown to red. Many pieces contained both quartz and calcium carbonate. The rock did not, therefore, originate in a low temperature spring. It is very similar to a rough building stone which is widely used around Paris – for example in the market hall at Versailles – and it may have come from that general area.

8.3 Metamorphic rocks

The ornamental structure contained a few pieces of high grade metamorphic rock – some granite-like gneiss and some of dark sparkling amphibole. There were many more pieces in the cut fill above culvert section 2 and in the channel gravels. There were also a few small pieces of schist. These rocks are not local and must have come from Wales, Scotland, Brittany or some other hard rock area.

8.4 Ferrous conglomerate

Ferrous conglomerate was used to line parts of the inside of the ornamental structure and was also common among the detached finds. It consisted of flint pebbles of mixed size and shape bound by iron oxide. The material is very similar to the gravel stone found in several West-Middlesex churches on the Taplow gravel which is likely to be the source of the material.⁶² It is possible that the Beddington material came from Middlesex but it seems more likely that it was found in similar gravels in the upper Wandle valley.

8.5 Shelly marble

The gravels in the bottom of the culvert contained many pieces of shelly ‘marble’, probably Paludina limestone from the Weald Clay in Surrey, Sussex or Kent. The material falls into three groups:

- Thin slabs 17 – 24 mm thick with one smooth and one rough side, often with bevelled edges. Three joining pieces could be reconstructed as three quarters of a square slab with sides 300mm long.⁶³ The smooth surfaces of many of the pieces are partly covered with soft white limescale.
- Thick slabs 63 – 70 mm thick with one polished and one flat but rough side. Where the edge is preserved it is curved and has a polished surface except where the roughness of the side extends onto the edge. The rough surfaces appear to have been worn by water as the soft areas have been worn more than the hard ones. One piece has a preserved corner.
- A few pieces of intermediate thickness.

⁶² Robinson 1988

⁶³ Finds <11>, <12> and <17> from [CU20]

8.6 Marble

There were some pieces of mottled red and grey marble in the western end of the structure and a few pieces in the loose finds. This material is likely to have come from Belgium and was often used to decorate the tombs of wealthy Elizabethans and Jacobean.

8.7 Geodes from hematite

A small number of geodes were found although none was in situ on the structure. They have a hematite red surface and cavities lined with crystals of calcite and quartz. They may come from hematite or ochre deposits in the upper part of the Carboniferous limestone. There are many possible sources of which the Mendips and Bristol are the nearest.

8.8 Shells

These are still awaiting identification. However, a preliminary examination has shown that there are many cockles and some other shells that are found on the coast of southern England. The grotto structure included several abalone shells and further examples have come from the rubble. Abalones are found in Cornwall and Channel Islands and on rocky shores to the south of these. The rubble also included tropical barnacles and some other shells which are likely to be of tropical origin.

8.9 Coral

Seven pieces of tropical coral were found in trench CW, 1 in trench CU and two pieces were found in CN on the centre of the east lawn (see section 4.11 above).⁶⁴

Special number	Context	Coral type	Notes
<41>	[CU20]	Scleractinian Agaricia	Curving sheet-like piece of coral. This is of Caribbean origin
<5>	Cut fill over culvert section 2	Scleractinian Dendrophylliid	Branch coral with linear pattern on the surface. Indet? Much limescale on the surface.
<29>	Cut fill over culvert section 2	Scleractinian indet	Sheet like coral with linear patterns on the surface. Indet?
<77>	[CW10]	Scleractinian Porites	Branch coral with a star-like pattern on the surface. Traces of mortar and probable limescale
<79>	[CW10]	Scleractinian Porites	Branch coral with a star-like surface pattern. Limescale on the surface.
<452>	[CW8]	Scleractinian	Scrap of branch coral embedded in mortar with many charcoal flecks.
<1005>	Cut fill over culvert section 2	Scleractinian	Branch coral with small bumps on the surface with a hole in the centre like a minute volcanic crater. A little white limescale on the surface
<448>	CW	Not yet identified	

⁶⁴ I am very grateful to Dr Brian Rosen for the identification of these corals and their habitat.

Special number	Context	Coral type	Notes
<10>	CN	Dendrophylliid coral	Piece of stag horn coral. Traces of clay on the surface. This coral group almost all live below 70m
<11>	CN	Acropora coral	Some patches of white material on the surface - probably mortar.

Dr Brian Rosen comments that:

The corals do not seem to represent an ecological suite. In particular, dendrophylliids usually live in relatively deeper darker water habitats, not necessarily in the tropics. In fact, of the known species of *Dendrophyllia* recorded from the Atlantic region (including Caribbean), only one relatively rare one occurs in depths of less than 70 m or so. Reef corals like *Agaricia*, on the other hand, live on, or close to, coral reefs in warm shallow tropical waters, generally in depths less than 70 m, perhaps 100 m at most. This suggests to me that the Carew Manor corals were not necessarily collected all at the same time. More likely, they came from different habitats, and possibly even different geographical locations. The deeper water origin of most dendrophylliids also makes one wonder how, back in 1720 or so, such specimens were recovered. Deeper water dredging and trawling are generally more recent techniques.

The material is therefore highly problematic especially as the deep water coral CN <11> came from beneath the chalk walk foundation from an apparently very secure early eighteenth century context (see section 4.11 above).

Find <14> from the culvert gravels in trench CU is a West Indian reef coral. There are two known connections between Sir Francis Carew and the Caribbean. The first are the voyages of Sir Walter Raleigh who married Sir Francis Carew's niece Bess Throckmorton. The marriage took place in secret probably in November 1591 when Bess was pregnant⁶⁵. It is not known when the relationship started but it is unlikely to have been before November 1584 when Bess became a member of Queen Elizabeth's privy chamber where Raleigh was a prominent courtier and captain of the guard from 1587.⁶⁶ Raleigh had opportunities to obtain material from tropical sources both before and after his marriage.

Raleigh sponsored the Virginia colonising expedition of 1585 which included the scientist Thomas Harriot and the artist John White who were sent to record the people, landscapes and wildlife encountered. The expedition went out via the Caribbean and visited Puerto Rico. Harriot and White may have collected specimens but much of their material was lost as they left Virginia.⁶⁷

The second connection is the voyage of Thomas Throckmorton, the son of Sir Francis's sister Ann. On 25 May 1589 Thomas Throckmorton made his will as he was

⁶⁵ Rowse 1962 p160

⁶⁶ Rowse 1962 p104 and 144.

⁶⁷ Hulton 1984 esp. p12 and plate 4.

planning to go on a sea voyage with John Chidley.⁶⁸ Andrews *Elizabethan Privateering* provides an account of the proceedings:

Another amateur was John Chidley, a young gentleman of Devon, born in 1565 into an old and well connected family. Like others, Chidley was inspired by Drake's famous circumnavigation to venture by the Magellan Straights into the South Sea and return by the East Indies. He was not driven by poverty or disgrace to undertake this gamble ... In financing the voyage he obtained the help of a number of investors, including several merchants, but essentially it remained Chidley's own project, in which he and his chief partner, Francis Manby, held the decisive last shares. Both sold the greater part of their estates for the adventure. Three ships – the *Wildman* (300 tons), the *White Lion* (340 tons) and the *Delight* (alias the *Robin*, 120 tons) – and two pinices (one of them called the *Wildman's Club*) made up about 800 tons of shipping – a formidable force for a private venture. Expenses in the fitting out were excessive. The *Robin*, which was acquired from the Bristol shipowner William Walton, was probably worth far less than the £900 bill of adventure that Chidley gave for her; and the 25-ton *Wildman's Club*, which had been Paul Bayning's *Susan's Handmade*, cost the astounding sum of £600. The *White Lion* alone, fully furnished and victualled, represented a capital outlay of four or five thousand pounds, and if the other vessels were as lavishly provided the whole expedition must have cost well over £10,000.

The fleet left Plymouth on 5 August 1589, Chidley commanding the *Wildman*, Thomas Polwhele the *White Lion* and Andrew Merrick the *Robin*. The last was separated from the fleet somewhere between Cape Blanco and the coast of America. Nevertheless she kept her course to the Magellan Straights and only turned back after six weeks of encroaching despair, having lost thirty-eight out of a complement of ninety-one, the remainder threatening mutiny. Finally only six remained alive to bring their ship to the coast of Normandy, where she was wrecked for lack of an anchor. Meanwhile the other ships were faring little better. Disease spread through the force, and in November, off the Guiana coast, Chidley and Polwhele both died. Soon afterwards Benjamin Wood, a notable seaman in his time, brought the *White Lion* home. The *Wildman* and her *Club* then made for Trinidad, where the crews stayed some time recruiting their healths, and here it was that a few of them, led by Abraham Kendall, stole away with the pinice, sailed it to Barry in Wales and there sold it. The *Wildman* herself returned last, about midsummer 1590, and the disasters of the sea now gave place to salvage operations in the Admiralty Court, where investors set forth their financial claims against the dead man's widow.⁶⁹

The will suggests that Throckmorton had invested £500 in the venture. Rowse says that he disappears about this time and it seems likely that he died on the expedition.⁷⁰

Neither expedition seems a likely source of deep water corals.

⁶⁸ Sutton Carew papers 3/11.

⁶⁹ Andrews 1964 p67-8.

⁷⁰ Rowse 1962 p118

8.10 Glass waste

There were a few small pieces of green, black and blue glassy material in the deposits around the grotto. Three pieces have been examined by David Dugworth of English Heritage. These were:

Find	Context	Description
<33>	[7]	Cream-coloured ceramic material with adhering green glass
<57>	[8]	Pale blue to grey vesicular and brittle vitreous material
<117>	[20]	Opalescent white to pale green vitreous material

He reports:

All three samples are fragments of glass working waste. Sample 1 comprises a glass working crucible which has undergone extensive vitrification and reaction with adhering glass. Samples 2 and 3 are fragments of two different types of glass which have undergone devitrification. Devitrification occurs when glasses are maintained at high temperatures for long periods of time. The types of glass represented were manufactured in Britain from the late 16th century into the 19th century. Neither of the two types of glass represented were manufactured in Britain prior to 1567. Sample 2 is a type of glass which was widely used for the manufacture of vessels, bottles and windows. Sample 3 is a type of glass which was used for the manufacture of vessels and window glass. The composition of sample 2 is typical for late 17th century and is unlikely to have been manufactured after the early 18th century. The relatively high alkali content of sample 3 suggests it was manufactured in London rather than a provincial glasshouse. In terms of the glass composition, the closest parallels are the glasshouses at Old Broad Street (early 17th century) and Vauxhall (late 17th century).⁷¹

8.11 Lizard ware – a Palissy type ceramic

The excavations at Carew Manor have produced four small pieces of a Palissy-like ceramic, two of which came from trench CW; one from CU and one from CG in the south east corner of the moat (see section 3.3.5 above).⁷²

Find CG <11> (figure 90) is only 16 mm long. The curved shape and the fine details are similar to Palissy ware lizards' tails. The ceramic body is white, the bottom of the piece had been knife cut before firing and the whole covered with a green lead glaze with traces of yellow. It came from [CG13], a layer of rubble dumped in the south-west corner of the moat probably when the house was remodelled about 1710-12.

⁷¹ Dugworth 2006.

⁷² The Palissy background is based on Amico 1996

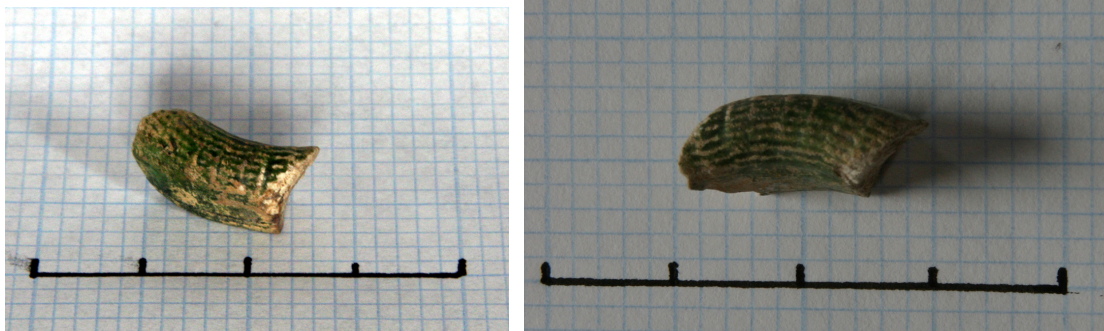


Figure 90. Find <11> a lizard ware fragment from trench. The graph paper has 2mm squares.

Find CW <2000> (figure 91) consists of a short section of green glazed lizard tail with characteristic mouldings attached to a small area of manganese-glazed base. The glaze extends down the sides of the base showing that it was part of a small ornament rather than a fragment of a plate. The fragment is 14 mm long, 10 mm wide and 6 mm high. It came from [CW207] in the fill of the cut immediately north of the south wall of the ornamental structure.

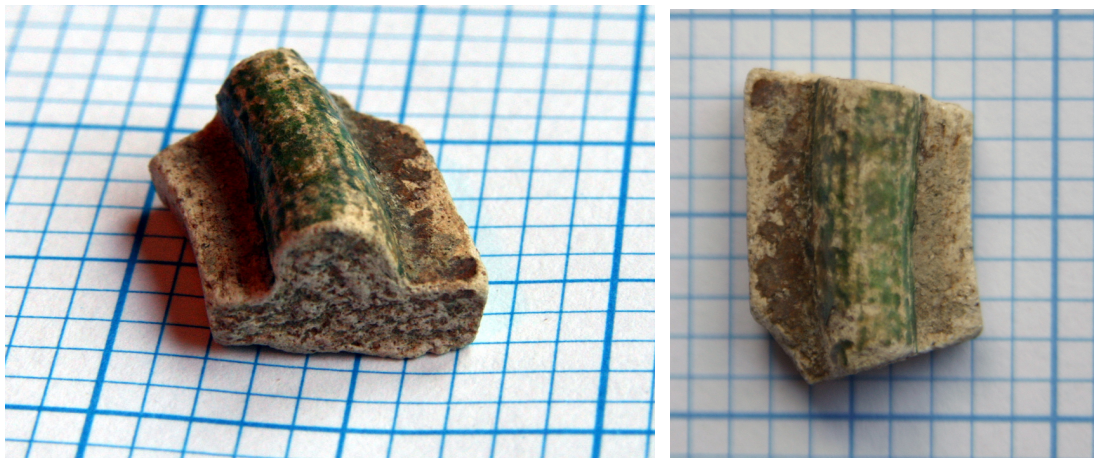


Figure 91. Find <2000> a lizard ware fragment from trench CW. The graph paper has 2mm squares.

Find CU <8> (figure 92) is more enigmatic. One side is decorated in high relief with two oval rolls of clay both tapering to a point and lying side by side in opposite directions, and both covered with dark green glaze. To one side of these there is a curved surface covered with thin brown manganese glaze. On the other side of the oval strips there is a small area of surface with pale blue glaze. It came from [CU20] the gravel at the culvert exit.



Figure 92. Front and back view of lizard ware fragment <8> from trench CU. The graph paper has 2mm squares.

Find CW <2147> (figure 93) is equally enigmatic fragment. It consists of a slab of clay, 15-20 mm wide, up to 30 mm long and about 6 mm thick with a shallow moulding impressed into it. The moulded side is covered with brown glaze. It was found in the cut fill close to inner wall of the ornamental structure.

