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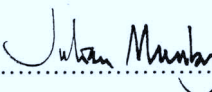
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Witley Court, Worcestershire

The Parterre Gardens

ARCHAEOLOGICAL INVESTIGATIONS REPORT

VOLUME I

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Witley Court, Worcestershire

The Parterre Gardens

ARCHAEOLOGICAL INVESTIGATIONS REPORT

SUMMARY

The gardens at Witley Court, a Scheduled Ancient Monument, were created by William A. Nesfield in 1854-60 for Lord Ward. These comprise two large gardens with parterres and fountains, constructed on the east and south sides of the house and church, designed to compliment the modernisation of the house by Samuel Daukes, and replacing the former open landscaping around the house according to a design by George Repton. In 1937 the house caught fire and was never rebuilt, and later in the century both the house and garden were stripped of some architectural details before coming into public ownership.

The programme of archaeological investigation carried out by Oxford Archaeology (OA) within the Parterre gardens, as reported in this document, Volume I, and supported by a technical supplement, Volume II, between May 2002 and March 2003, was undertaken on behalf of English Heritage as part of their garden restorations programme at Witley Court which has been developed as an application to the Heritage Lottery Fund (HLF).

The archaeological response to the works was driven by the need to provide information by survey and excavation for the repair and reconstruction process; and to mitigate the impact of alterations or loss to the historic character and fabric of the Scheduled Monument by ensuring that records were made and related to current and future research needs for the site.

The excavation and survey work has been successful in providing a more detailed examination of the constructional development of the gardens. Limited surviving evidence of features/deposits relating to pre-Nesfield garden/landscape features were recorded, however, the majority of recorded features and deposits related to surviving elements of the Nesfield gardens, their potential later adaptation and ultimately their decline.

Witley Court, Worcestershire

The Parterre Gardens

ARCHAEOLOGICAL INVESTIGATIONS REPORT

1 INTRODUCTION

1.1 Location and scope of work

- 1.1.1 Oxford Archaeology (OA) has been retained by English Heritage (EH) West Midlands Region, to undertake a programme of archaeological recording in the Parterre Gardens at Witley Court Scheduled Ancient Monument, Great Witley, Worcestershire (Malvern Hills District, SAM 306, NGR SO 769648) (Fig. 1).
- 1.1.2 The Parterre Garden Project Design was developed as an application to the Heritage Lottery Fund (HLF), and comprises a Conservation Plan and an SMCC(6) application in addition to other technical reports and designs. Preliminary investigations on the archaeological potential of the garden works was undertaken by OA in 2001 and have been reported (OA 2002a). Some earlier investigations, including geophysical determinations have covered parts of the garden, and have also been reported previously (Bartlett, McCann and Mackie, 1997; City of Hereford Archaeology Unit 1994 and 1996; Heald and McGee, 1996 and 1997).
- 1.1.3 The scope of works undertaken and reported in this document were developed with the assistance of the EH Inspector, Tony Fleming, and following discussions with Mark Bowden of EH Survey Section, Swindon.

1.2 Geology and topography

- 1.2.1 Witley Court lies near the village of Great Witley Worcestershire and west of the important river port of Stourport. The site lies on a sandstone scarp at c. 85 m OD. The land is presently kept under a basic landscape management policy with the site being open as a public attraction through the Guardianship of English Heritage. The surrounding area is open farmland and woodland.

1.3 Archaeological and historical background

- 1.3.1 The ruins of the great house are the product of several centuries of human activity on the site. The archaeological and historical background of the house and its surrounding gardens has been the subject of a number of previous archaeological, documentary, cartographic and pictorial assessments and only a brief summary is presented below.

- 1.3.2 The medieval manor house stood on the site of the later mansion. Virtually all that remains of this early phase is the much damaged sandstone vault, which stands at the centre of the cellar complex. This vault is either 13th or early 14th-century in date although one doorway is cut by a 15th-century doorhead. Although this is the most obvious early phase of activity, some of the sandstone walls in the cellars and a spiral stair may also have medieval origins. The medieval village and its church stood somewhere near the manor and probably lay under the later graveyard.
- 1.3.3 By the sixteenth century a park had been laid out around the court, although the appearance of the house during this period is uncertain. By 1655 the estate was sold to the Foley family of Stourbridge. This family were minor local aristocracy who had become exceptionally wealthy from iron manufacture. The Foleys expanded and enlarged the house in several phases. Several blocked seventeenth century windows and the massive stone base of the house testify to the quality and scale of work of that date.
- 1.3.4 In the eighteenth century further work was carried out. In the 1730s the baroque church adjoining the house was built to the east of its medieval predecessor. The grounds were also landscaped and altered, symmetrical service wings were added to the front of the house. In 1805 the architect John Nash added the massive north and south porticoes and substantially altered the appearance of the house.
- 1.3.5 In the mid-nineteenth century the house was again altered and the old brick core was largely hidden from view behind bath stone or render. The new house was built in the fashionable Italianate style popularised by the Queen and her consort at Osborne House. The new house included a much enlarged Orangery and massive alteration to the park and grounds.
- 1.3.6 The gardens at Witley Court were created by William Nesfield in 1854-60 for Lord Ward, at the same time as the house was rebuilt and extended. In the place of Repton's open landscaping around the house two large gardens with parterres and fountains were constructed on the east and south sides. Since the house and church stand on the highest land the garden falls away from the terrace on each side of the house: the principal axis on the south has a sloping path with short flights of steps on this and other paths, while the eastern terrace is approached by steps and has further steps down from it. In all there are 29 flights of steps in the garden, and only a few of these are still complete, while most have had their stonework robbed at some point after the abandonment of the house in the 1930s. There are numerous photographs of the gardens before their destruction, and records of their design and maintenance (e.g. the use of blue gravel on the paths). A number of aerial photographs give a clear view of the gardens before they had deteriorated.
- 1.3.7 In 1937 the house caught fire and was never rebuilt. Later in the century it was stripped of some architectural details before coming into public ownership.