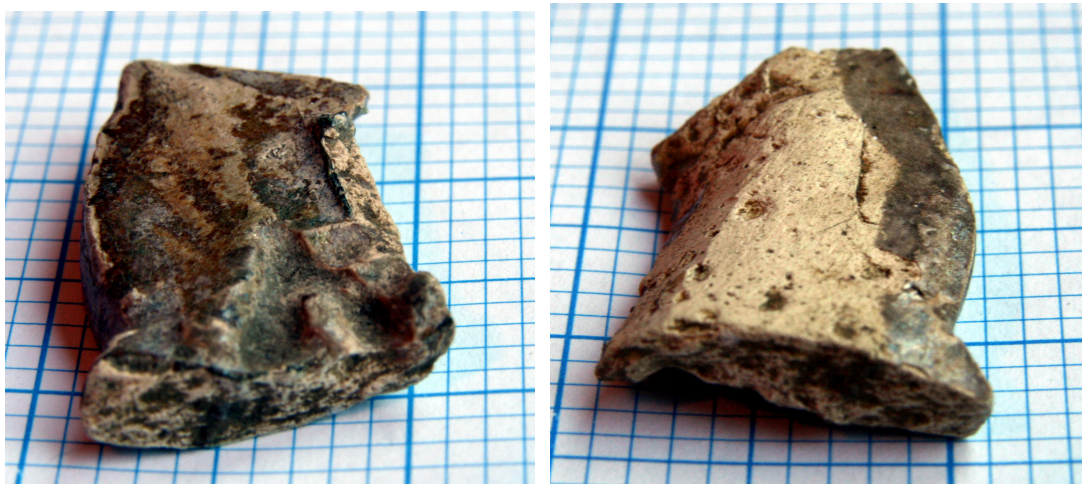


Figure 93. Front and back view of lizard ware fragment <2147> from trench CW. The graph paper has 2mm squares.

The coloured lead glaze, high relief moulding and the lizard's tail form are all features of Palissy-type ware that are hard to parallel in other early modern pottery. However, a brief comparison of the Beddington material with some of finds from Palissy's workshop at the Tuilleries, Paris, now in the National Museum of the Renaissance at Ecoyen, France shows clear differences as well as similarities. The Beddington lizard's tails are more crudely made, the moulding is much less sharp and the glazes and fabric differ somewhat. It is clear that the Beddington ceramics were not by Bernard Palissy and, in the absence of a known potter or production centre we have called the material *Lizard Ware*.

8.12 Metal work

8.12.1 The leaf

A small heart shaped, non-symmetrical leaf of thin sheet copper or copper alloy was found in trench CW (figure 94).⁷³ The leaf is 20 mm wide, has a length along the spine of 21.5 mm and the maximum length of 24 mm. The spine of the leaf is formed by a fold in the metal creating a shallow V section. The leaf has veins which were made by scoring on one side producing shallow ridges on the other side. The edges of the leaf have been cut and the cuts bent slightly to produce serrations. The tip of the leaf has been pinched shut and the metal bent slightly. On excavation about two-thirds of the convex side was covered with pale olive-brown limescale, which was in turn partly covered by grey limescale. The concave side was also largely covered with layers of olive-brown and grey limescale. On both sides the limescale had a network of cracks in it which existed when the leaf was excavated.



Figure 94. The copper leaf, as found partly covered with limescale and the two sides after cleaning. The graph paper has 2mm squares.

8.12.2 The fish

A small copper fish (figures 95 and 96) was found in the topsoil to the west of trench CW. This is 50 mm long by 25.5 mm high and is made from sheet copper, or copper alloy, about 0.25 mm thick. A joint runs from nose to tail along the bottom of the fish and from the back of the head to the tail on the top. The edges are butted together and are presumably soldered, although the job is very fine with no obvious spillage on the surface. The fish has a protruding upper lip, a large head and prominent gill covers. The head has some light vertical ribs along the gills. There are two eye sockets each about 4 mm in diameter with 2 mm holes at the back probably to secure an eye of glass or some similar reflective material. There is a rectangular opening under the head where the mouth would have been, which was originally 14.5 mm wide and 7 mm high. Behind the head the scales are represented by a combination of light diagonal scoring and by raised diagonal ribs that were hammered from behind. They run in opposite directions at an interval of about 2.5 mm. The scoring appears to have been done first on the outside followed by the repousse. The ribs are much more prominent than the scoring so that the overall impression is of a fish with protruding ribs rather than scales. A small fin on the top, 9.5 mm long and 2 mm high, is

⁷³ Find <80> from [CW10].

decorated with light, more or less vertical, scoring. There is a 2 mm diameter hole in the underside of the fish 22.5 mm from the tip of the nose. This corresponds to a small metal bracket, pierced with another hole, inside the fish at the top. This has been distorted by a dent, but the hole in the bracket appears originally to have been located above the hole in the underside of the fish, and presumably fitted onto a pin on which the fish could rotate. When the fish is suspended by a thread through the hole it is very close to balance. The tail is missing and there is no sign of any fixture to attach it. The opening where the tail would have fitted has been somewhat distorted but it appears to have been more or less oval, about 11mm high and 5mm wide. There is no evidence for the form of the tail. If the fish were immersed facing upstream the rectangular mouth would tend to catch the flow and it was presumably intended to oscillate in a current.



Figure 95. Side view of the fish.



Figure 96. Bottom of the fish showing the mouth and the pivot hole.

8.12.3 The ring

<125> [CW10]

A tiny copper ring was found in the soil to the south of the grotto.⁷⁴ It was nearly circular with an internal diameter of 5-5.5 mm and a thickness of up to 1 mm. The ring is not closed and the 'wire' tapers to points leaving a gap of slightly over 1 mm. The outer side of the ring is slightly faceted. It is not clear if this is the original shape or is due to wear or corrosion. It has green and brown patination and traces of a white deposit which might be limescale. It looks as if it belongs with the leaf and fish but its function is unknown.

9 THE NORTH SIDE OF THE GARDEN

This section deals with the areas to the north of the central garden. The north edge of the western end of the area is today bounded by the river Wandle and Roque's map suggests that, in the mid-eighteenth century, this also applied to the eastern area.

The north side of the garden can be divided into several areas based on recent land use. These are shown on figure 97. From west to east they are:

⁷⁴ Find <125> from [CW10].

- The area around the Dovecote with Beddington Park Cottages on the east side.
- The new cottages to the east of the north end of Beddington Park Cottages.
- The allotments and Carew Manor Cottages
- The former hockey pitch
- The Crispin Crescent housing estate.

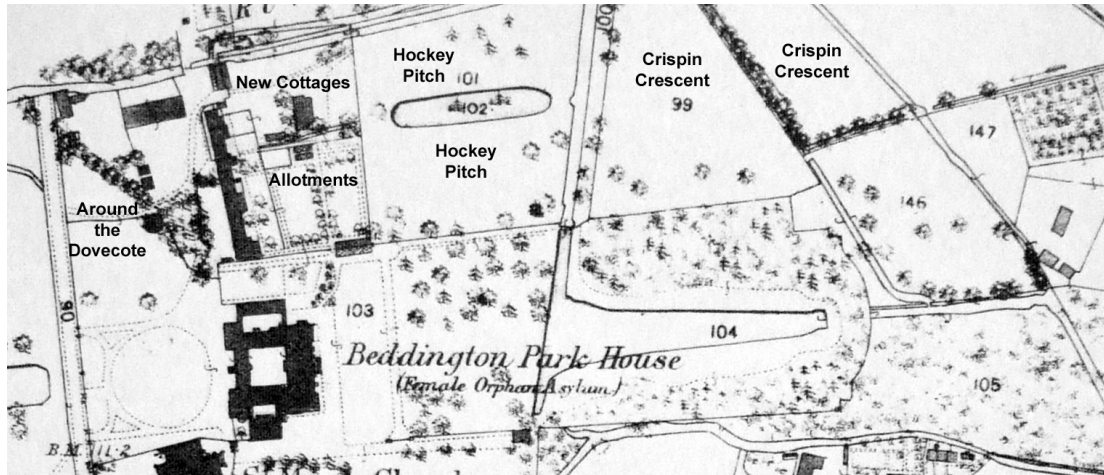


Figure 97. The first edition 25 inch Ordnance Survey map of 1868 with the names of the north garden areas used in this report.

9.1 The River Wandle

Roque's mid-eighteenth century map of Surrey shows a river channel running westwards from Beddington mill across the north side of the garden.

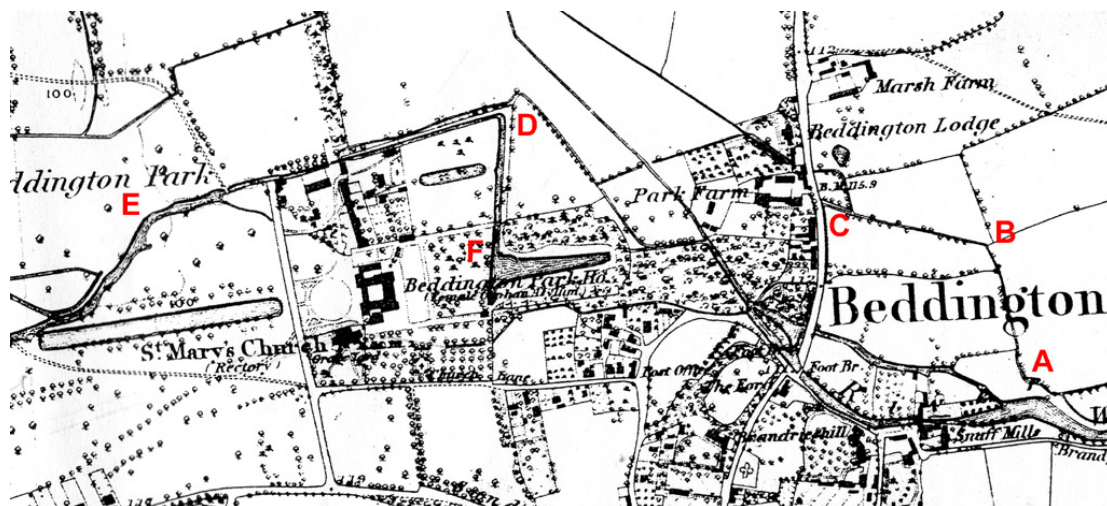


Figure 98. The river on first 6 inch Ordnance Survey map.

This line can probably be traced on the first edition six inch Ordnance Survey map. It left the present channel just upstream of Beddington Mill (marked A on figure 98). It then passed by B and C to Park Farm which is clearly on the Roque channel line. It joined the present river channel at D, ran along the modern line to E, and then continued westwards across the park in a channel which still survives as a grass mark.

It is likely that this channel is of some antiquity as it appears to mark the southern boundary of the manor of Huscarls which can be traced back to at least the mid-

thirteenth century.⁷⁵ This suggests that the river channel shown on Roque is probably the same as the medieval and Tudor channel.

The north-south channel D-F on figure 98 took the water from the east lake to the north channel. It is not marked on Roque but is likely to be of eighteenth century date as its alignment was incorporated into the eastern end of the Orangery wall and the pillar by the river (See sections 4.1.3 and 5 above).

The river downstream of the former east lake (F-D on figure 98) was regraded, reshaped and slightly realigned when flood alleviation work was carried out in 1990-1. The foundation of a brick retaining wall was found on the east side of the channel as it left the lake (figure 99). This was mostly made of coarse red bricks. It was aligned to give a funnel shaped entrance to the river channel and appeared to relate to the lake in its nineteenth century form. There was no sign of other structures in the channel apart from the weir near the north end of Beddington Park Cottages although observation conditions were not good.



Figure 99. Foundation of a retaining wall on the east side of the channel at the exit from the east lake. Looking north-west during the flood alleviation work in 1990-1.

9.2 Around the Dovecote

This area was a service court to the northwest of the house. It centred on the dovecote, a large octagonal brick structure which was probably built for the first baronet at the beginning of the eighteenth century. The 1820 map shows a long building on the north side of the area and parallel with the river. This may have been the stable but the structure did not survive the nineteenth century and very little is known about it. The east side of the area is marked by a long range of buildings which are now known as

⁷⁵ Phillips 2006; Pryer 1974.

Beddington Park Cottages. The early nineteenth century maps also show several smaller buildings which have not survived.

This area is of only peripheral relevance to the garden. The main issue was whether the court existed in the sixteenth and eighteenth centuries as it would have formed the western boundary of the northern part of the garden. The court is clearly marked on the 1820 map and the first edition one inch Ordnance Survey shows a scatter of buildings in the area. This was based on a survey some time between 1792 and 1816. However, there are no buildings on the site on Roque's map of c.1750. The Elizabethan household accounts mention a great court but it is not clear if it was on this site or elsewhere. The archaeological evidence is limited to the two buildings that have survived.

The first is the Dovecote, an octagonal brick structure with a prominent string course half way up the wall and small brackets at the eaves. On stylistic grounds it should date from the first half of the eighteenth century and is generally attributed to Nicholas Carew first baronet who owned the house 1707-1727. It appears to have replaced an earlier dovecote which stood on the west side of the modern Church Road, on or near the site of the New Graveyard.

The second is Beddington Park Cottages which are also clearly marked on the 1820 map and still stand today although they have been much altered and modernised. The Cottages were surveyed in the 1980s prior to their conversion into modern houses. They had been greatly altered and rebuilt over several centuries. The cottage at the northern north end of the range had a crown post roof suggesting that it was constructed before c.1550.⁷⁶

However, there were two pieces of evidence to suggest that the building may have been moved:

- The carpenter's marks on the roof rafters were jumbled suggesting that that the roof had been taken apart and reassembled.
- The original frame was good quality with substantial squared timbers and one would expect equally well made footings of mortared chalk. There were, however, no convincing medieval footings. The lower parts of the west and north walls were clearly later rebuilding (mostly nineteenth century?) but there was no reason why they should not have rested on the original footings if they had ever existed. A surviving section of sill beam in the east wall was supported by brick resting on flint and mortar.

If the buildings were moved it must have happened before 1820. Roque does not mark any buildings to the north of the house but the map is too small scale to be conclusive.

9.3 Test pit CX and the watercourse east of the cottages

The 1820 map (figure 63) shows a north-south aligned water course immediately east of Beddington Park Cottages. This ran from the west end of an oval pond in the

⁷⁶ Gray 1998 p20 says that in East Surrey crown post roofs had gone out of use by about 1550.

hockey pitch area (section 9.6), turned southwards along the back of the cottages, and ended against a small building.

In January 2004 a deep test pit was dug in the back garden of 3 Carew Manor Cottages to investigate a wall exposed by workmen during alterations to the drains. The wall ran north-south continuing the line of the west wall of the allotments. It was made of coarse red bricks with shallow frogs. The upper part had been removed by the workmen and at the time of the investigation the top by the trench was at 31.24 m OD. Here the wall was 0.46 m wide. Within the trench there was an offset 0.58 m below the top at 30.66 m OD. The wall bottom was 1.09 m below the top at 30.15 m OD. The use of coarse red bricks with shallow frogs would be consistent with a nineteenth century date.⁷⁷

Trench CX was dug down the western face of the wall. The earliest deposits in it were a gravel layer [CX16] and the overlying brown peat [CX15]. The investigation of these was hindered by flooding and the confined space so it is not clear whether they were part of the channel sequence or much older natural.

They were overlaid by four layers [CX14], [CX13], [CX12] and [CX11] which appear to represent a sequence of water laid deposits which presumably formed in a channel shown on the 1820 map. From top to bottom these deposits were:

[CX11]	Gravel
[CX12]	Black peat with scraps of twig
[CX13]	Yellow silt with many roots
[CX14]	Gravel

They suggest a series of changes in flow regime. The first deposit [CX14] must have been deposited by fairly fast flowing water. The yellow silt implies a low speed as does the peat. The change from silt to peat may suggest a reduction in the oxygen content of the water. The upper gravel [CX11] implies a return to more rapid flow.

The lower gravel contained an L25 pipe bowl which dates from the early eighteenth century while the peat [CX12] contained pottery of eighteenth or nineteenth century date. This would be consistent with the gravel [CX14] forming during, or soon after, the remodelling of the garden by Nicholas Carew, first Baronet, between 1707 and 1727. The return of more rapid flow would then belong to the period before the channel was filled. The maps show that this took place between 1820 and 1840.