1.3.8 The parterre gardens have been the subject of previous archaeological investigations. In 1996 the City of Hereford Archaeology Unit undertook a programme of architectural recording and archaeological surveying of the house and its surroundings (CHAU 1994 and 1996). These works included a landscape survey of the grounds to the south of the house. Invasive archaeological investigations within the gardens were further carried out by Nottingham University between 1996-7 and these works included the excavation of trenches within the south, east and north parterre gardens, the redefinition of the Ha-Ha that surrounds the gardens balustrade and the partial excavation of the main bed of the east parterre (Heald and McGee 1996 and 1997). The excavations undertaken within the main bed of the east parterre revealed significant evidence for the survival of its former interior design.

1.4 Acknowledgements

1.4.1 Thanks to all the staff at Witley Court for their help during the archaeological works and to Tony Fleming (English Heritage Inspector, West Midlands Region), Stephen Wells and Ian Hurst (English Heritage: Major Projects), Mark Bowden (English Heritage Survey Section), Derek Clark (ST Duckham and Walker), Hugo Schofield, Richard Pugh and Paul Rice (Capps and Capps) and John Lomax (Nicol Jones and Lomax). Additional geophysical survey was undertaken by Stratascan.

2 FIELDWORK AIMS

2.1.1 The aims of the archaeological programme were:

- to provide information by prior survey and excavation for the repair and reconstruction process.
- to ensure that all episodes of ground disturbance or fabric intervention are subject to archaeological observation, supervision and recording.
- to relate the investigation and discoveries to the research questions outlined in section 1.3 of the OA method statement (OA 2002b).
- to ensure that recording and results are related to previous investigations and records.
- to ensure recovery and retention of artefacts removed or discovered in the works.
- to create a record and archive of the investigations.
- to provide on-site information for visitors about the purpose and results of the investigations.
- to disseminate the results of the investigations by publication or other means.

3 FIELDWORK METHODOLOGY

3.1 Scope of fieldwork

- 3.1.1 The scope of archaeological works is based on an assessment of the implications of the categories of proposed works schedule issued in March 2002 and as identified in the OA Method Statement (OA 2002b).
- 3.1.2 The archaeological response to the works was driven by the need to provide information by survey and excavation for the repair and reconstruction process; and to mitigate the impact of alterations or loss to the historic character and fabric of the Scheduled Monument by ensuring that records are made and related to current and future research needs for the site.
- 3.1.3 Additional remote sensing by non-invasive geophysical survey has been identified as a technique that could be employed to assess and determine the presence or absence of further elements of the Nesfield garden. As with the study of aerial photographs and historical photographs generally, the need for further research will be borne in mind during the course of the project, and may be called upon as necessary.

3.2 Fieldwork methods and recording

- 3.2.1 An integrated approach combining field survey, fabric analysis, excavation, evaluation, archaeological monitoring and recording and photography has been undertaken in order to meet the requirements of the proposed reinstatement works. The methodology employed in each area of work was implemented as specified by Task within the OA Method Statement (OA 2002b).
- 3.2.2 The field survey was carried out by members of Oxford Archaeology's Digital Survey department using a Leica TCR 705 reflectorless Total Station Instrument. The data was downloaded and reduced using the LisCAD software package and the recorded survey data saved as AutoCAD Map 2000 drawings.
- 3.2.3 All areas of archaeological intervention (including trenches and test pits) were hand cleaned and recorded in section at a scale of 1:20 and in plan at a scale of 1:10. All areas of archaeological intervention were photographed for Monochrome prints and Colour transparencies following procedures laid down in the *OAU Fieldwork Manual* (ed D Wilkinson, 1992).

3.3 Finds

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

3.4 Presentation of results

- 3.4.1 The reporting structure for the programme of archaeological investigations carried out within the gardens at Witley Court has been divided into two volumes, the purposes of which are outlined below;

- Archaeological Investigations Report (Volume I) - a readily accessible narrative with selected illustrations and photographs that fully documents the purpose of the restorations programme, describe the nature of the archaeological interventions and recorded archaeological remains, and concludes with interpretative analysis.
- Technical Report (Volume II) - a complementary supplement containing a readily accessible data set of the archaeological deposits discussed in Volume I, and as supplied with the project Archive. This report further contains a full copy of the photographic narrative of the fountain restoration works and selected images of deposits as excavated and recorded across the garden. Additionally, a post-excavation assessment of the archaeological works is also provided for future publication.

3.4.2 These reports are both supported by an accompanying CD-ROM. The CD-ROM contains a digital copy of both Volume I and II reports in PDF format, and a copy of the photographic narrative of the Perseus and Andromeda fountain restoration works and selected images of the excavation works in TIFF format. Additionally, the CD-ROM also contains an interactive digital survey of the house and gardens that is chronologically layered to indicate the location and extent of archaeological interventions within the garden to date. This survey has been produced in AUTOCAD.DWG format.

3.4.3 The structure of this report documents the results of the investigation works carried out within the gardens and these have been broken down below according to the nature of the fieldwork and the task schedule issued in the OA Method Statement (OA 2002b).

4 RESULTS: GENERAL

4.1 Soils and ground conditions

4.1.1 The site is located on sandstone bedrock that is generally overlain by a sequence of levelling deposits which form the basis of the gardens construction. In a number of areas these levelling deposits were seen to overlie a humic soil horizon thought to represent evidence of a pre-Nesfield garden/land surface. The ground conditions were generally good during the investigative works and the weather was on the whole fine and dry.