Which way was the channel flowing? It must originally have connected with northern arm of the moat around the house. This has been seen at two points. The first was in a contractor's trench AC created when the former laundry was rebuilt in 1983 (section 3.3.2 above). The northern edge of this trench was 32.5 m south of CX. The bottom of the AC was gravel which was overlaid by fine dark silt and then by several layers of dumped fill. The top of the gravel was estimated to be at about 30.67 m OD but this figure is suspect as it is not consistent with other heights on the moat floor.⁷⁸

⁷⁷ Personal comment by Andrew Skelton based on observations in Carshalton.

⁷⁸ When the laundry trench was investigated a level was not available. Tape measurements were made to ground level but this was difficult to do accurately. The ground may also have been compacted by lorries.

Height m OD	Place
30.43	Bottom of the SE corner of the moat in CJ (lowest point).
30.26	Floor of the moat culvert by the entrance manhole F0 on the south side of the house.
29.96	Lowest point of moat wall reached in CA at the NE corner of the moat island. (The bottom was not reached because the trench was flooding).

The bottom of the lower gravel layer [CX14] was at 29.81 m OD, the top was at 30.04 m OD⁷⁹ and the upper layer [CX11] was at 30.69 m OD. If the bottom of the gravel layer [CX14] represents the original channel floor it appears to be at about the same height as the bottom of the moat. The water level in the moat must have been above the moat floor in trench CJ at 30.43 m OD and also above the top of the silt in trench CJ at 30.95 m OD. The levels are therefore of no use in determining the flow direction in the CX channel; it could have been either way: northwards out of the moat or southwards into it.

The silt sequence in the laundry trench differs for the sequence in CX. In the moat the gravel was overlaid by dark silt, in CX it was overlaid by light silt. Both suggest a low water speed but CX appears to have been cleaner. This suggests that the CX flow ran to the moat rather than from it.

The latest object in the laundry foundation trench silt was the base of a wine bottle with a date range of c.1725-30 into the mid-eighteenth century. This suggests that the north arm of the moat was still open when Nicholas Carew, first baronet, died in 1727 and it may well have remained open until his son came of age in 1741.

When the moat was filled an east-west aligned culvert was laid. This was seen in the laundry foundation trench and in the flood alleviation work further east on the edge of the present river. The culvert was a brick structure. In the laundry trench it was 0.47 m wide and the side walls rested on the top of the gravel. Deposits in it consisted of a thin layer of fine dark brown sticky silt.⁸⁰ There was no sign of a turning or branch towards the CX water course.

Peat layer [CX12] would be consistent with stagnation so it is possible that the channel was cut off from the moat at some point in the eighteenth century and then carried no more than local drainage.

The upper gravel layer [CX11] implies a return to a reasonable flow. This was presumably around 1820 when the channel was shown on the enclosure award map. The map shows the channel ending or starting against a small building just south of the excavation. It was presumably connected to a culvert but it is not obvious where the culvert went.

⁷⁹ There were two levels on the top of [CX (14): 30.03m OD at the west end and 30.049 m OD at the east.

⁸⁰ Layer AC (14)

9.4 The new cottages area (former wood yard)

This area east of the northern end of Beddington Park Cottages and north of the house as shown in figure 97.

9.4.1 History of the area

The 1820 map shows a building in the centre of the area with a smaller one to the south-west of it. In 1820 it was described as a 'carpenter's shop'. The area had more or less the same layout on the 1859 sales particulars where it was described as a 'carpenter's shop, timber yard &c.' In the 1980s cottages were built in the area.

9.4.2 Contractors trenches

In January 1986 the developers dug three trenches (AG, AH and AI) on the site of the new cottages to the east of the northern end of Beddington Park Cottages (figure 100).

Trench AG was about 1.16 m square and had a maximum depth of 1.34 m. It cut through eight layers of gravel and soil containing some rubble. The lowest layer [AG8] consisted of gravely brown soil with much broken roof tile.

Trench AH was about 1.15 m north-south by 1.09 m east-west and had a maximum depth of 0.98 m. It passed through two layers of flinty soil to end in soilly gravel.

Trench AI was close to the kitchen garden wall. It was excavated through six layers of soil, gravel, crushed chalk and earth and ended against the top of an east-west aligned stoneware pipe 0.96 m below ground level. The trench had a north-south width of about 2 m with little sign of a cut for the pipe except at the very bottom. The pipe was on or close to the line of a watercourse shown on the 1820 map.

These trenches suggest that there may be a considerable amount of made ground close to the Wandle and on the line of the watercourse to the north of the kitchen garden.

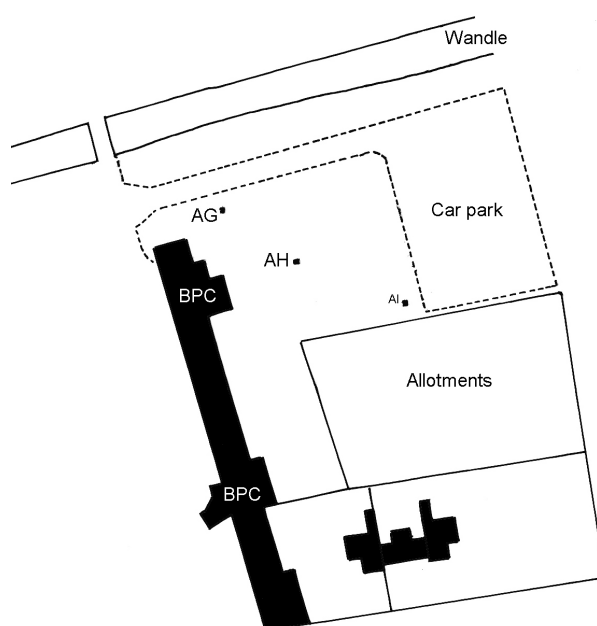


Figure 100. The location of trenches AG, AH and AI.
BPC= Beddington Park Cottages.

9.5 The former kitchen garden and Carew Manor Cottages

This area is east of the southern end of Beddington Park Cottages and north of the house as shown in figure 97.

9.5.1 History of the area

The schedule for the 1820 enclosure award map describes this area as a kitchen garden. At that time there was a building against the centre of the north wall and another straddling the boundary wall in the southeast corner. The layout was the same when the estate was sold in 1859 when there was a kitchen garden ‘enclosed by a high brick wall, clothed with choice fruit trees; there are also conservatories, vineries, forcing pits, &c., and a neat gardener’s cottage’.

The orphanage divided the kitchen garden with an east-west wall. Three cottages were built in the southern part as housing for their staff. These are now 1-3 Carew Manor Cottages. The area north of the cottages is now allotments.

9.5.2 The boundary walls

The eastern boundary wall of the kitchen garden is made of soft red brick laid in Flemish bond. At least part of this wall has a deep foundation. A small hole was dug down the east face of the wall 32.7 m north of the south-east corner of the kitchen garden uncovered an off set just below ground level. The brick then continued down for a further 0.54 m.

The north wall of the kitchen garden has gone. The eastern wall which separates the kitchen garden from Beddington Park Cottages is not very accessible and has not been examined.

9.6 The Hockey Pitch (former wilderness)

This area is bounded by the River Wandle to the west and north, the central garden to the south, and the allotments and new cottages areas to the west (figure 97).

9.6.1 Maps and documents

Roque’s map shows two east-west lines of trees in this area and it is shaded black on the first edition one inch Ordnance Survey map which might also indicate trees. The enclosure award schedule of 1820 calls the area a ‘wilderness wood’ and the map (figure 101) shows a more or less oval lake in the centre with trees to the north and south. A path ran from the gates at the end of the cross walk around the west, north and east sides of the area to the boundary wall at the southeast corner of the area where there was presumably a gate into the central garden. The wall at this point was destroyed by vandals in 1981 before it had been recorded. This layout is not inconsistent with the depiction of the area on Roque and the first edition one inch Ordnance Survey so it may have dated from at least the mid-eighteenth century. The 1859 sales particulars describe the area as ‘The Wilderness’ and ‘shrubby’.



Figure 101. The hockey pitch (area 60) from the enclosure award map, 1820

9.6.2 The culvert

The flood alleviation work in 1990-1 cut into a culvert (FG) which ran northwards from the river bank near the bridge over the Wandle at the south east corner of the Hockey Pitch area (figure 25).

It was aligned at about 11.5 degrees west of OS grid north. The side walls were two brick widths (0.22 m) thick and are made of five courses of brick with a height of 0.35 m on the east side and 0.36 m on the west. The arch was one brick width thick. The culvert had an internal width of 0.41 m and had an internal height of about 0.5 m. The culvert was almost totally filled with fine silt leaving a gap of only 0.02 m at the top. The silt was 0.33 m deep, was dark brown at the bottom and gradually changed in colour upwards so that it was light brown at the top. The lower part of the culvert was filled with gravel and the culvert walls also rested on gravel. The culvert appeared to be running towards the eastern end of the oval pond but its course has not been traced.

9.6.3 Aerial photographs

Dry weather aerial photos of the area show various patterns which are not easy to interpret and may be largely caused by natural variations in the underlying gravel and the depth of soil. Two vertical photos are of particular interest. One in the Local Studies Centre in Sutton Central Library was taken for the Greater London Council in dry weather in 1981. The other was published on Google Earth in 2006. Figure 102 shows the main features visible on them.

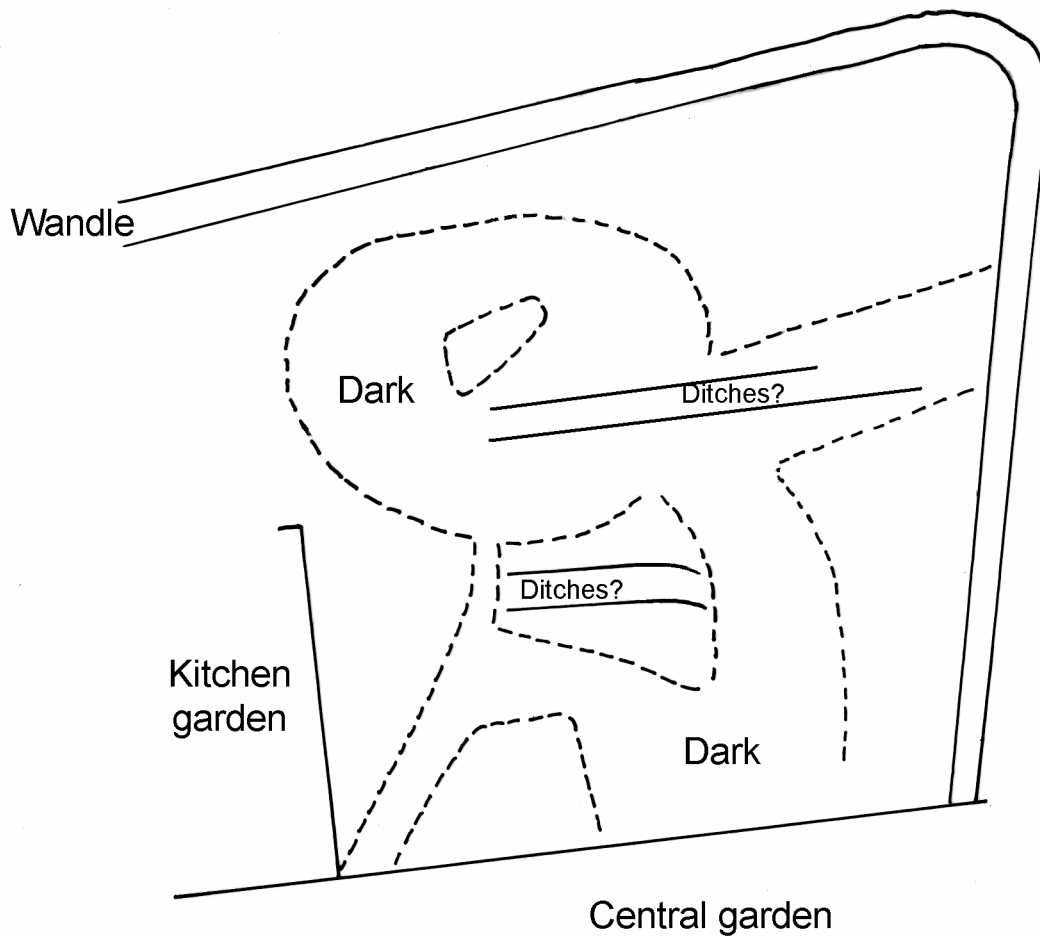


Figure 102. Some of the features appearing on two aerial photos of the Hockey Pitch.

9.7 The Crispin Crescent area

This area is east of the north-south section of the Wandle and on the site of the present Crispin Crescent estate (figure 97).

Roque's map shows two walled gardens on this site, the eastern one extending further south than the other. These are not marked on the first edition one inch Ordnance Survey map or the tithe award map of 1820.

An Ordnance Survey aerial photograph shows the area in 1946 before it was turned into a housing estate. The photo shows various ditches of uncertain interpretation and date but no trace of a walled garden.

Roque is therefore in conflict with the other sources and it seems likely that he is inaccurate. One possible explanation is that Roque's map was based on a plan for the garden which was never fully completed.

9.7.1 The boundary walls

There is a boundary wall along the eastern edge of the area between the Crispin Crescent estate and the river Wandle. This is made of soft red brick laid in Flemish bond.

The wall along the southern edge of the estate forms the north side of the central garden and is described in section 4.1.4 above.

10 THE WEST LAWN, GATES AND WEST LAKE

The area at the front or west side of the main house is known as the west lawn. It slopes westwards down to Church Road and beyond that to Beddington Park. There is an avenue of trees running across the park roughly on the axis of the house. A shallow depression between the trees marks the site of the long canal-like west lake.

In the nineteenth and twentieth centuries the west lawn was a grassed area crossed by the drives to the front of the house. However, the first edition of Defoe's *Tour* published in 1724 implies that there were gardens between the house and the west lake:

...the gardens are exquisitely fine ... the court before them [the wings] is extremely fine, and the canal in the park, before the court, is so well that nothing can be better, having a river running through it; the gardens are exceedingly enlarged, they take up all the flat part of the park, with vistas, or prospects thro' the park, for two or three miles.⁸¹

The west lake appears on Roque's map of c.1750 lined by a double avenue of trees with radiating avenues to the north and south. Part of the layout survived to be recorded on the 1820 enclosure map which shows the lake with a double avenue and the northern radiating avenue.

A series of prints and paintings show the front of the house from the 1790s. At this date the west lawn was grassed and there was no barrier between it and the main part of the park.

In 1820 the house was approached either by a drive which ran across the Park from London Road, Wallington along the north side of the lake or by a shorter route from Church Lane, Beddington, along the west side of the churchyard. There was a circular drive in front of the house. Part of this was uncovered in trench CI where it was well made of tightly packed flints set in sand (section 3.3.5 above). The tops of the flints had been struck off to form a level surface.

When the house was converted into an orphanage 1859-65 Church Road was constructed to make a new approach. A wall, railings and gates were erected along the east side of the road to enclose the orphanage grounds and the drives on the west lawn were relaid and elaborated. A statue was later erected in the centre of the lawn. The lake was filled between the 25 inch Ordnance Survey maps of 1868 and 1896.