4.2 Distribution of archaeological deposits

4.2.1 Archaeological deposits and features were located within every investigation trench excavated within the Nesfield gardens. Predominantly the recorded features/deposits relate to elements that formed part of Nesfield's original landscape design, although evidence of pre- and post-Nesfield garden horizons were recorded, as was extensive evidence of their decline.

5 RESULTS: SURVEY

5.1 Topographic Survey (Task 101 to 106) (Figs. 2 to 4) (Plate 1)

- 5.1.1 The initial set up, site walkover and establishment of control stations was commenced on the 6th May 2002. A series of earthworks were identified during the site walkover as shown in Figure 2. These predominantly relate to garden features (tree hollows) bordering the paths within the south parterre garden. These are thought likely to represent areas of earlier planting possibly associated with the Nesfield Garden.
- 5.1.2 The paths, oval beds, and a series of earthworks adjacent to the oval beds have been surveyed and are thought to represent evidence of their former associated quarter beds (Fig. 2). The evaluation trenches from previous archaeological work have also been located and surveyed.
- 5.1.3 The long sections surveyed through the garden beyond the church provide a detailed picture of the sites topography and sections I, II, IV, V and VII are described separately below (Figs 3 and 4). Of particular interest is the precision of levelling work exhibited in the perfect arc described by the east parterre and the great difference in elevation between service yard and church yard, testifying to large scale ground makeup for the construction of the church.
- 5.1.4 The earthwork survey in the southern end of the garden was completed. This included the twin paths leading east and west respectively (identified as grass marks). Further earthworks (mainly tree-holes) were identified, though they proved not to be as extensive in this area as previously thought.
- 5.1.5 An initial walkover of the East Parterre Garden identified several areas of surviving surface detail in the garden landscape (Fig. 2). These are described as follows:
- 5.1.6 Paths bisecting the east parterre were identified in two places. These comprised parallel linear areas of higher ground either side of the central fountain, aligned with the two sets of steps descending from the upper terrace, and leading east west across the garden. Linear depressions either side of the paths were identified as drainage gullies. The paths were evenly cambered to allow for efficient surface water run off into the gullies.
- 5.1.7 Sunken features in the surface of the east parterre of nearly circular shape were also observed. These were highly variable in size, from over 6 m in diameter toward the northern edge of the garden, to less than 0.50 m in the centre of the east parterre. These features were believed to correspond to hollows left by removed trees. It is currently uncertain which of these, if any, correspond to Nesfield's original design.
- 5.1.8 Depressions in the grass around the fountain were identified as hollows from numerous small ornamental trees. These must have once almost completely encircled the narrow fountain path and the fountain itself.

- 5.1.9 Outside of the East Parterre, some additional sunken features interpreted as tree hollows were surveyed parallel to and east of the north-south aligned path to the East Pavilion.
- 5.1.10 A 2-dimensional hachure drawing has been produced from the earthwork survey of the garden denoting the location and dimensions of the observed features (Fig 2); a selection of long sections have also been produced as 2-dimensional sections (see representative sections shown in Figs 3 and 4).
- 5.1.11 The Fabric Investigation (3.4 of the Method Statement) was not deemed to require digital survey support and was left to be planned as part of the on-going archaeological investigation.

5.2 Survey: Cross Sections (Figs 3 and 4)

5.2.1 *Transect I*

5.2.2 This transect runs from north to south from the road to the north of the house to the west of the south parterre (Fig. 2). This section clearly defines the almost flat hill upon which sits the church yard and church (Fig. 3). This appears to be the levelling of a low sandstone knoll, this levelling may be associated with the demolition of the medieval church (which lay slightly to the west) and the construction of the new church in the 1730's.

5.2.3 To the south of the churchyard the hill has been completely terraced away to allow the building of the stables and service courts. This terracing was achieved by at least 1805 and the construction of the Nash influenced stables. Further rock cut cellars and sub basements lie to the east beneath this ground level. To the south the ground drops away towards the south garden.

5.2.4 *Transect II*

5.2.5 This section runs from north to south from the lake to the highest part of the south balustrade and the (now missing) decorative iron gates (Fig. 2). In the north the sections runs from the lake along a projecting 'snout' of land which may represent the remains of the eighteenth century causeway (as shown on early nineteenth century Repton sketches) (Fig. 3). The semi circular balustrade and road are shown as a terrace and the ground rises gently towards the house. The various cellars and sub basements beneath the house itself are not shown.

5.2.6 To the south of the house lies the terrace after which the land drops towards the fountain and then rises again to the south. The artificial flattening of the fountain and its surrounding is clearly visible and represents a raising of the ground level in this area.

5.2.7 *Transect IV*

5.2.8 This section runs north-south through the east parterre (Fig. 2). The artificially levelled parterre is clearly defined, as are the raised planting beds within it (Fig. 3). On either side the section drops away and terminates at the boundary Ha-Ha.

5.2.9 *Transect V*

5.2.10 Running from east to west this section cuts through the flanking wings of the house and the churchyard (Fig. 2). In the east it starts with the gently rising natural slope beneath the east parterre (Fig. 4). This rises to the two terraces which lie beneath the east front. The house itself is flatter but beneath this lies a number of basements (omitted for clarity). The church is sited on a hill which on this side (as in Transect I) has been terraced away to accommodate a number of buildings. On this side of the hill this must have been completed by the start of construction of the late 17th century house. To the west lies the gently descending approach to the church.

5.2.11 *Transect VII*

5.2.12 A short east to west section across the south garden (Fig. 2). The gentle slope on either side represents the original depression which has been filled by the raised fountain and garden (Fig. 4).