10.1 The gates

The late eighteenth and early nineteenth century views of the house show a set of wrought iron gates between the wings. When the Female Orphan Asylum took over the house in the mid-nineteenth century the gates were moved to the Church Road boundary wall. In October 1878 when the gates were being repaired the Carew coat of

⁸¹ Defoe 1724 v1 p8.

arms were removed along with a plate on the south gate in the back garden and both were placed in the inner court. They were never replaced and lay there rotting away in the courtyard until 1896 when the fragments, along with a stone Coat of Arms, were given to Sir Reginald Pole-Carew, of Anthony in Cornwall. By 1912 the gates themselves were in poor condition and, in 1913, they were sold to Mr. Starkie Gardner of Kennington on condition that he replaced them with a 'screen' of the same design. The originals are now at the Huntingdon Library and Art Gallery at San Marino in California.⁸²

The gates are not shown between the wings on Colen Campbell's elevation of the west front published in *Vitruvius Britannicus* in 1717 and they may originally have separated the formal garden area in front of the house from the park. If this is so they must have been moved to the position between the wings when the park was extended to the front of the house in the later eighteenth century.



Figure 103: The west gates in January 2006.

10.2 The gas pipe trench

10.2.1 The trench

In October 2000 a gas pipe trench was dug across the west lawn. It started on the edge of the tarmac opposite the south side of the north wing of the house. It then ran diagonally across the west lawn in a south-westerly direction to the gas intake at the northwest corner of the lawn next to the church yard and Church Road. It was generally about 0.65 m to 0.7 m deep.

At the northeast end the trench cut through a layer of orange gravel which extended out about 4 m from the present tarmac drive. This was probably the remains of an earlier drive.

Beyond this the trench was dug through soil but the bottom was loose rubble.

⁸² Shew forthcoming based on the Orphanage minute book

It then cut through a foundation of chalk, brick and flint bonded with mortar spotted with chalk. Neither side had a fair face. The brick was fairly dark and one had a rough finish and a thickness of 54 mm. The foundation was probably running roughly north south and was about 0.8 m thick. Its east edge was about 18.3 m west of the end of the house wings. The wall was cut in line with the north edge of the front steps to the house.

The top of the solid foundation was about 0.25 m below the grass but the rubble above it extended to within 0.1 m of the surface.

There was a deposit of chalky soil in the bottom of the trench which extended from the wall eastwards for about 2.8 m. There was also a deposit of chalk and flint in the bottom of the trench to the west of the foundation. However, neither of these looked like the remains of a demolished structure and there was no sign of a parallel return wall.

To the southwest of the wall the trench crossed the projected line of the walk which ran west on the axis of the house. This appeared to be represented by a band of gravel in the upper part of the soil. The central part of the walk may have had a sparse and uneven chalk foundation but this is uncertain as the side of the trench side was dirty and the deposit may have been randomly dumped chalk.

Beyond this the sides of the trench consisted of soil with flint and occasional rubble. It became much more sandy as it approached the southern entrance drive, The bottom of the trench was different from the sides. It was of variable character - most often loose flinty soil but also stiff flinty soil, crushed chalk, flint and sand, and patches of clay. The overall impression was that the bottom of the trench consisted of dumped material and that the sides were of soil which had been deposited to cover it.

The top soil was fairly clean to the south of the entrance drive and the bottom of the trench was not so convincingly made ground. The drive had not been cut through when the site was inspected.

10.2.2 Discussion

The outer bank of the west moat was excavated in trench CI. The bank sloped down from a height of 31.65 to 31.7 m OD although these may not have covered the crest of the bank. Ground level on the north side of the trench varied from 32.4 to 32.44 m OD. If a cut 0.65 m deep had been made on the site the bottom of it would have been on or near the top of the outer bank of the moat.

The western outer bank of the moat was also seen in the service trench for the Beddington Church extension, Here the moat bank contained a pocket of orange sand, some flat peg tile, a piece of grey foam-like slag and a pig tooth. The layer was interpreted as dump rather than natural⁸³.

This seems to imply that the western bank of the moat was the edge of a large area of made ground which extended west to the vicinity of Church Road. If so the deposit laps under the fill of the west moat The dating of this rests on documents and the

⁸³ Context DE (1).

archaeology of trenches CG, CH and CI. They seem consistent and a date of c.1710-12 looks fairly secure (section 3.3.5 above).

The only dating evidence in the gas main trench was the brick. Most of this was Tudor type which was certainly in use on the site from the early sixteenth century. The absence of soft red early eighteenth century type brick suggests that the deposit was in place before the first Baronet began his building campaign or that the material came from a source remote from the house. The former is probably more likely as early eighteenth century brick is very widely distributed over the site. It is also consistent with a date before c.1710-12.

The four pieces of smooth finished brick were found on the tip and are therefore unstratified. They are likely to have come from the soil rather than the base of the trench. The two pieces of brick with a surviving height of 60 mm and 62-64 mm are therefore much thicker than the 'Tudor' type brick⁸⁴ and within the range of early eighteenth century brick. One of the gas main trench bricks had a width of 95 mm. This is narrower than the means for both Tudor and early eighteenth century material from Carew Manor and a late eighteenth or nineteenth century date seems likely.

If the base of the deposit under the west lawn is at the ground level of the park it will have a volume of around 4,500 m³ and the soil cover will have an additional volume of 4,200 m³. This is a huge amount of material and the most obvious source would be the west lake which would have had a volume of about 4,725 m³ if it had a depth of 0.75 m. The actual depth is unknown.

The lake is first mentioned in Defoe's *Tour* (1724) and is generally thought to have been created by the first baronet. The water feeder to it runs from the western moat culvert and passes beneath the west lawn. The feeder is clearly inserted into the side of the west moat culvert and it has been assumed that the lake is later than the filling of the moat. This need not be the case if the feeder replaced some earlier water source. Defoe seems to half imply this as he says:

...the gardens are exquisitely fine ... the court before them [the wings] is extremely fine, and the canal in the park, before the court, is so well that nothing can be better, *having a river running through it.*⁸⁵

Before the west lawn was sloped the moat island must have risen very abruptly out of the landscape which would certainly have been unfashionable by 1700. Whoever placed the fill intended to keep the moat open which would also have been very unfashionable by the time the first Baronet took over in 1707.

10.3 The west lake and feeder culvert

The first 25 inch Ordnance Survey map of 1868 shows that the west lake was about 300 m long by 21 m wide. In the nineteenth century it was fed by culvert F32 which ran under the west lawn from the western moat culvert (see section 3.1 above).⁸⁶ This

⁸⁴ The largest sample of Tudor type brick is from CM (15). It had a mean thickness of 52.

⁸⁵ Defoe 1724 vol.1 p.158. My italics.

⁸⁶ It left the main culvert 32.44m north of the junction of the south and west moat culverts below the south-west corner of the house. (The measurement was made from the inner edge of the junction).

was crawled and surveyed by the Chelsea Speleological Society in 1983.⁸⁷ The feeder culvert had clearly been rather roughly inserted into the side of the western moat culvert. It was initially 1.22 m wide, made of yellow stock brick and aligned approximately north-west. After a short distance it turned nearer to west and was made of red brick. It runs below the lawn somewhat north of the centre line of the house and, after several minor changes in direction, passes under Church Road where it had been much altered and modified. Grass marks and manhole covers suggest that it continues along the line of the former west lake and into the river Wandle.



Figure 104. The feeder culvert to the west lake looking from the main moat culvert. (Photo Doug Cluett).

11 FRANCIS CAREW'S GARDEN FROM DOCUMENTS

The documentary sources for the Elizabethan garden are of two main types: travellers' descriptions and entries in the household accounts. These are described in Phillips and Burnett 2006 which also deals with the chronological development of the garden and what we know of the foreign influences on it. This material is only repeated here when it is relevant to the layout of the garden and the details of the structures, watercourses and planting.

11.1 Two key descriptions

The two best descriptions of Sir Francis Carew's garden were made by travellers. The first is from the diary kept by the Moravian Baron Waldstein who visited Beddington on 26 July 1600:

We made a four mile detour via Beddington in order to see a most lovely garden belonging to a nobleman called Francis Carew. A little river runs through the

⁸⁷ Pearman 1984 p12 & 15-17.

middle of this garden, so crystal clear that you see the water-plants beneath the surface. A thing of interest is the oval fish-pond enclosed by trim hedges. The garden contains a beautiful square-shaped rock, sheltered on all sides and very cleverly contrived: the stream flows right through it and washes all around. In the stream one can see a number of different representations: the best of these is Polyphome playing on his pipe, surrounded by all kinds of animals. There is also a Hydra out of whose many heads the water gushes.⁸⁸

The second was also from a diary, in this case kept by a gentleman accompanying the Landgraf Otto of Hessen-Kassel on a visit to England. He came to Beddington in May 1611:

In the first garden we saw a very fine fountain with neatly made fishes frogs etc. swimming in the fountain as if they were alive. In the other garden we saw a great number of figgs, oranges, lemons - all trees which were bearing fruit at the time. Item Taxum, Laurocerasum, Pomum Adami, cuius folia melissi odorem fere habent. Nerion vel Rododendron with beautiful red flowers, it is, however, poisonous. Not far away there is a stream of water cheerfully running out of a little hill which is handsomely furnished with all sorts of neatly made animals and little men as though they were alive. Further down are two little corn mills, well made, driven by the water. There are also small boats and a little naval vessel lying at anchor on the water. Further up there is a beautiful pleasure house, artificially built with all kinds of shell. Inside an animal with many heads with jets of water issuing forth. Nearby runs a very clear and clean water with many trout therein. Not far away is an exceedingly fine pleasure house built all of mineralibus or various kinds of brass in cheerful fashion, the ceilings made like the sky from which rain pours down. Coelum pluens etc. On top is a fine and pleasant cabinet on whose ceiling Flanders Holland and Zealand etc. are beautifully painted. There is a mirror in the pleasure house which is laid in with all sorts of marble. Lapide Lydio.⁸⁹

11.2 Garden areas

The Hess description refers to two garden areas: the first garden and the other garden. The household accounts mention three areas: the privy garden, the great garden and the orchard.

11.2.1 The privy garden

The accounts provide several scraps of information about the privy garden. There was a 'dore at ye steyres in ye prevey garden'; a payment for gillyflowers to set in it; a door from the hall to the privy garden,⁹⁰ and a privy in the privy garden.⁹¹ There are also references, in 1573, to a privy bridge which had a 'grate' beneath it where 'the fyshe was kept'.⁹²

11.2.2 The orchard

The accounts show that the orchard contained grass walks⁹³ and that care was taken about the orchard's appearance; there are references to payments for gathering stones

⁸⁸ Waldstein 1981 p163 and 165

⁸⁹ Quoted from Strong 1990.

⁹⁰ SHC 281/4/14, 281/4/25 fol. 3.

⁹¹ SHC G6/3/1 fol. 50.

⁹² SHC 281/4/9, 281/4/23.

⁹³ There are payments for cutting grass in the walks SHC G6/3/1 fol. 33.

in the orchard and to catching moles. The orchards also contained large hedges as the accounts include a payment for a scaffold for the gardener to cut them from.

11.2.3 The Great Garden

There are payments for weeding the Great Garden in August 1570.⁹⁴

11.3 The oval pond

There are two sources for this in Sir Francis Carew's lifetime. The first is Baron Waldstein who mentions an 'oval fish-pond enclosed by trim hedges'. The second is a passing mention by Thomas Coryate who walked from England to Italy at the beginning of the seventeenth century and wrote an account called *Crudities*. When he described the Roman amphitheatre at Verona he thought of Beddington:

The cavea or greene plaine in the middle is made in the form of an egge shape at the ends, and broad at the sides, very like to a pond that I have seen in one of Sir Francis Carewes gardens in Middlesex: and in length nine & thirty pearches, in bredth two and twenty and halfe ...⁹⁵

Coryate says that the Verona amphitheatre was 39 perches by 22.5 which is 196 m by 113 m. This seems to be an exaggeration as Ward-Perkins says that the amphitheatre is 152 m by 123 m.⁹⁶ It is, none the less, large and would invite comparison with an equally large feature.

The household accounts for 1574 contain several payments relating to a pond but we cannot be certain that it is the same one.⁹⁷

It payd to Thomas wonnan for castinge of the pond for a daye and a haufe xiiij^d
It payd to Thomas Roger for castinge of the ponde for a daye and a haufe xiiij^d
It payde to Legger for castinge of the ponde for a daye and a haufe xiiij^d
It payde to Richard mathew for castinge of ye ponde for j daye x^d
It payd to Thomas white for castinge of ye ponde for a daye x^d

So five men were paid for a total of 6.5 man days cleaning a pond.

In 1650 the house was let to the earl of Warwick who carried out a number of repairs and submitted accounts to Carew trustees to reclaim the costs. There are a series of payments relating to an 'egg pond' which may well be the same as the oval pond.⁹⁸

⁹⁴ SHC 281/4/21

⁹⁵ Coryate 1905 vol.2 p.20.

⁹⁶ Ward-Perkins 1981 p166.

⁹⁷ SHC 281/4/24 p15

⁹⁸ SHC 2152/1 p3

June 1650

For fowr men to clense and make cleane the egg pond at fifeteen pence p diem	00-10-00
More for two Bricklayers for four dayes and a halfe to mende the brickworke about ye Eggpond at twenty pence a day	00-13-04
For two labourers fowr dayes and a halfe	00-04-06
More for A Loade of Bricks to mende the egg pond with	00-10-00
It: For A Carpenter to make two Penstocks foe ye eggpond: for one day and a halfe at twenty pence the day	00-02-06

Four men cleaned the pond for a total of 8 days which is not much more than the Elizabethan payments. In 1708 Nicholas Carew paid 7s 6d for cleaning a pond.⁹⁹

11.4 The pleasure house with a painting

Waldstein mentions

an exceedingly fine pleasure house built all of mineralibus or various kinds of brass in cheerful fashion, the ceilings made like the sky from which rain pours down. Coelum pluens etc. On top is a fine and pleasant cabinet on whose ceiling Flanders Holland and Zealand etc. are beautifully painted. There is a mirror in the pleasure house which is laid in with all sorts of marble. Lapide Lydio.

The ceiling painting links this to a building mentioned in Aubrey's *History of Surrey*:

In the Summer-House, round a red and white Marble Table, (formerly a grave stone, I conjecture) is this Dutch inscription

HIER LEGHET MYN WROWE
MARGRIETE (AN ANGEL WITH A LABEL) DE
MEDEWE BANS. HEREN DACH
DECEMBE BYD OBER D YELE

at the end is a hawke with a label; this was brought from abroad by Sir Franc. Carew, who built this pleasure house; on the top of which is painted the Spanish Invasion of 1588, much decayed; under which was a cold bath.

The cold bath might have been inserted in place of the grotto at some point in the seventeenth century.

11.5 Fountain with fishes and frogs

The Hesse description says that 'in the first garden we saw a very fine fountain with neatly made fishes frogs etc. swimming in the fountain as if they were alive'.

11.6 The Orangery

This is dealt with in section 5.

⁹⁹ Bax 1891 p.271.

11.7 Fig House

In November 1607 there is a reference to a fig house.¹⁰⁰

‘It[e]m paid to John Shurlock for V dayes aboute the figg house at Xvjd p[er] diem - vjs Viijd and to keneby for vj dayes at xiiijd p[er] diem - vijs in all xiijs viijd’

In the past figs were grown against warm walls and further protected from severe frosts.¹⁰¹ The fig house may therefore be a temporarily erected winter shelter, similar to the orangery.

11.8 The flower house

Accounts for 1607 include the following:

‘It[e]m paid to Kennylie for ij dayes worke at the flore howse doore and the fishe chamber at xiiijd a daye ijs iiijd’

It is not clear whether this was for flowers or flour.

11.9 The hydra grotto

Waldstein mentions ‘a hydra out of whose many heads the water gushes’ while Hesse says ‘Further up there is a beautiful pleasure house, artificially built with all kinds of shell. Inside an animal with many heads with jets of water issuing forth’. These must be the same structure.

The Accounts for the week beginning 9th of October 1603,

‘John sherlocke demandeth for the sawing of 1j^c iij^{xx} foote of oken borde for the dragon howse at ij^s the hundred v^siiij^d

It pade to John shirlocke for v daes worke at x^d the dae iij^s ij^d and to George tappesfilde for v daes at viij^d the dae iij^s iiij^d in all vij^s vi^d’

This may also relate to the hydra.

11.10 The features in the stream

Waldstein says that ‘In the stream one can see a number of different representations: the best of these is Polyphome playing on his pipe, surrounded by all kinds of animals’. Hesse says that ‘Further down [from the little hill] are two little corn mills, well made, driven by the water’. There are also small boats and a little naval vessel lying at anchor on the water. This seems to have stood downstream of the rock.

The accounts for 1607 have the following:

‘It[e]m paid to Kennylie for ij dayes worke at the flore howse doore and the fishe chamber at xiiijd a daye ijs iiijd’

¹⁰⁰ SHC G6/3/1 fol. 67.

¹⁰¹ Dictionary of Gardening, Royal Horticultural Society.

The fish chamber may have been a pen in the river for holding fish. It is conceivable that this was referred to in October 1607,

‘It[e]m paid for iiij dayes aboute the pann
betwixt the milles at Xd p[er]diem in all Vjs Viijd’

‘Betwixt the milles’ would place the pan or pen between the ‘two little corn mills, well made, driven by the water.’ of the 1611 description. These would be vulnerable to flooding so it is unlikely they would be in the main river.

11.11 The Force Mill

In 1610 a commission of Surrey landowners investigated a proposal to divert part of the flow of the river Wandle to supply water to London. They produced a hostile report with a long list of people who would suffer from the project including Sir Francis Carew

in respect of a force [m]ill w^{ch} conveyeth the water into his house. To the damage of the said S^r Frauncis Carew in regard of the greate costs . . . bestowed upon the said River for the delight of our late Sovereigne Lady the Queens Majestie and continued for the pleasure and delight of the K[ing]es most . . .
Ma^{tie} 102

This must have been some kind of water driven pump which is likely to have supplied the garden fountains in addition to the house.

The Warwick reparation accounts of 1650 include several payments for a force mill which is likely to have been the same machine:

June: 5: th 1650	
It: For a Millwright to mende the force	
Mill: two days three shillings p diem	00-06-00
More: for boards to mende the Mill	00-02-03
For halfe a hundred of nailes	00-00-03 ¹⁰³

11.12 Grate pother place

The accounts for 1570 include a payment to ‘Ric wona’ and his man 2 days working for the grate pother place.¹⁰⁴ The *Oxford English Dictionary* says that pother means a loud noise so a grate pother place might be translated as great roaring place. This could have been some sort of garden trick.

11.13 Bird House

The early seventeenth century accounts refer to ‘birde howse’ and include payments for hemp seed.¹⁰⁵

¹⁰² Giuseppi 1908 p190

¹⁰³ SHC 2152/1 p6

¹⁰⁴ SHC 281/4/11

¹⁰⁵ Lambert 1918, p8.

11.14 Training House

Sherlock's man and 'kennely' appear in the accounts of April 1607, being paid for four days work 'about the trayning howse'. A few lines later:

It[e]m Irons iij dayes about the trayning howse iijs vjd
It[e]m more for halfe a bushell of tyle pinnes viijd'

This suggests that roof repairs were being carried out. It is not clear if this was a building for raising plants or training horses or other animals.

11.15 The Banqueting House, mount and rock

The household accounts contain a series of payments relating to a mount and a house on the river which may or may not be the same structure:

Sutton 2 29 September 1567 - 25 March 1568
It pd for tagynge oute of the wurke oute of ye locke of ye monte bridge
et setting of it into A newe stocke et mendyng of ye staple viijd

SHC 281/4/11 4 - 11 June 1570 1570
It pd to edmonde Collenes et hs men for vj daies wurking a ye house upon ye water x^d
It pd to John wallas for viij^c of pennye nayle for ye plumer xvj^d
It pd to him more for a ^c of short brode nayle for to nayle ye ley^adowts iiij^d

SHC 281/4/13 18 - 25 June 1570
It pd for a Bushell of here for ye house upon ye Ryverv^d

SHC 281/4/16 f1 9 - 15 July 1570
It pd to hym for A plat locke et a keye for y^e dore beyonde y^e house upon y^e ryrv^{er}

SHC 281/4/18 23 - 30 July 1570
It pd for A plate Lok for y^e dore beyonde y^e Ryver v^s iiij^d

SHC 281/4/21 f1 13 - 20 August 1570
It pd to wm freye for sawing of a C et a halfe of y^e bridge ij^svj^d
It pd to Ric wonam et henray for xij daies wurking at y^e bridgex^s
It pd to Edmand Collens for iij daies wurking for y^e moding of batilments of the syds of
y^e stone of y^e bridge et his man likewise ij daies iij^s iiij^d
It pd to Collens for a daie <helping y^e carte> plastring xij^d

SHC 281/4/21 f2 13 - 20 August 1570
It pd to y^e smyrthe for a plate to sett upon y^e hole of y^e monte gate ij^d
It pd to him for ij hope for y^e barrell of y^e drabridge y^t weyeda xj^{li} xxij^d
It pd for mendyng of ij gogins [*] <et A Ronde pynne> viij^d
It pd for v stone great nayls et xv__ for y^e bridge vij^s viij^d
It pd for ij Ryngs for y^e ronde pynns et ij keys y^e same iiij^d
It pd for sharpening of xxⁱⁱⁱⁱ nayles y^t were olde for y^e brydgeiiiij^d
It pd for sharpening v keys for y^e same <j^d> iij^d
It pd for a payre of crosse garnitts y^t weyed v^{li} et a halfexiiij^d dd

SHC 281/4/23 f21 21 - 28 June 1573
It pd to symons white and Rogers for making of a hove at y^e monte
for a daie A pese at viij^d ye - daie a pese xvj^d

In July 1607 Irons was paid for one day at the mount house, presumably for more maintenance work.

The accountant always writes *the river* – it does not need qualification. Whatever other watercourses there were there was only one river. It is hard to see the channel south of the Orangery wall as *the river*.

It is difficult to know if these entries refer to one or two structures although taken as a whole this group of payments would fit a rock with an internal room set in the river and approached by a drawbridge. Both the rock and the river appear to be close to a boundary there are payments for locks for the door beyond the house on the river and for the door beyond the river. There was also enough water around the structure for a 'hove' or fish pen.

It is also difficult to know whether these are the structures mentioned by Waldstein, Hess and Coryate:

Waldstein - The garden contains a beautiful square shaped rock, sheltered on all sides and very cleverly contrived.

Hesse - Not far away there is a stream of water cheerfully running out of a little hill which is handsomely furnished with all sorts of neatly made animals and little men as though they were alive.

Coryate - In one of these walks [at Verona] is a delicate little refectory: at one side whereof there is a curious artificial rock, adorned with many fine devices, as scollop shells, and great varieties of other pretty shells of fishes brought from Cyprus: and mosse groweth upon the same as if it were a natural rock. This place certainly is contrived with as admirable curiosity as ever I saw, and moystened with delicate springs and fountains conveighed into the same by leaden pipes. I have seen in England one place something like to this, even in one of the gardens of that noble Knight Sir Francis Carew of Middlesex, who hathe one most excellent rocke there frame all by arte, and beautified with many elegant conceits, notwithstanding it is somewhat inferior unto this.

A mount house also appears in Sir Francis Carew's Probate Inventory of 1611.¹⁰⁶ The document is in poor condition and is only partly legible but the following sequence of rooms appears:

In the Chamb[e]r ov[e]r the pantry
In the Chamb[e]r ov[er] the larder
In the Chamb[e]r ov[er] it

There is then:

In the olde gallery
...able a cubbard seaven et twenty
..ten mapps eleaven stoole et six

¹⁰⁶ SHC 2163/7/3

In the newe mount house
..a square table of India wood and six
..tooles of Walnuttree a Couch Covered w[i]th
..greene et five et twenty glasses w[i]th fethers

The room sequence then continues:

In the Butlers Chamber ...
In the Stewards Chamb[e]r
..n the Falcon[er]s Chamber
..n the Cooks Chamb[e]r

The sequence of rooms suggests that the gallery was close to the kitchen at the southeast corner of the house and that the mount house was attached to the galley.

An internal gallery in this position seems unlikely. It is therefore possible that this gallery ran out into the garden from near the south east corner of the house and that the mount house stood at the end of it. If so the gallery would have crossed the moat.

The Warwick reparations accounts of 1650 include repairs to a mount house:

For two Bricklaires six dayes to mende ye little house by the Mounthouse, and the stones of the Mounthouse	00-10-00
Ite for two Labourers to serve them six dayes	00-06-00
More for two bushells of haire to mende ye little house by the Mounthouse	00-01-00
For a thousand of lath nayles for the litle house by the Mount	00-01-08
More for 3 bundles of laths for the little house by the Mounthouse	00-04-06
More for halfe a bushell of tyle pins	00-01-00 ¹⁰⁷

11.16 Exotic plants

The Hesse diary entry of 1611 gives the best account of the exotic plants growing in Sir Francis Carew's garden:

In the other garden we saw a great number of figs oranges and lemons - all trees which were bearing fruit at the time. Item Taxum, Laurocerasum, Pomum Adami, cuius folia melissi odorem fere habent. Nerion vel Rododendron with beautiful red flowers, it is, however, poisonous.

The figs, oranges and lemons are self explanatory. Taxum is yew which is a common English plant and must have been fairly prominent to be mentioned.

Comparison with the Tradescant lists suggests that Laurocerasum is Laurocerasus, Cherry bay there identified as *Prunus laurocerasus* L.¹⁰⁸ This is a small evergreen tree

¹⁰⁷ SRO 2152/1 p2

¹⁰⁸ Leith-Ross 1984 p207-24.

which is a native of southeast Europe and Asia minor. It grows to a height of about 6 m. The leaves have been used for flavouring but care is needed as they are poisonous, They also contain oil which has medicinal uses.¹⁰⁹ The tree became fashionable in Italy in the second half of the sixteenth century.¹¹⁰

‘Nerion vel Rhododendron’ may be Nerium Oleander which is native to the Mediterranean. It is a tall robust shrub with narrow gray-green pointed leathery leaves and large sweet smelling pink flowers.¹¹¹ Claudia Lazaro’s *The Italian Renaissance Garden* says:

At Castelo [outside Florence] Belon also saw oleander, then called rhododendron, or *rododafne*, which had long been known but little used in gardens until the latter decades of the sixteenth century, perhaps because of the toxicity of its flowers ... One of the few flowering shrubs with prominent blooms in Europe at that time, its appearance at Tivoli trained on the walls of the enclosed garden must also have been noteworthy.¹¹²

‘Cuius folia melissi odorem fere habent’ is currently unidentified.

11.17 Water in sixteenth century gardens

The streams seem to have been a prominent feature in the garden at Beddington as they were commented on by almost all visitors. How was water organized in other sixteenth century gardens? The plates in Du Cerceau’s *Les Plus Excellents Bastiments de France* suggest that in France water was generally present in three forms:

- Moats that defined the edge of garden areas.
- Fountains within a basin or pool – generally fed with pipes and not connected to a stream.
- Ponds.

In France the sides of moats and ponds tend to be high. This gave the moats an appropriately 'defensive' character and on many rivers would have been necessary to prevent flooding. The high sides would make it difficult to visually integrate the water with the knots so the channels tend to be boundaries rather than features. The canal at Gaillon is rather unusual as it was central to garden area that it was in and had a rock in a basin at the end.

Italian practice was different. The gardens were generally away from the river and are supplied by a conduit or aqueduct. This protected the garden from flooding and sometimes allowed the use of a considerable volume of water. Many of the most famous Italian gardens are also on a steep slope allowing the water to be repeatedly reused as it passed from one terrace to another. These factors allow the water to flow through the garden in a more intimate way with water chains as well as fountains and ponds. There are instances of stream-like channels in gardens such as the Rometa at Tivoli.

¹⁰⁹ Mitchell 1988 p.300; Grieve 1992 p465-6

¹¹⁰ Lazaro 1990 p28

¹¹¹ Polunin and Huxley 1987 p147.

¹¹² Lazaro 1990 p28

Waldstein and Hess suggest that at Beddington key features such as the rock and Polyphomy were in the stream. This seems to be closer to the Italian than the French manner. The closest European parallel is perhaps the garden at Hellbrunn near Saltzberg which was made for the Archbishop of Saltzberg Marcus Sittikus from 1612. Here a series of fountains, ponds, water tricks and grottos are laid out around a group of springs which are linked by open streams. Marcus Sittikus was brought up in Italy and educated in Milan and Rome and his architect Santino Solari was an Italian.

The gardens at Beddington and Hellbrunn are both on fairly flat sites with a naturally stable water supply. Beddington was on a spring fed chalk stream while Hellbrunn was at the springhead itself. A number of other English water gardens were also fed by springs or chalk streams and the water was fairly closely integrated. The most striking example is provided by a drawing in the British Library which is thought to be of the Dell at Hatfield which was constructed for Robert Cecil in the early seventeenth century. This shows the stream integrated into the garden with a banqueting house and statues in the channel. Earlier gardens of this type may have existed either in England or on the chalk lands of northern France. The use of streams in the garden is likely to be at least partly a product of the natural possibilities of the site.

12 SIR FRANCIS CAREW'S FINANCIAL POSITION

Sir Francis Carew's father Sir Nicholas Carew KG was for many years a favourite of Henry VIII. He appears to have profited considerably from this and added a large amount of property to his estate. He eventually ended up on the wrong side of court politics and was executed for treason in 1539. His estates were forfeited to the crown and his widow was only allowed to keep a house in Wallington, next to Beddington, and a small amount of land in Sussex. Francis had the reversion of these and the property was confirmed to him when she died, some time before 8 May 1546. There must have been a minority as he would not have been of age until 1551.

Francis's fortunes were utterly transformed by the accession of Mary in 1554. His father had been a supporter of Mary and her mother which contributed to his downfall and execution. Mary probably felt that there was a debt to repay and Francis was restored to almost all of his father's property within months of her accession. The estate consisted of:

Surrey

- The manor of Beddington with the advowson of Beddington church.
- The manor of Bandon in Beddington
- The manor of Banstead
- The manor of Coulsdon
- The manor of Epsom
- The manor of Horley
- The manor of Norbury in Croydon
- The manor of Ravensbury
- The manor of Sutton
- The manor of Walton on the Hill
- A house and land in Wallington
- Some land in Burstow and Horne in the Surrey Weald.

- Properties in Carshalton
- Property in Chessington
- A good deal of scattered woodland in Croydon
- Property in Morden
- Property in Streatham
- Land in ‘Whattingdon’ (possibly part of the manor of Coulsdon).

Sussex

- Plumpton with the advowson of the church
- Plumpton Buskage
- Plumpton Pedynghoo
- Barcombe
- Birling, and Netherhall in Fletching

In Lincolnshire:

- Bradley
- Cumberworth
- Conisholme
- Grainsby
- Manby
- Skendleby
- Sutton le Marsh
- Trusthorpe
- Wyberton
- Withern

Northamptonshire

- Faxton

Northumberland

- Ellington

London

- A house in London

There were significant changes to the estate in Francis’s lifetime. Francis disposed of a substantial part – possibly all – of the Sussex property although this was done in piecemeal way. Plumpton was granted to Elizabeth Carew in 1539 with remainder to Francis. In the same year the manor house and demesne was leased to John Mascall for 21 years. In 1555 Francis converted the lease to a sale. He sold the rest of the property with the manorial rights to Richard Leache in 1593¹¹³ who acquired Piddinghoe at the same time.¹¹⁴ Barcombe was sold to George Goring in 1572.¹¹⁵ Property at Sugworth (or Southworth) was sold to a George Boord in 1574.¹¹⁶ Standen in Pycombe was in Carew hands in 1575 but had gone by 1617.¹¹⁷

On 19 December 1573 Francis alienated all his northern properties in Lincolnshire, Northamptonshire and Northumberland to Arthur Hall who is thought to have married his sister Elizabeth.¹¹⁸ This is assumed to be Arthur Hall of Grantham. However, Hasler 1981 states that Arthur Hall (1539-1605) married Mary daughter of Thomas

¹¹³ VCH Sussex v7 p110-111.