6 RESULTS: FABRIC INVESTIGATIONS

6.1 Ha-Ha Stonework (Task 201)

6.1.1 A walkover of the balustrade was carried out and 75 residual/displaced pieces of balustrade stonework were recorded, numbered and plotted on a 1:500 plan for recovery and reinstatement by the principal gardens contractor.

6.2 Fountain and Tunnel: Introduction (Tasks 202 to 205)

6.2.1 The massive Perseus and Andromeda fountain dominates the south gardens of Witley Court and is rightly famous as one of the largest and most intricate fountains in Europe. It was one of a pair of large and elaborate fountains added by Nesfield as the main foci of his new gardens. The smaller (but still massive) Triton fountain lies on the east parterre while the gigantic Perseus and Andromeda fountain lay below the south front of the house.

6.2.2 As a key element of the restorations project the Perseus and Andromeda fountain was to be restored to full working order. This entailed the replication of missing elements (achieved by copying pieces in store or using evidence from historic photographs) and the addition of new pumps, pipes etc. These restorations have allowed close inspection of both the sculptural and constructional elements of the fountain itself as

well as the tunnels and vault, which lie under the fountain and provided its water supply.

- 6.2.3 In cooperation with English Heritage and Capps and Capps, OA have compiled a photographic narrative record of the restorations as they progressed. The development of the restoration is discussed in Appendix 1 along with selected photographs (Plates F1 to F54).
- 6.2.4 The tunnels beneath the fountain are not being directly impacted by the garden restoration works, other than accommodating a series of pipes between pump house and fountain, and the level of recording reflected the relatively minor level of impact on the primary fabric. The recording was principally photographic (black and white prints and colour slides) with additional drawn elements. These included a 1:100 plan of the tunnel network and 1:20 sections, particularly through the central domed area beneath the Perseus and Andromeda fountain. The access chamber was also recorded photographically and through the creation of a plan and sections.

6.3 The Fountain: Sculpture and Construction

- 6.3.1 The fountain forms part of the ambitious landscaping works undertaken in the mid nineteenth century by William Andrews Nesfield for Lord Ward. Nesfield was commissioned to undertake the works in 1853 and the Perseus and Andromeda fountain is known to have been completed in 1859 (Conservation Plan). The water was supplied to the fountain from a reservoir c.1 km south-west of the house and 30 m above the level of the house. It was pumped up to the reservoir from Hundred Pool, c.600 m west of the house, using a 40 hp steam-powered beam engine with two Cornish boilers. An engine house to accommodate the beam engine was constructed in 1859 immediately below (i.e. north-east) Hundred Pool (Evans 1994).
- 6.3.2 *The Gardener's Chronicle* of October 15 1881 reports that 5000 gallons of water was supplied to the fountain per minute and it could supply a maximum of 10,000 gallons per minute. The main jet is said to have reached 36 m high. The engineers for the fountain and water supply system were Easton & Co.
- 6.3.3 The fountain consists of a circular pond with rectangular projections along its east and west sides. This pond has a Portland stone lip and the water was retained by a lead liner. In the centre of the pond rises the massive Perseus and Andromeda fountain. This is made up of an octagonal base supporting a sculpture depicting the rescue of Andromeda. This was carved in Portland stone by James Forsyth (his inscription may still be seen on the south side of the sculpture). To the east and west (in the projecting areas of pond) lie the bases of two smaller statues. These were two cherubs drawing bows and riding on sea monsters, carved by T Raymond Smith. As part of the current restorations these (missing) statues are being entirely remade.

- 6.3.4 The fountains were noted not only for the sculptures but the height and variety of their jets, which were said to be the world's tallest. During the late nineteenth century they played twice a week powered by the dedicated steam engine that was fed by the reservoir. The numerous jets included dolphins with reeds in their mouths which emitted a shriek when working. Other jets played from all over the fountain and early photographs and paintings give some idea of the impressive effect created (Evans 1994).
- 6.3.5 By the First World War the fountain appears to have become something of a costly luxury and during the later tenureship of the Dudley's it rarely played. After 1937 the fountain fell into a state of disrepair and during the Second World War it was stripped of much of its iron piping. The idea of moving and restoring the fountain to a new location (in Britain or America) was mooted on several occasions but never carried out.
- 6.3.6 The massive bulk of the sculptural group, which forms the core of the fountain, and its pond protected the monument from the worst ravages of vandalism and wilful destruction before Witley Court was taken into guardianship. After abandonment a number of elements were damaged or removed for safekeeping, these have been replaced during the current restorations. The main missing elements were:
- The statue groups from the two small flanking fountains
 - The tails of the rearing dolphins
 - Andromeda's hands and arms
 - Perseus's right arm and spear
 - Perseus's feet
 - Parts of the monster
 - The wings and ears of Pegasus
- 6.3.7 Despite being constructed in the mid nineteenth century the fountain owes much to the Renaissance public fountains of Italy and private fountains of France. The composition and style of carving is ostensibly classical particularly details such as the cherubs and dolphins which owe much to earlier works. Although it is impossible to clearly identify what inspired and influenced the designer (although his early sketches survive for the Triton fountain) and carvers, it is clear that the composition was rooted in a tradition of representing this scene.
- 6.3.8 The subject of Perseus and Andromeda has been the subject of numerous works of art since antiquity. A wall painting from Pompeii shows Perseus releasing Andromeda from the rock and a mosaic from Bulla Regia shows the same scene but with the monster writhing in the background. Numerous later artists represented the same scene including; Titian 1553-62, Wtewael 1630, Rubens 1639, Mighard 1679, Lemoyne 1723, Coypel 1726-27, Tiepolo 1730, Mengs 1777, Ingres 1819.