¹¹⁴ VCH Sussex v7 p66-7

¹¹⁵ VCH Sussex v7 p80-1. Cal Patent Rolls 1575-78 It 1647

¹¹⁶ VCH Sussex v7 p159

¹¹⁷ VCH Sussex v7 p213.

¹¹⁸ Cal Patent Rolls 1580-82 p47

Dewie a London goldsmith. The notes at the head of the article give the date as c.1556 but the text implies a date of c.1566. Hall would have been about 17 in 1556 – an early age for an Elizabethan marriage. If he married her in c.1566 he would be about 27. Could she have been a second wife – with an earlier marriage to Elizabeth Carew who then died young? The transaction could then be seen as a settlement of the Halls' share of the estate – on the assumption that Sir Francis was going to die childless. This seems premature as Francis was only 43. The identification of Hall seems questionable, but if he is the right man it seems unlikely that he would have been able to make any significant payment for the property as he was imprisoned for debt around 1565 and was again in financial trouble from the late 1570s.¹¹⁹

On 18 February 1567/8 Francis leased the manor of Epsom to Nicholas and Isabella Saunder. He also leased them the parsonage and rectory of Epsom for 21 years from the end of the lease of Nicholas's father William. Isabella was Francis's sister. She had married Nicholas at Beddington on 28 May 1560. The rent for the manor was £13 6s 8d and the rectory £11 6s 8d yearly. The advowson and timber was reserved to Francis.¹²⁰ In 1589 the reversion was granted to Edward Darcy and it went to him on Francis's death in 1611.¹²¹ He was the son of Francis's sister Mary, who married Sir Arthur Darcy of the north. This transaction also seems to be part of a settlement of Francis's estate.

In 1596 Francis bought the manor of Wallington. He already owned a significant amount of land in the township and it is not clear that he bought much more than the manorial rights.¹²²

Taken as whole Sir Francis disposed of a large amount of outlying property in Sussex, the Midlands and the north and made one act of consolidation near his home. If he got a market price for the northern property it would have brought him a substantial capital sum. It may be significant that the household accounts show that work was in progress in the garden at Beddington in 1570 and that the transaction took place soon after.¹²³

In December 1594 Sir Francis was asking the Queen for the lease of some land in Hampshire belonging to Winchester Cathedral and was writing to Robert Cecil to press the suit.¹²⁴ The same month Cecil wrote to William Wickham, who was Bishop of Lincoln and prospective Bishop of Winchester pressing Francis's suit: ... her Majesty is extrodinately disposed in regard that it is the first suit that ever he made unto her ...¹²⁵ The matter was still not resolved in April 1596 when Francis wrote to Cecil saying that the Bishop had offered him £1000 and he

would think that reasonable if it came clear to his purse, but 100/ must go to his nephew Darcy and 300/ to Sackefelde, and he has spent at least 100/ in the hope of it since the Queen was at Nonesuch, The Queen will think 'that she hath bestowed a great suit upon me in passing the lease, and will therefore expect

¹¹⁹ Hasler 1981 entry for Arthur Hall.

¹²⁰ SHC 2163/7/21 and 22.

¹²¹ VCH v3 p274

¹²² VCH v4 p173

¹²³ Francis was involved in several other land transactions at various points in his life but these appear to be trusts or uses for other people rather than additions to or sales from his own lands.

¹²⁴ HMC Sal Pt5 1894 p31

¹²⁵ HMC Sal Pt5 1894 p41

greater entertainment and gifts at my hand than by this means I shall be able to bestow'.¹²⁶

In July 1597 Francis was eventually given an annuity worth £400 and a lease of unspecified value. Francis assigned the lease to Edward Cole and Anthony Dawley presumably for a cash payment. Cole was registrar of the Diocese of Winchester and a prominent citizen of the town.¹²⁷ This suggests that, towards the end of his life Sir Francis began to experience financial trouble but the reason for this is unclear.

13 THE GARDEN 1611 – 1707

Sir Francis Carew never married and when he died in May 1611 his property was left to the descendants of his sisters. Although Francis's surviving will was not made until 2 August 1610, the disposition of his property seems to have been decided twenty or thirty years earlier (see section 12 above). It therefore seems likely that Francis's principal heir, Nicholas Throckmorton had been expecting to inherit Beddington for twenty or more years before Francis's death. He may have been involved in the development of the garden in the later stages of Francis's life. If this was so it might help to explain the garden's advanced style. Throckmorton is known to have been in Italy in the summer of 1588 when money was forwarded to him in Lucca. He was still there in 1590 when he matriculated at the University of Padua, returning to England later that year.¹²⁸ Nothing else is known about the visit, although he must have had the opportunity to see a number of Italian gardens.

Nicholas Throckmorton changed his name to Carew after inheriting in 1611. However, the division of the estate meant that he had only a fraction of the property that had been restored to Francis in 1554. The main lands were:

- Beddington Manor
- Bandon and Fosters Manor
- Banstead Manor¹²⁹
- Horne and Burstow
- Norbury Manor¹³⁰
- Ravensbury Manor¹³¹
- Wallington Manor

The slight available evidence suggests that he maintained the garden well. In November 1616 there was a request for lemons for 'the prince' and in 1623 a request originating from the king to allow a tour of the garden.¹³² Nicholas died in 1643, leaving a son Francis who was financially inept and had to flee abroad to escape his creditors.¹³³ He was also heavily fined for supporting the Royalist side in the Civil War. This combination of events broke the finances of the already weakened estate and the available scraps of information suggest that they never really recovered.

¹²⁶ HMC Sal Pt6 1895 p139

¹²⁷ HMC Salisbury Papers at Hatfield part 7 p292

¹²⁸ Rowse 1962 118, 122-3; Sutton Archives 25/3/13.

¹²⁹ VCH v3 p255

¹³⁰ Paget 1937 p19-24

¹³¹ VCH v4 p232

¹³² BL, Add MS 29599 fol. 6 and fol. 18.

¹³³ N. Burnett, *Notes on the private life of a Carew*, (unpublished research note to the Carew Manor Group on 26 January 1995).

Francis's son Nicholas Carew, who came of age about 1656, was an active Member of Parliament but we know very little about his life at Beddington. Wallington was, effectively, lost from the estate when it separated in a family settlement and then, in 1685, was leased for 500 years.

Nicholas died in 1687, leaving a son Francis who died just two years later in 1689. His son, another Nicholas, was only an infant and a long minority followed when trustees administered the property. Two descriptions from this period suggest that the garden was neglected. The first by a J. Gibson dates from 1691:

Beddington Garden at present in the hands of the duke of Norfolk, but belonging to the family of Carew, has in it the best orangery in England. The orange and lemon trees there grow in the ground, and have done so near one hundred years, as the gardener, an aged man, said he believed. There are a great number of them, the house wherein they are being above two hundred feet long; they are most of them thirteen feet high, and very full of fruit, the gardener not having taken off so many flowers this last summer as usually others do. He said, he gathered off them at least ten thousand oranges this last year. The heir of the family being but about five years of age, the trustees take care of the oranges, and this year they built a new house over them, but they look not well for want of trimming. The rest of the garden is all out of order, the orangery being the gardener's chief care; but it is capable of being made one of the best gardens in England, the soil being very agreeable, and a clear silver stream running through it.¹³⁴

The second appears in John Evelyn's Diary for 20 Sept. 1700. He found the garden,

decaying with the house its selfe, heretofore adorned with ample Gardens, & the first Orange trees that ever were seene in England, planted in the open ground, & secured in Winter onely by a Tabernacle of boards, & stoves, removable in summer; thus standing 120 yeares large & goodly Trees & laden with fruite, but now in decay as well as the Grotts & other curiosities, cabinets and fountaines in the house & abroad, thro the debauchery & negligence of the Heires, it being now fallen to a child under age, & onely kept by a servant or two from utter delapidation. The Estate & Parke about it also in decay: the negligence of a few years, ruining the elegances of many.

14 NICHOLAS CAREW, FIRST BARONET

14.1 Background and finance

When Nicholas Carew, later first baronet, came of age in 1707 he must have found the house and garden dilapidated and old fashioned. He must also have inherited a relatively poor financial position although it is likely that low expenditure in his long minority brought a partial recovery.

In 1709 he married Elizabeth, the daughter of Nicholas Hackett of South Crawley in Buckinghamshire. The marriage settlement must have alleviated his financial position and in addition to this Elizabeth was an heiress so he could expect to inherit her property.

¹³⁴ Hamilton, 1794 p182-3.

He started building work on the house about 1710 and, on 18 September of that year, he sold 200 beech trees in the grounds of his manor at Walton on the Hill for £100 down with £100 to pay.¹³⁵ This does not seem to have ended his need for money. In February 1716 he mortgaged his wife's inheritance at South Crawley to Peter King for £4,000; a further property at Woodend was mortgaged for £3,000 in February 1719.¹³⁶ On the 18 February 1718 Nicholas Carew directed his bankers to pay £200 to Sir Peter.¹³⁷ This property was never recovered.¹³⁸

Nicholas Carew appears to have been involved in speculation during the South Sea Bubble but it is not clear whether he made or lost money.¹³⁹ However, by the end of 1720 he owed £10,000 to the trustees of Sir William Scawen of Carshalton and had mortgaged most of his property – other than that tied up in his marriage settlement – as security for the debt.¹⁴⁰ In short he was virtually bankrupt.

14.2 Remodelling the house

Nicholas refaced and remodelled the house to give it the baroque elevations shown in Colen Campbell's *Vitruvius Britannicus* and in late eighteenth and early nineteenth century prints. There are four pieces of evidence that this was done about 1710-12:

- On 12 July 1710 Nicholas Carew made a contract for Henry Elkins and William Poplett to carry out refacing work on the house. It seems likely that this marked the beginning of his modernisation campaign.¹⁴¹
- The heraldry in the Great Hall postdates Nicholas Carew's marriage to Elizabeth Hacket in 1709 and predates his baronetcy on 11 August 1714.¹⁴²
- The design must have been conceived before it was published in the second volume of Colen Campbell's *Vitruvius Britannicus* in 1717.
- Berkshire Record Office has a long account for upholstery and furnishings bought from John Hibbert and Company between 12 April 1711 and 17 October 1712.¹⁴³ Some of this may have been for Carew's London house in Dover Street but most is clearly for furnishing Beddington. It seems likely that the material was used to fit out the house as building work finished.

14.3 Documentary evidence for work on the garden

There are only a few pieces of documentary evidence for the garden in this period. A surviving notebook kept by Nicholas Carew spans the period when he came of age and took control of Beddington. It includes two payments for the garden: one of £4 to the 'surveyor of my Gardens' in February 1707 and the other for £7 6s for cleaning a pond in 1708.¹⁴⁴ The second volume of Colen Campbell's *Vitruvius Britannicus* published in 1717 says that:

¹³⁵ Sutton 25/1/8.

¹³⁶ Hertfordshire Record Office 29169.

¹³⁷ Sutton 25/3/31.

¹³⁸ VCH Bucks vol 4 p331 quoting Recov. R. Mich. 10 Geo I.

¹³⁹ Berkshire Record Office D/EL1 C1/210, C1/217, C1/218

¹⁴⁰ Derbyshire Record Office. List of Holden papers D 779B/T 592

¹⁴¹ BL Add 29599 f104

¹⁴² Unless the red hand of Ulster has been lost from the arms.

¹⁴³ D/ELI 26

¹⁴⁴ Bax 1891 p269 and 271.

The House stands in a large Park, the gardens are very curious and artful, the Orangerie is esteemed the best in the Kingdom; here is a great plenty of excellent Water, with Canals and Cascades; and indeed every thing is truly worthy of so generous a Patron, who has spared no Cost to rebuild and imbellish his seat.¹⁴⁵

Aubrey's *History of Surrey* published in 1718 says that:

The house ... having before it neat Gardens, not yet finished, with several canals, and orchard; but what more particularly deserves our notice, is the fine Orangerie, where are several orange trees, (transplanted from the warmer breezes of Italian air, into our more inclement climate) planted in the open ground, where they have throve to admiration for above a whole century; but are preserved, during the winter season, under a moveable covert. They were brought from Italy by Sir Francis Carew, Knt. (who built the old Mansion House) and it was the first attempt of this kind that we here of ... In the Summer-House, round a red and white Marble Table, (formerly a grave stone, I conjecture) is this Dutch inscription

HIER LEGHET MYN WROWE
MARGRIETE (AN ANGEL WITH A LABEL) DE
MEDEWE BANS. HEREN DACH
DECEMBE BYD OBER DE YELE

at the end is a hawke with a label; this was brought from abroad by Sir Franc. Carew, who built this pleasure house; on the top of which is painted the Spanish Invasion of 1588, much decayed; under which was a cold bath.¹⁴⁶

John Aubrey collected material for a history of Surrey but left it incomplete on his death in 1697. The manuscript was added to and edited by Richard Rawlinson. The Beddington garden is not mentioned in Aubrey's manuscript in the Bodlian Library, Oxford, and internal evidence suggests that the section was written by Rawlinson who is known to have visited Beddington to collect material on 29 May 1717.¹⁴⁷ The description refers to Nicholas Carew as a Baronet and MP for Haslemere. He received his baronetcy on 11 January 1715 when he was already MP for Haslemere.

The first edition of Defoe's *Tour* says that the house was rebuilt by Sir Nicholas Carew MP for Surrey and then continues:

...the gardens are exquisitely fine ... the court before them [the wings] is extremely fine, and the canal in the park, before the court, is so well that nothing can be better, having a river running through it; the gardens are exceedingly enlarged, they take up all the flat part of the park, with vistas, or prospects thro' the park, for two or three miles; the orange trees continue, and are indeed wonderful; they are the only standard orange trees in England, and have moving houses to cover them in winter; they are loaded with fruit in the summer, and the gardeners told us, they have stood in the garden where they now grow above 80 years.¹⁴⁸

¹⁴⁵ Page 2

¹⁴⁶ Aubrey 1718 v.2 p159-160

¹⁴⁷ B. Enright, 'Richard Rawlinson and the publication of Aubrey's Natural History and Antiquities of Surrey', *Surrey Archaeological Collections*, LIV (1956), 124-133 esp. 129.

¹⁴⁸ Defoe 1724 v.1 p.158.

The Carew papers in the British Library include a single sheet of paper with a list of trees in two columns. This is undated but appears to belong to the late seventeenth or early eighteenth century.¹⁴⁹

First Column:

The lower end of the upper Part
in that row next the walk

Lady pair
Lady pair
Birgimee pair
Birgimee pair
Catherine pair
Amadot pair.
Birgy Loe pair
Orange Birimee pair
Middleton pair

the middle row of the upper part
Marockow plumb
Damaskeen plumb
Black Musle plumb
Black Musle plumb
Pinnello plumb
Morockow plumb
Apricock plumb

The row next the Hedge of the upper p^t
Green portor Apple
Summer pair mean
Summer pair mean
Morockow plumb
Q__en mother plumb
Tirky plumb
Tirky plumb
Denny plumb [possibly Penny]
Denny plumb

Second column

the lower end next the walk
Lady Buttocks } pair
Lady Buttocks }
Amodott pair
Hamdons birgimee pair
Hamdons birgimee
Hamdons birgimee
Birgee low pair
Birgee low
Orange Birgimee pair
Orange Birgimee
Lord Cherries pair
Lord Cherries pair
Golden delbury pair

the Lower end of the Middle row
Cathalock pair
Popler pair
Bond fobbe pair
Docter Consins pair
Winter Catherine pair
Winter Catherine
Winter Bury de roy pair
Winter Bury de roy
Winter Grindfoil pair
Winter Grindfoil
Bona magna plumb
Bona magna plumb

Lower end of the row next the Hedge
Golden rennetts Apple
Golden rennetts
Golden rennetts
Golden rennetts
Golden pippins }
Golden pippins } Apples
Golden pippins }

Golden pippins }
Red sided pippin
the great pippin
the great pippin
pair Russett Apple
pair Russett

¹⁴⁹ BL Add MS 29606 f79.

15 THE MINORITY AND THE 2ND BARONET (1727-1762)

15.1 Background

The First Baronet died in 1727 aged about 41 when his son Nicholas Carew, later second baronet, was still a minor. The first baronet's widow re-married to William Chetwynd and they appear to have run the estate during the minority although we know very little about this period.

The second baronet came of age about 1741 and was soon in financial trouble. In May 1742 he sold 1039 oaks, beeches and ashes standing in woods called the Ruffets and Banstead Park, 202 oaks and beeches in Walton Park, 107 oaks and beeches now or lately standing in the wood called Little Hurst (parish not given) for a staged payment of £582 10s.¹⁵⁰

A letter of 1743 was concerned with reducing the costs on the garden and another letter from John Price (presumably his steward) dated 31 October 1749 is more explicit:

Inclosed I send you the quarterly account. I am sorry to inform you that all the 3500 last took up is paid away without paying any other tradesmen upon your last order [crossing out and illegible insertion] Mr Sells as I formerly acquainted you. I have proposed to pay and apply some money out of the ironworks to go towards that account but it is not yet settled – Mr Wade as you know has been very sanguine to our fl... [illegible] the grounds about the home farm which will be attended with Expense in bring up Workmen from remote places which I think should just at the present be avoided till we have satisfied by some means other ingagements, which I have requested.

The plate I brought up from Beddington to sell pr yr order weighed 314 oz which I sold at 5s 5d pr oz and have paid it to the General account., it came to 85^l 1^s 4^d.¹⁵¹

Things don't seem to have improved as a surviving letter of 1760 has much to say on the subject of unpaid bills.¹⁵²

The second baronet died in 1762 and his will shows the depth of his financial troubles – he had debts of over £16,000.¹⁵³

His probate inventory shows the north wing of the house was more or less an empty shell with several incomplete or sparsely furnished rooms. Lysons says that wing was gutted by fire soon after the early eighteenth century remodelling¹⁵⁴. It appears to have been re-roofed but the inside was not properly rebuilt and it remained in that state until the house was sold in 1859.

¹⁵⁰ SHC 848/1/74

¹⁵¹ Berkshire Record Office D/EL1 C1/243.

¹⁵² Quoted in Michell 1981 p98.

¹⁵³ TNA PCC wills 11/879

¹⁵⁴ Lysons 1792 v.1 p.53

15.2 The garden

Apart from information on the Orangery (see section 5 above) there is only one known document relating to the garden in the second baronet's ownership. This is the letter dated 1743:

S^r Nicholas Carew Bart at ?
near Cambridge

13 June 1743

...The purport of our conversation at Beddington turned chiefly on the Garden how to preserve the Simitry and take away some part of the Expense and in this we had the opinion of M^r Harris who dined with us that day. Plantations which you seem to favour are condemned as making the view of the House too confined. Lawns had the prevailing influence which I beg to describe to you. It was thought advisable to cover the Graveled vista walk and those below it with a greensward from end to End, to level the two groves next the Bason of each side and to leave that standing next the North wall which answers the Elme hedges in the Upper quarters, to take down the Elme hedge in the orchard and plant thereon Espaliers and fill the orchard full of Fruit trees and to clean the drying ground of weeds but anything we talked on must wait on your approbation and appointment. Hahaws or any division with paling are condemed for it is not supposed anything can feed in the Garden therefore no need of seperation ...¹⁵⁵

16 THE LATE EIGHTEENTH AND NINETEENTH CENTURIES

16.1 The owners

The second Baronet died in 1762. His wife was already dead so his natural heirs were his two daughters Katherine and Elizabeth. The former was entitled to £10,000 by a previous family settlement. In addition to this obligation he left debts of over £16,200 owed to his wife's family. A little over £5,200 of this debt had come via his mother and may have been the residue of his father's debts. He appointed William Pellat as a trustee to manage the estate. His daughter Katherine was allowed the use of the house and grounds for her life. The house and estate was then to go to the eldest son of his cousin the Rev John Fountain, Dean of York and his heirs male. In default of this it was left to the eldest son of Richard Gee of Orpington and his heirs male and then to the eldest son of his cousin William Farmer of Cold Brayfield, Buckinghamshire.¹⁵⁶

Katherine died in 1769 and the Fountain heir died before he came age so the house and estate passed to Richard Gee of Orpington. He seems to have allowed his brother William to live at Beddington with his wife Anne Paston.

¹⁵⁵ Berkshire Record Office D/EL1 C1/240.

¹⁵⁶ TNA Prob 11/879.

Richard died in 1816 and Beddington passed to his brother's wife Anne Paston Gee. She remodelled the south wing of the house in 1818.¹⁵⁷

Anne Paston Gee died in March 1828 and left the house to a cousin, Benjamin Hallowell, an admiral who had served with Nelson. He took the name Carew and lived at Beddington until his death in 1834. He was followed by his son Charles Hallowell Carew who died in 1849. His son Charles Hallowell Hallowell Carew followed. He appears to have spent a great deal of money horse racing and as a result he became bankrupt. The estate was sold in 1859 and the house and garden was bought by the Lambeth Female Orphanage Asylum who converted it into an orphanage. In the course of the work the south wing was gutted by fire and the inside was totally rebuilt. Almost all of the outside of the house was refaced in mock Tudor gothic.

The Orphanage was opened in 1865 and occupied the house and grounds until 1939 when the institution was evacuated to High Wycombe, Buckinghamshire. The building was used as a store in the Second World War and then became a school. Today it is a special school run by the London Borough of Sutton.

16.2 The garden after 1762

We know almost nothing about the garden between the death of the second baronet and the enclosure award map of 1820 (figure 63). The map is supported by two views. The first is a drawing by John Buckler showing the southeast corner of the house in 1827. The other is a print by John Nash showing the east front and gardens in the 1830s (figure 105).



Figure 105: The east front of the house by John Nash in the 1830s.

These show that the garden had been grassed over and that the edges of the east lake had been filled in to give it a more natural shape. The tithe award map of 1840, the first edition 25 inch Ordnance Survey map of 1868, and the second edition of 1897 show a great deal of stability. The Orphanage grew vegetables in the area south of the Orangery wall and on both sides of the east lake. In 1874 they turned the building at

¹⁵⁷ Colvin 1995 p72

the end of the Orangery wall into a lean-to and then, in 1877, they added to it, converted it into a stable and put in a fireplace to dry earth for the closets.¹⁵⁸ The lake gradually silted up and by 1896 it was little more than a river channel. A row of Cottages were also built to the north of the house and the south end of Beddington Park Cottages was converted to house the steam pump and boiler for the water supply.

The twentieth century has not been kind to the site. A factory was developed on the land to the east of the south garden. After the Second World War the Crispin Crescent Estate was built to the north of the east end of the garden. We do not know if these areas were part of the former gardens (see sections 6.1 and 9.7 above). A swimming pool was built for the orphanage on the north east corner of the east lawn in June 1933. It survived until the 1960s.¹⁵⁹ TS Puma – a building for navy cadets – was constructed in the area south of the house in 1967. In the late 1960s or early 1970s the river was diverted around the south end of the bank at the end of the central garden and the cascade went out of use and fell into decay. In 1986-7 Beddington Park Cottages were converted into modern homes and additional houses were built to east of the north end of them. In 1990-1 the river was regraded and a flood pond was constructed in the east end of the former garden destroying much of the south wall of the former east lake. In addition to this the whole area has been subject to great deal of vandalism. The Orangery wall has suffered terribly despite numerous repairs by the local authority and many sections of boundary wall have been damaged or demolished.

17 THE WR PIPE BOWLS

Thirteen L25 pipe bowls marked or probably marked WR have been found on the site in the following contexts:¹⁶⁰

Context	Spec no	Form	Mark
AC (29). Lower part of the fill of the north moat.		L25	WR
AJ. Fill predating the construction of the east lake.		Uncertain	WR
CG (2) Recent deposit on the site of the south-west corner of the moat.	<12>	L25	WR
CH (1) Top soil with modern finds on the site of the south-west corner of the moat.	<9>	L25	W-
CH (1) Top soil with modern finds on the site of the south-west corner of the moat.	<13>	L25	WR
CH (1) Top soil with modern finds on the site of the south-west corner of the moat.		L25	WR
CJ (15) Fill of the south-east corner of the moat.	<15>	L25	W?
CJ (7) Soil including twentieth century finds.	<6>	L25	WR
CN (14). Rubble forming the lower part of the fill of the channel or pond.	<7>	L25	W?
CN (14)? Rubble forming the lower part of the fill of the channel or pond.	<9>	L25	W?
Stream deposits in the culvert in trench CU [13]	<3>	Uncertain	WR
Stream deposits in the culvert in trench CU [19]	<4>	L25	WR

¹⁵⁸ Female Orphan Asylum minutes 12 November 1874 and 22 February 1877.

¹⁵⁹ Shew forthcoming

¹⁶⁰ Atkinson and Oswald 1969.

Context	Spec no	Form	Mark
From the bank covering the 'grotto' in trench CW	<2028>	L25	WR
Cavity in the brickwork of the flue at the eastern end of the Orangery wall.		L25	WR

These are strongly associated with the garden. The two bowls from [CN14] were found in dumped rubble and sand which included debris likely to have come from the remodelling of the house about 1710-12. The pipe from trench AJ was in deposits which predate the construction of the east lake.

Oswald 1975 lists two London makers with WR names, William Robinson (1708) and William Ryder (1717). L25 WRs predate the east lake so they must have appeared by the second phase of the eighteenth century garden (see 17 below).

18 BRICK WORK AND BRICK SIZES

The surviving sections of wall along the north and south sides of the central garden are generally in English bond or a have a more irregular bond using courses largely of either headers or stretchers (figure 106). The same also applies to the boundary walls around the south garden. The Orangery wall is an exception. The north side of this is English bond while the south side is Flemish although the decoration means that there are many irregularities.

The curved wall that closes the eastern end of the central garden may be in Flemish bond but the surviving northern half has been so heavily repaired that it is hard to be certain.

The two surviving sections of wall in the north garden are in Flemish bond. One of these marks the western boundary of the present Crispin Crescent estate, the other forms the eastern boundary of the allotments formerly the kitchen garden. It seems likely that these two walls are of a different and later date than the walls in the central and south garden.

A number of bricks have been measured in standing walls and from excavated contexts:

Source	25 th quartile	50 th quartile	75 th quartile	Number
Wall in trench CE to the west of the Orangery wall.	57.00	58.00	61.00	21
East end of garden north of the bank. Section B-C on fig.17 (BS12)	58.00	59.00	60.00	100
Wall by trench CL on the south side of the central garden east of the Orangery wall.	62.00	63.00	64.00	31
Dovecote (BS17)	63.00	63.00	64.00	100
Bricks from the pillar by the bridge at the SW corner of Crispin Crescent	62.00	63.00	64.00	20

Source	25 th quartile	50 th quartile	75 th quartile	Number
Bricks from the wall between the Crispin Crescent Estate and the east end of the central garden	62.00	63.50	64.00	50
Brick rubbing rubble from the construction of the Orangery in trench CF (context [CF4])	62.00	64.00	66.00	258
Orangery south side (BS13)	65.00	66.00	67.00	100
Orangery north side (BS16)	66.00	66.00	68.00	100
East garden wall section C-D on figure 17 (BS19)	65.00	66.00	67.25	100
Stub wall at east end of Orangery (BS18)	66.00	67.00	68.00	97
South wall of the East lake wall exposed in flood alleviation work	66.00	67.00	68.00	11

The brick thicknesses appear to fall into three thickness groups one at 58-59 mm, another at 63-64 mm and a third at 66-67 mm.

The thinner bricks were used for the wall between the central and south garden to the west of the Orangery wall and on the short section of north-south wall closing the east end of the garden (B-C on figure 17).

The middle group were used for:

- Wall by trench CL on the south side of the central garden east of the Orangery wall.
- The Dovecote
- Bricks from the pillar by the bridge at the SW corner of Crispin Crescent
- Bricks from the wall between the Crispin Crescent Estate and the east end of the central garden
- Brick rubbing rubble from the construction of the Orangery in trench CF

The third group are associated with the Orangery wall, the east lake and the wall closing the east end of the central garden:

- Orangery south side
- Orangery north side
- East garden wall section C-D on figure 17
- Stub wall at east end of Orangery
- South wall of the East lake wall exposed in flood alleviation work

The Orangery related brick rubble from trench CF looks anomalous in the middle group. However, much of this brick had been rubbed which would make the material thinner.

This data is consistent with the garden being constructed in three phases or perhaps in stages at a time when bricks were becoming thicker.

Bricks from the thinner group can be found on the north side of the south wing of the house. A large part of the house was refaced in the mid-nineteenth century but this and some other areas probably date from the first baronet's re-facing of the house about 1710-12. Very similar bricks were used to construct the basement of Stone Court, Carshalton, built sometime between 1693-1710. These had a 25th percentile height of 57, a 50th percentile of 58 and a 75th percentile of 59.¹⁶¹

The thickest group of bricks were used to construct the orangery wall and the adjacent stub wall linking it to the gates at the end of the south cross walk. The Orangery appears to have been rebuilt after 1717 and probably belongs to the later part of the first Baronet's ownership.

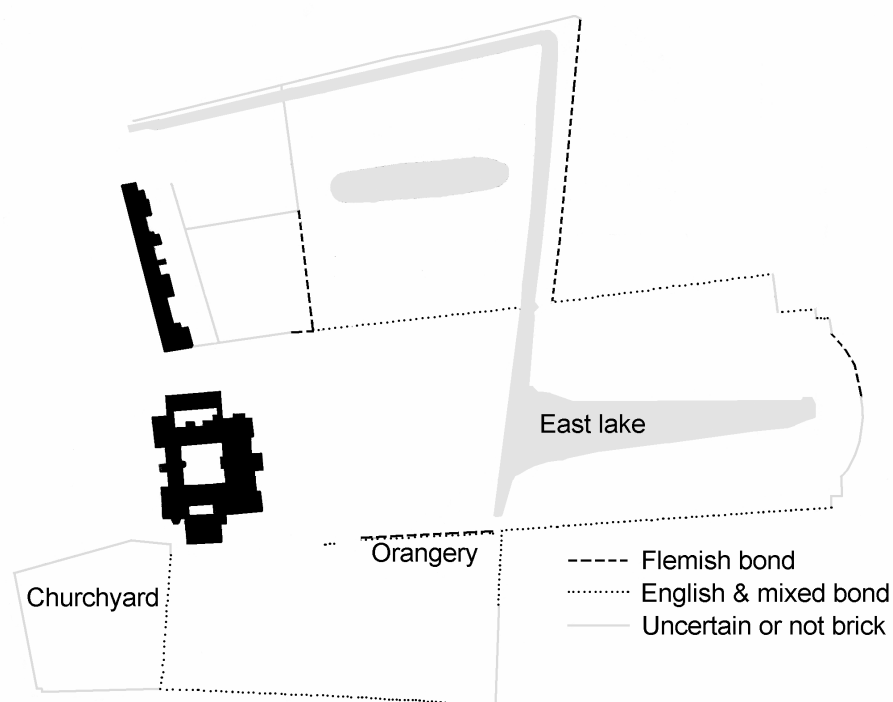


Figure 106. The bonding in the walls

19 THE TUDOR GARDEN LAYOUT

This section draws together the evidence for the layout of the Tudor garden. It does not cover the documentary evidence for its development and background which has recently been summarised in Phillips and Burnett 2005. This paper also considered the outline plan of the Tudor garden but space did not allow a complete review of the existing evidence which is presented below.