- 6.3.9 Unlike the Witley fountain these later representations are often similar and usually depict either Perseus descending from the sky and Andromeda chained to her rock, or Perseus releasing Andromeda from her chains after he has slain the monster. Rarely do they show Pegasus although they often include other characters including a cherub or cherubs (Mengs, Rubens, Coypel, Mighard etc), Nereids and cherubs (Mighael), but more usually the monster and the two lovers are the only figures.
- 6.3.10 The Witley fountain with its rearing Pegasus looming over the recumbent monster appears to owe more to representations of Saint George and the Dragon than to other depictions of Perseus and Andromeda. George slaying the dragon is repeated in numerous works of art from early Christian and Byzantine times onwards. The lance raised in both hands resembles eastern icons rather than the crouched lance shown in medieval and western renditions of the scene. Interestingly the composition and detailing resembles the Benedetto Pistrucci design for the reverse of the sovereign (1817) (A Fleming pers comm).
- 6.3.11 The portrayal of Andromeda herself and her rock owes much to the tradition of portraying the legend in the paintings mentioned above. The inclusion of the two cherubs on the flanking statues may be directly inspired by earlier paintings of the scene. At Witley these are sometimes incorrectly termed sea nymphs (or Nereids) although they are actually representations of cherubs.

6.4 **The Fountain: Sculptural Elements (Figs 11 and 12)**

- 6.4.1 The main sculptural group consists of the figures representing the primary characters in the legend (i.e. the main characters of Perseus, Pegasus and Andromeda). Perseus is depicted astride his winged horse Pegasus. He is nude apart from a billowing cloak, and sandals and raising his lance held in both hands (appropriately, as he has no stirrups). On his head he wears his enchanted helmet, the crest is a griffins head, the cheek pieces are raised up and tied to the helmet skull (giving the appearance of 'wings') and he wears open sandals tied high up the leg.
- 6.4.2 Andromeda is similarly nude but her modesty is conveniently shielded by a billowing garment, which is also wrapped around her right arm. Her hair is loosely tied back in antique fashion and she faces the monster. Her representation closely follows the Andromedas seen in numerous works of art.
- 6.4.3 Pegasus is depicted rearing up and turning his head towards the monster, his forelegs dramatically raised above the monster's tail, with his rear legs resting on the rock behind Andromeda. He has no harness or saddlery. The horse lacks his wings (the original wings were put into store and have been replaced by modern replicas). In comparison to the bulk of the horse they are surprisingly small but old paintings and photographs show they appear larger when viewed from below or from a distance.

- 6.4.4 The monster itself rises from the waves below the rock and despite its great size and weight is an intricate piece of carving. Its head is raised at Pegasus and Perseus and it drags itself onto the rock with its massive clawed feet. The head itself with its exaggerated eyes and brows, neck frill and tendrils around the mouth is reminiscent of dragons in Chinese rather than European art. The monster's feet are amongst the most intricate pieces of carving in the whole sculpture and include very fine feather like membranes between the sinuous claws. The body of the monster is made up of a massive trunk (with dorsal fin and spines) finished by a swirling and whipping tail with delicate tail fin.
- 6.4.5 These three figures all sit on the front of a giant rock; Andromeda stands on a step in the foreground and Perseus and Pegasus loom above and behind on a higher part of the rock. One of the most delightful aspects of the whole fountain is the detailing on this rock, which includes groups of exquisitely rendered barnacles, strands of kelp and seaweed tossed by the sea onto crevices and ledges.
- 6.4.6 This giant rock and the monster all lie on a base that on the north side is carved to represent a swirling sea and on the south (behind the main scene) shows a seaweed strewn rocky shoreline. This base is as richly carved as the elements it supports and includes numerous small details (shells, numerous different weeds etc) which would never be seen by an observer unless he were standing on the fountain itself.
- 6.4.7 Around the lip of this base lies a layer of deeply cut hanging seaweed (or coral) which falls fringe like around the entire octagon. The carving here is more stylised and repetitive than that on the main group above and serves merely to frame the main elements. Below this hanging layer sits a plain round moulding above a sloping undecorated battered plinth. This slopes outwards and allows the lower elements to be set out from the main group.
- 6.4.8 This lower level of statuary consists of nearly identical dolphins and shells. The dolphins are highly stylised and although the scales, snake-like tails and fins look distinctly un-cetacean. The head still preserves something of a dolphin like brow. Representations of this type of stylised dolphin have a long ancestry and appear in antiquity. They are also common in the middle ages and Renaissance (the badge of the French Dauphin was a similar, almost reptilian dolphin). These sit atop projecting rectangular plinths or piers, which jut out into the water. Jets (with noise generating reeds) were spouted from bronze nozzles in their open upturned mouths.
- 6.4.9 The shells are representation of stylised clams deeply carved on the outside but with a shallow bowl like interior (with jet nozzle). The hinges (the overlapping part of a bivalve shell) have been stylised into spiral volutes. They sit atop semicircular plinths on the main base.
- 6.4.10 The dolphins and shells all sit on beds of grass like weed which in turn are placed on top of a larger base of coral or seaweed carved into the surfaces of blocks. This is

superficially similar to that seen on the base of the main group but the carving is shallower and the weeds smaller. This in turn sits upon plain blocks, which have been eroded by water action creating an uneven effect on the stone's surfaces.