19.1 The layout of the Tudor garden

Any reconstruction of the Tudor garden must start with the few features which existed in the later sixteenth century and are still in the modern landscape:

¹⁶¹ Sample of 49 measured during the 2005 excavation.

- The house which contains a significant amount of sixteenth century structure including the great hall.
- The churchyard. It is likely that the boundaries of this were stable from the late medieval period until 1994 when an extension was made.
- The southern edge of the garden was almost certainly defined by Church Lane as it is today.
- The northern boundary was probably defined by the line of the river shown on Roque's map, the western section of which survives today. This formed the southern boundary of a sub-manor called Huscarls which can be traced back to at least the 13th century.¹⁶²
- The 1748 edition of Defoe's *Tour* shows that the sixteenth century orange house was on the site of the eighteenth century brick Orangery.

Several excavated features are likely to belong to the Tudor garden although none can be dated with certainty.

- The moat around the house. This was wide. Trench CI showed that the southern end of the western arm had a width of 15 m at water level while the south bank passed between trenches CE and CJ (figure 25). Trench AC showed that the north moat had a minimum width of 8 m although neither bank was seen.
- The fragment of ornamental structure found in trench CW
- The watercourse found in trench CD
- The pond or water feature found in trenches CM and CN
- The pond or water feature which underlies the eastern end of the Orangery wall. The silts from this were exposed in trench CP and in an auger hole on the southern side of the wall. A water feature predating the east lake was also seen on trench AJ to the northeast of the Orangery.
- The channel seen in trench CF.

It is not easy to reconcile this information with the documentary evidence partly because the latter is very fragmentary.

The two best descriptions of the garden by Baron Waldstein (1600) and a gentleman accompanying the Landgraf of Hessen-Kassel (1611) both mention a stream in the garden and the latter seems to imply a stream and a flowing 'water' – presumably a river. The household accounts refer to 'the river' without qualification which implies that there was only one substantial channel. This sits uneasily with the archaeological evidence which suggests several channels and ponds:

- The present line of the river along the north side of the garden.
- The channel passing through the north moat
- The channel or pond seen in trenches CM and CN
- The channel seen in CF
- The channel in the south garden seen in trenches CU and CW
- The 1820 map shows an oval pond in the middle of the wilderness. It is not known if this was created in the eighteenth century or was older.

¹⁶² Phillips 2006

The channel on the north side of the garden seems to be an old boundary. In the eighteenth and early nineteenth century it served as a spillway taking surplus water around the northern edge of the garden and preventing flooding within it. This function would also have been necessary in the sixteenth century.

It seems likely that the main river was the channel through the north moat as this would flow through the heart of the garden as suggested in the descriptions.

The channel or pond in the centre of the east lawn may be the oval pond mentioned in various sources (section 11.3) although the oval pond shown in the centre of the wilderness on the 1820 map is an alternative site.

The channel through the south garden cut through the Tudor ornamental structure. However, calcite deposits show that the ornamental structure was wet and it is likely that the stream was brought to it at a higher level. If so that stream existed in the Tudor garden.

The household accounts mention three garden areas (see section 11.2):

- The privy garden
- The Great Garden
- An orchard

There was also a New Orchard but this appears to have been on the park side of the house.¹⁶³

The accounts and various other sixteenth and seventeenth century sources also mention a number of features:

- An oval pond
- A banqueting house with a painted ceiling and a grotto beneath
- A fountain with fishes and frogs
- An orange house
- A fig house
- A flower house
- A grotto with a hydra
- Mills, boats and statues in a stream
- The grate pother place
- A bird house
- One or more rocks or mounts

Only the orange house can be placed on the ground with any certainty although this is open to some doubt as the eastern end of the existing structure appears to have overlaid the water feature seen on trench CP. It may be that the structure was moved eastwards in the eighteenth century to fit in with the cross walk and south garden gates. The location of the other features is currently unknown and it is unclear which of them, if any, is the structure found in trench CW.

¹⁶³ Gowans 1983 p65-6.

The mount or mount house appears to be associated with the river and it may perhaps have stood in the channel which ran through the north moat.

The grotto with the hydra and the toy mills and boats were also in a stream. This might perhaps be the small channel south of the Orange house although this is uncertain.

In many ways the water course found in trench CF is the most enigmatic of all. Its bottom appears to respect the level of the moat and if, as the finds suggest, it dated from the middle ages it may originally have been the moat feeder. This suggests that the river channel through the north moat was created for the garden and that the original moat was off the main river in the usual way. It is however, hard to see how the CF channel fitted into the Tudor garden, but if the dating is correct, it was there.

The river channel through the north moat presumably continued out into the park apparently forming a long canal like feature to one side of the axis through the house. This seems a remarkably radical piece of design for an English sixteenth century garden but it is not impossible as much else at Beddington was at the cutting edge of fashion.

20 THE CHRONOLOGY AND LAYOUT OF THE EIGHTEENTH CENTURY GARDEN

The overall layout of the central part of the early eighteenth century garden is fairly clear. The central area extended eastwards from the house for about 290 m. It was defined by brick walls to the north and south and the east end was closed by a curving bank backed by a wall. The River Wandle entered the garden through two culverts in the centre of the bank and flowed over a cascade into a more or less rectangular lake. The lake occupied the centre of the eastern end of the garden. There were gravel walks along the sides and another wide walk connecting the lake to the house along the garden axis. A walk ran north to south across the garden connecting ornamental gates in the boundary walls. These opened into the north and south garden areas.

The south garden occupied the area between the central garden and Church Lane. The gates opening into this area were larger and more elaborate than the gate to the north area suggesting that it was the more important. Roque's map shows it divided into four areas, one directly south of the house, two formal garden areas to the east, and area with trees at the eastern end. The area south of the house and the westernmost formal garden appear on the 1820 enclosure map and substantial parts of the boundary walls survive. There was a large brick Orangery along the north side of the formal garden which stood on or near the site of the Tudor orange house.

The eastern of the two formal garden areas shown on Roque's map and the ground beyond it are more problematic. There is no clear evidence that they ever existed and it may be that Roque depicts a proposed layout which was never completed.

It is also hard to reconcile Roque's depiction of the northern garden area with the enclosure award map of 1820 and the surviving remains. The latter suggest that the Wandle flowed northwards from the western end of the lake and then turned west along the northern edge of the garden. In the early nineteenth century the area

bounded by the river, the kitchen garden and wood yard and the central garden was a wilderness with an oval pond in the centre. It was entered by a gate at the south-west corner. This connected to the north end of the cross walk in the central garden area. Roque shows gardens to the east of this wilderness but there is no evidence that they ever existed. It may be that the arrangement shown in 1820 dated from the early eighteenth century.

20.1 The chronology of the early eighteenth century garden

There is good documentary evidence that shows that Nicholas Carew, first baronet, carried out a substantial amount of work on the house and garden. He came of age in 1707 and died in 1727 leaving a young son as the heir. His father also died young so the two decades of his ownership were preceded and followed by long minorities 1689-1707 and 1727-1741. There is documentary evidence for the neglect of the house and garden in the first of these periods but very little information relating to the second.

The early eighteenth century garden obviously replaced its Tudor predecessor and it is not clear how much the earlier arrangements influenced that latter. However, the overall relationship between early eighteenth century house, garden and park was unusual and was almost certainly a legacy from the past. Most large early eighteenth century houses had an entrance drive at the front of the house, the garden at the back and the park beyond. At Beddington the drive and park were at the front and the garden isolated at the back. The First Baronet could have resolved this by turning the house round but it would have involved a great deal of building work and was perhaps beyond his resources. However, he may have wished at least initially to preserve some features of the original garden such as the Orangery which was by that time well known.

The brick work and bonding allows the eighteenth century garden walls to be divided into at least two clear groups (figure 106). Most of the boundary walls around the central and south garden are laid in English or some more irregular bond. The curved wall at the eastern end of the central garden, the ornamental northern side of the Orangery and the walls in the north garden are laid in Flemish bond.

The brick sizes offer clues to the chronology. The soft red smooth finished bricks can be divided into two broad groups one about 58-60 mm thick and the other about 63-67 mm. The thin bricks are very similar to those used to build the Stone Court mansion house in Carshalton around 1700 and can also be found in the surviving areas of eighteenth century facing of Carew Manor which dates from about 1710-12. The thicker bricks were used to construct both sides of the Orangery wall, the stub wall linking the Orangery with the gates at the end of the cross drive, the lake retaining wall and the curved wall closing the eastern end of the garden. There was a bonding break on both sides of the north gates suggesting that it had been inserted into an existing wall. The lower part wall on the west side of the south gates was in thin brick which again suggests that the gates had been built into a pre-existing wall.¹⁶⁴

This suggests that the First Baronet initially planned a relatively simple garden retaining the original wooden orange house and that he or his successors altered the

¹⁶⁴ From the foundations exposed in trench CE.

design adding the Orangery, gates, lake and closing bank and cascade. Most of the documentary evidence for the date of these additions relates to the Orangery. In the seventeenth century this was a wooden structure which covered trees planted in the ground. The various editions of Defoe's *Tour* suggest that this was replaced by a brick Orangery between 1742 and 1748 during the ownership of the Second Baronet. However, two pieces of evidence contradict this. One is Lyson's *Environs of London* which says that the trees died in the harsh winter of 1739-40 and the other is the letter of June 1743 which talks about economies in the garden rather than new projects. The Second Baronet seems to have inherited some debt and to have been in almost immediate financial difficulty which means he is unlikely to have carried out major alterations in the garden. The First Baronet also had financial problems. There is however documentary evidence for him working on the garden from Colen Campbell's *Vitruvius Britannicus* published in 1717 and Aubrey's *History of Surrey* published in 1718 which says that the garden was incomplete. The latter is of particular importance as the editor, Richard Rawlinson, is known to have visited Beddington to collect material in May 1717 so he was an eyewitness. This was in the period of financial engineering that led to the South Sea Bubble. The First Baronet was speculating in stocks in 1720. It is possible that this activity went back some years and that this resulted in a period of prosperity when he felt that he could spend lavishly on the garden. If so it did not last and by the end of 1720 he was in deep financial trouble. It is possible that work stopped and that the garden was never properly completed. This might explain the discrepancies between Roque's map and the existing remains although, the map was not published until long after the First Baronet's death.

Several pieces of archaeological evidence tend to support this picture. The moat which had surrounded the medieval and Tudor house would sit uneasily with the classical refacing of the building. The fill of the south-west corner of the moat excavated in trenches CG and CI contained a great deal of rubble which probably came from the house. It seems likely that this part of the moat was filled when the house was refaced and remodelled about 1710-12. It is likely that the whole of the west moat was filled at this time and probably the east moat which also contained a great deal of rubble.¹⁶⁵ The finds from the gravels in the culvert laid in the southern moat suggest that this was an open channel until about 1800. It is likely that the greater part of the south moat was filled in the early eighteenth century leaving the culvert as an open channel to collect the water from the kitchen and south wing drains. The channel may have been arched over in 1818 when Anne Paston Gee remodelled the south wing.

Trench CA showed that the fill of the north moat overlays that of the east moat. The sand deposits in the moat bottom at the north-east corner of the island show that there was originally a significant water flow through the north arm. This is confirmed by the deposits in the foundation trench AC where the gravels contained an L25 pipe bowl marked WR. The lower moat fill also contained a mallet wine bottle of c.1725-30 or later. The north moat appears to have been part of a river channel which flowed westwards across the garden, through the moat and away into the park. The bed of this channel was found in trench CD where the fill may have come from the construction of the east lake a short distance to the south. If so the channel existed in the first phase

¹⁶⁵ Trench CA.

of the eighteenth century garden but, at least the eastern end of it, was not in the later one.

Trench CF contained a layer of brick off cuts which appeared to be waste left from the construction of the ornamental north side of the Orangery wall. This rested directly on the silt which had filled a deep and long established water course. This suggests that the construction of the Orangery wall was part of the first remodelling of the garden rather than an alteration carried out in the mid-eighteenth century as the channel would have no discharge point after the moat was filled. In other words it was done by the First Baronet not the second.

The culverts in and around the moat throw some light on the water flows through the southern end of the garden There are three relevant culverts:

- F58 which ran from near the west end of the Orangery wall into the east end of the main moat culvert
- F53 which took water from the west end east-west channel across the south garden into the moat culvert
- F53A a blocked off culvert which entered the main moat culvert just upstream of F53. Its route is unknown.

The upstream line of culvert F53 is fairly clear. The culvert ran from the west end of the watercourse across the south garden which was in turn supplied by a channel running from the Wandle below Beddington Ford. The surface part of the route is clearly shown on the Beddington and Bandon enclosure award map of 1820. The finds within the south moat culvert suggest that it was not arched over until the early nineteenth century – possibly 1818 when Anne Paston Gee remodelled the south wing of the house. Culvert F53 was clearly an insertion into the main moat culvert and must therefore be later.

Culvert F58 has been traced as far as a roof collapse near the western end of the Orangery wall. It is likely that it connects with culvert [CT20] which ran roughly east-west just south of the Orangery wall. However, it is unlikely that [CT20] was the main source of water in F58. The inside of F58 was covered with limescale which sometimes had a black deposit on it which suggests that the water came from the river. The floor was covered with gravel overlaid with fine silt. This is consistent with the deposits in trench CU where the channel from the river Wandle entered the south garden. The floor of culvert [CT20] was brick covered with fine silt. There was no gravel and no precipitates suggesting drainage rather than river water. It therefore seems likely that culvert F58 originally received all or part of the river water from the south garden. The black deposits suggest that it was still flowing when the Wandle was badly polluted in the mid-nineteenth century. The water flows in the south garden were, therefore, altered but it is not clear how this relates to changes in the garden layout.

20.2 The west lawn and west lake

When the moat was constructed in the second half of the 14th century the spoil seems to have been thrown up onto the island so that the house is considerably above natural ground level. Today there is a drop of about 2 m between the house and the surface of

the park on the west side of Church Road. Most of this is accounted for by the slope of the west lawn.

In the eighteenth century there was a long canal-like west lake which ran out into the park more or less on the axis of the house. There was an avenue of trees along the lake and further radiating avenues to the north and south. The lake and avenues were first recorded in the 1724 edition of Defoe's *Tour* which also mentions a fine ornamental 'court' between the lake and house.

It seems likely that the lake was created by the First Baronet and it would be logical to connect it with the additions to east garden which seem to date from about 1718. This is supported by the fact that the lake feeder culvert (F32) was clearly inserted into the main moat culvert. However, this interpretation sits uneasily with what we know of the levelling sequence on the west lawn. The gas pipe trench (section 10.2) suggested that the west lawn had been levelled up with a substantial amount of fairly clean earth. The obvious source for this is the west lake. Trench CI clearly showed that the make up of the lawn underlays the fill of the west arm of the moat and was therefore later than the moat culvert. Defoe said that the canal had a river running through it which suggests that, in the 1720s, it was fed by an open channel rather than the culvert. If so the feed arrangement must have been changed, possibly in the later eighteenth century, when the park was brought up to the front of the house.

There is, therefore, some uncertainty about the chronology of the west lake, when the west lawn was graded up, and what was on the site before. It would have been an obvious site for an outer court which was a common feature of large Tudor courtier class houses. It is also unclear why Defoe said 'the court before them [the wings] is extremely fine, and the canal in the park, before the court, is so well that nothing can be better ... What was there to justify such a statement? Did it contain a significant early eighteenth century garden feature?

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