6.5 The Fountain: Statuary Components (Figs 11 and 12)

- 6.5.1 The visible statuary and sculpture of the main group is made up of blocks of Portland stone this is presumably built up around a brick core. Within this core lie the pipe galleries above the circular chamber, which feed water to the dolphins and shells. All the sculptural elements were fixed by cement and bronze dowels. In the restorations these have been replaced where possible with stainless steel. Andromeda's chain, Perseus's spear and the bows of the flanking cherubs were all made of bronze these have been replaced by fibreglass (partly to minimise the risk of lightning strike).
- 6.5.2 The fountain is supported on a base of plain undecorated stone blocks, which lie below the waterline. On top of these lie the carved blocks of the seaweed base with jutting piers supporting the dolphins and shells. Both these outer layers are made up of relatively small rectangular blocks the upper ones having a richly carved surface (see above).
- 6.5.3 This outer ring of stone blocks supports the lowest tier of statuary, this being the dolphins and shells, the dolphins sitting on rectangular piers, the shells on half round ones. Each dolphin is made of two blocks one forming the chest, head and fins, the other the tail. The tail only rests lightly on the base of the main group and the dolphin is anchored on its abdomen and fins. The shells appear to be large single blocks with exaggerated spiral hinges at the rear. These rest on slight semicircular piers and are supported partly on these and partly on the rear of the main drum of the fountain base. Jet nozzles pierce the dolphin's mouths and the shells.
- 6.5.4 Above this outer layer of dolphins and shells sits the main base of the figure group. This consists of an almost flat base representing sea on the north side and seaweed strewn rocks on the south. In the centre of these sits a large rock on which stands Pegasus ridden by Perseus. To the north of the rock stands Andromeda and below on the base sits the sea monster rearing from the waves.
- 6.5.5 The base (seaweed and waves) is made up of several large flat blocks almost seamlessly jointed in straight lines. Above this lies the main rock and this is made up of a number of stones, some of which are massive, others quite small. This rock has a large joint along its centre line with a number of smaller irregularly spaced blocks above and below. The folds of the rock cunningly hide the jointing of the blocks.
- 6.5.6 The large rock supports Pegasus both on its belly and by a gap on the west side of the rock which hold his abdomen and rear left leg. In this way although the horse appears to be rearing almost all the weight rests on the belly. Pegasus is made up of:
- The main trunk and rear legs (resting on the rock)

- The tail
- The forelegs
- The neck main and head
- The wings (missing)

6.5.7 Perseus sits astride Pegasus and leans forward, the weight of the statue supported both on the belly of Pegasus, although the billowing cloak behind transfers weight to the rear of the horse. Perseus is made up of:

- The main trunk
- The feet (missing)
- The arms
- The lower section of the cloak

6.5.8 Andromeda sits on a step on a smaller rock made up of four blocks, her weight is supported by her garment which billows behind her and rests on a small rock. She also leans back onto this rock and the cloak takes most of her weight (although it appears when viewed from the front as if she is supported on her slender legs). Andromeda is made up of:

- The main trunk and legs
- The head
- The Arms
- The cloak

6.5.9 The writhing sea monster is rather massive and its rearing head rests directly on the neck. It is made up of four main blocks:

- The tail fin and tip
- The main part of the tail
- The trunk and the head

6.6 Fountain Tunnels

6.6.1 The network of brick-vaulted tunnels beneath the south parterre gardens essentially consists of a 90m long east-west tunnel with three north-south crossing branch tunnels (Fig. 10). For the purposes of this study the network has been divided into 12 separate elements: nine distinct sections of tunnel and two main intersections. The tunnels formerly accommodated water pipes to supply the fountain but the main pipes have now been almost entirely removed.

6.6.2 *Branches A and B*

6.6.3 These two branches form the easternmost section of tunnel stretching 52.5 m from the access chamber (replaced by the new pump house in the current works), situated immediately beyond the eastern boundary of the south parterre garden, to the main tunnels beneath the fountain and garden. The two sections are of identical construction but they have been treated as two separate sections due to there being a clear kink in the tunnel alignment c.19 m from the eastern end. Similarly to the other

sections of tunnel Branches A and B are barrel-vaulted and constructed of typical mid-nineteenth century red brick. These sections are however narrower and lower. They are c.95 cm wide and the underside of the crest of the vault is 1.55 m above the floor level. The smaller profile and lack of any evidence of pipes suggests that these sections of the tunnel were purely for access rather than to carry water pipes and they were constructed to allow the access chamber to the tunnels to be situated outside the main garden. At the west end of Branch B the vaulted tunnel steps out and up to form an intersection of three larger service tunnels each one 1.6 m wide and 2 m tall. These three are Branch C (to the south), Branch D (to the north) and Branch E (to the west).

6.6.4 *Branches C and D*

6.6.5 Both branches measured c. 4.5 m long and had stone bases for pressure control bases. The box within Branch C is no longer in-situ but that within Branch D survives. The box is of cast iron and is 46 cm high by 61 cm long by 61 cm wide. It has five pipe inlets in the top, one at each corner and one at the centre. Each inlet is secured to the box with three bolts and directly above each there is the truncated end of a cut off pipe within the brick vault. Clearly five pipes formerly extended vertically from the box through the vault and up to the fountain. In the front (south) face of the box is a further, larger truncated pipe. This clearly supplied water to the box and the smaller pipes.

6.6.6 *Branch E*

6.6.7 This branch measured 16.5 m long and the main set of features recorded within it were eight evenly spaced brick bearers in the floor along the central line of the tunnel that would formerly have held a water pipe. Each bearer is 50 cm wide by 25 cm long and has a 25cm diameter semicircular groove in its upper face where the pipe would have sat.

6.6.8 *Branch F*

6.6.9 This branch forms the central chamber directly located beneath the Perseus and Andromeda fountain. It has a circular plan (3m diameter), with four openings to the branch tunnels, and a domed roof. At the apex of the dome there is a 1 m wide circular opening which allows access to an upper gallery above the domed chamber and within the statue of Perseus and Andromeda. The upper gallery consists of two arrow-shaped tunnels off the central access hole, each one with a barrel-vaulted roof. From its furthest two points the chamber is 4.7 m long. There are six cut-off water pipes within the floor, one at the two arrow points and one at each of the ends of the two arrow-shaped tunnels. Directly above the circular access hole is a further domed roof with a small (30 cm) shaft within it which must have accommodated a pipe up to the main fountain.

6.6.10 *Branches G and H*

- 6.6.11 These branches form the two north-south tunnels running off from the central domed chamber (Branch F). Each one is again barrel vaulted, constructed of red brick and is 1.6 m wide by 2 m tall. Branch H (to the north) is 20 m long and at its northern end there is a rectangular vertical shaft (60 cm x 75 cm in plan) within the vault. The shaft only extends up c.1 m but there is a small cast iron pipe within it which continues vertically. Also at the southern end of Branch H there is a brick relieving arch within the west wall of the tunnel and immediately above it the truncated end of a large cast iron pipe (38cm diameter). This would presumably originally have extended along Branch H before leaving the tunnel beneath this arch and continuing towards the north-east beneath the parterre gardens. It is likely that this would have linked with and supplied water to the Flora fountain in the east garden. Beneath the relieving arch there are two further similarly sized pipes which also curve out of the tunnel towards the north-east and presumably the Flora fountain, but each of these are slightly more intact as they are partially buried within the floor beneath a brick and earth hump. These are intact for the first 5 m but the upper half of the central pipe has been broken and removed in the rest of Branch H leaving a semicircular imprint in the floor. The only other features of significance in Branch H are a series of truncated cast-iron pipes within the barrel vault which would formerly have carried water up to the fountain. Towards the southern end of the tunnel (close to the domed centre) there is a single small horizontal pipe in each of the side walls, 50 cm above the floor, and adjacent to these is a further small vertical pipe in the crest of the vault. North of these pipes are four slightly larger (14 cm diameter), regularly spaced vertical pipes within the vault which form a rectangle.
- 6.6.12 Branch G is very similar to Branch H but only the northernmost 16m is accessible; the southern end either having suffered a collapse or having been partially filled in with earth. Branch G has a mirror image of the arrangement of seven truncated pipes in the walls and barrel vault of those in Branch H. The floor is again slightly cambered towards the centre suggesting that there is likely to be a pipe (or more than one) buried within the floor.
- 6.6.13 *Branch I*
- 6.6.14 This branch forms the continuation of the main east-west tunnel to the west of the domed chamber. It is 14 m long and is very similar to Branch E with seven regularly spaced brick pipe supports along the floor. At the west end of Branch I is a square plan intersection with north-south branches to the north (Branch K) and to the south (Branch J).
- 6.6.15 *Branches J and K*
- 6.6.16 These two branches are very similar to Branches C and D. They are each c.4.5 m long and they have pressure control boxes on stone pads at each end. The only minor difference is that adjacent to the pressure control boxes in Branches J and K are small

recesses in the west wall beneath brick arches. The two branches each have two cut-off pipes within the vault, one 14 cm diameter and one 10 cm.

6.6.17 *Branch L*

6.6.18 This branch forms the intersection between Branches J and K together with a short (c.0.5 m) extension to the west. The square plan intersection is barrel-vaulted with its highest point 3.08 m above the floor (or 1.13 m above the top of the adjacent tunnels). Within the crown of the vault there is an opening (20 cm²) to a vertical shaft which rises to the surface (within the fountain basin) where the shaft is now capped with the base of the former statue at this point which flanked the main Perseus and Andromeda composition. The underside of the coping (or statue base) is 4.2 m above the floor level within the tunnel. Neither this statue nor the vertical pipe which would have carried water up the shaft from the main pipe in the tunnel to the statue remains in-situ. However, beneath, and adjacent to, the shaft there is a 10 cm deep scar within the brickwork of the upper part of the east wall of the intersection where a pipe would formerly have been embedded within the wall. It is apparent that the pipe would have gone down the shaft and then continued down embedded within this wall towards the main water pipe on the tunnel floor. The west wall of Branch L, and the westernmost point of the tunnel network, is slightly curved and has the end of a large ceramic pipe, 1.75m above the floor, within it. The pipe continues westwards beneath the parterre gardens and it presumably formerly continued eastwards through the tunnel as part of the fountain's water supply system. However the end of the pipe is flush with the end wall of the tunnel and is not roughly truncated as would be expected if the pipe within the tunnel had been knocked off. The pipe may have been cut off neatly and then reused.

6.6.19 *Access chamber*

6.6.20 The only access to the tunnels is through a manhole towards the east, immediately south-east of the set of steps at the east edge of the south parterre garden. The whole chamber is a secondary addition shown by a structural break in the brickwork of the tunnel 1.4 m from the east end of the tunnel. The brickwork to each side of the break is red and of a broadly similar character to each other, so it is likely that the chamber was added relatively soon after the original construction of the tunnels, probably in the later nineteenth century.

6.6.21 The whole chamber is constructed of the same red brick and it is capped with large stone flags. It has a brick paved floor and the steps have stone treads. The manhole allows access to an L-shaped mid-height level 1.7 m by 1.8 m chamber which leads to a flight of six steps down to the east end of the vaulted tunnel. The mid-height level is c.2.3 m below the surface and 1.45 m above the height of the tunnel floor. At the foot of the stairs there is an opening in the shape of an up-turned teardrop at the base of the east wall which leads to a drainage channel to carry water out of the chamber (and tunnel) to a square sump c.1.5 m from the chamber. This channel links to small

drainage gullies 24 cm deep in the north and small east walls of the chamber. This gully continues along the primary tunnel. Approximately 1.5 m above the teardrop-shaped drainage opening there is a 10cm recess (60 cm x 75 cm) in the wall beneath a brick segmental arch.

7 RESULTS: EVALUATION, EXCAVATION, WATCHING BRIEFS (FIGS 5 TO 9)

7.1 The Ha-Ha (Task 301) (Plate 49)

7.1.1 A series of four trial trenches (Trenches 12, 13, 14 and 20) measuring approximately 2 m wide by 4.50 m long were excavated along the eastern balustrade of the east and south parterre gardens in order to locate and determine the surviving character and dimensions of the associated Ha-Ha ditch and provide a series of cross sections of its profile. These investigations were required to provide information for the location of the new service trench that is to be excavated for the fountain pumphouse in order to avoid the unnecessary removal of archaeological deposits.

7.1.2 The location of the four trenches is shown in Figure 5. These were initially dug by small mechanical excavator (Kubota) under constant archaeological supervision. Hand excavation was undertaken where sensitive archaeological features/deposits were located.

7.1.3 An inclined slope around the eastern balustrade was shown to survive, however, excavation did not reveal any evidence of an associated in-filled ditch within the trial trenches. A drainage channel revealed in Trenches 12 to 14 was, however, located flanking the balustrade (Plate 49). It was fed by ceramic out-pipes from the balustrade and was constructed from the same cylindrical piping material encountered during investigations of the paths and steps within the parterre gardens. The drainage channel flowed north to south terminating at the soakaway tower located at the pump house. Monitoring works undertaken during the excavation of the pumphouse service trench situated approximately 3 m to the east of the eastern balustrade of the East and South parterre gardens revealed no further evidence of these drainage runs. A man-hole access for the Flora fountain was however exposed, of which, a brief examination of the interior was made (see paragraph 7.11.4 below).

7.2 The Pumphouse (Task 302) (Plates 43 to 45 and 63 to 65)

7.2.1 The new pump house being installed to supply and power the fountain has required prior archaeological excavation and recording of the existing construction and fabric of the nineteenth century tunnel entrance and antechamber, and the detailed recording of the overlying steps (S7). The steps were excavated to characterise their construction and to ascertain their relationship to the construction of the tunnel, prior to their partial removal (Fig. 5; Trench 20). A detailed record of S7 has been

produced using phased plans and numbering of all the featured stonework to provide accurate information for their subsequent reinstatement. The steps comprise brickwork of eighteenth and nineteenth century date retaining a rubble and re-used limestone and sandstone core. Two types of bonding have been used, a sandy white/grey mortar and a very hard grey/blue silty cement. The former is the main bond and the latter has been used secondarily as consolidation. The steps are supported by a brick arch which rests against a large sandstone buttress in the foundation proper. At the base of the steps (east) is the tunnel entrance antechamber. This is brick built and capped by large peppered limestone slabs (see paragraph 6.6.19 above).

- 7.2.2 The original entrance steps to the tunnel were located to the south of the antechamber but have subsequently been re-built as a manhole access. The step structure has been partially demolished and re-built from inside. Consequently, the brickwork and mortar is very uneven. The back wall of the tunnel entrance is constructed of rough sandstone blocks with excessive amounts of mortar and cement.
- 7.2.3 The section of exposed balustrade within the excavation area (Trench 20) has been recorded in a detailed elevation showing the three elements of the build; sub-foundation, foundation-proper and balustrade (Fig. 6). The foundation-proper is constructed in sandstone, the sub-foundation of very rough large blocks with some bonding and areas of silt in-filling. The tunnel entrance and antechamber appear likely to have been contemporary with the construction of the balustrade foundations as the deposit sequence indicates that this area was required to be in-filled in order to raise the ground level for the construction of the buttresses which underpin the brick arch foundation recorded beneath steps S7. Furthermore, the slight angle of the brick arch would not support S7 without the secondary in-filling bringing the level up to the base of the balustrade footing and filling the cavity beneath the arch.

7.3 **Fountain Outfall (Task 303) (Plates 28 and 35 to 36)**

- 7.3.1 Excavations were undertaken to precisely locate both the fountain outfall of the Perseus and Andromeda fountain and possibly the 'escape hatch' believed to form part of the north tunnel extension. This work was required to extend knowledge of the workings of the fountain, to record surviving detail, and to inform the reinstatement works. An area measuring 10 m x 4 m was excavated at the centre of the north side of the fountain (Fig. 5; Trench 9). Removal of the humic overburden immediately to the north of the fountain basin revealed two north-south aligned arch built culverts that ran from two in-lets in the internal face of the fountain basin wall. The culverts were set in concrete with a further redundant iron pipe protruding between them. Adjacent to the fountain wall the culverts opened up into larger chambers the same size as the in-lets in the fountain basin.

7.3.2 After initial archaeological recording was completed engineers opened each culvert in order to examine their interior. Geophysical survey conducted within the south parterre gardens in 1997 had indicated that two linear anomalies ran on a north east alignment from the Perseus and Andromeda fountain toward the Flora fountain located in the east parterre (Bartlett, McCann, and Mackie, 1997). The trenched investigation however indicated that the recorded fountain outfall culverts ran on a north to south alignment toward the house. In order to acquire more detailed information to address this discrepancy and to locate the 'escape hatch' a further ground probing radar (GPR) survey was carried out by Stratascan (Plate 25).

7.3.3 The GPR survey further confirmed the presence and orientation of the north-south aligned culverts, but in addition identified the presence of a further ferrous north-south aligned pipe situated between the culverts, located at a depth of c. 0.75 m. All three services were shown to run below steps S5 and they are assumed to continue on a similar alignment to the house. Although a definite interpretation of the deeper central service is uncertain, it is believed to form an additional part of the over flow system. The GPR survey, within the confines of the approximate 20 m by 20 m survey area, additionally located the nineteenth century drainage system associated with the fountain circuit path and the path leading to steps S5. The two north east to southwest orientated services, recorded by previous survey, that are believed to provide water to the Flora fountain in the East parterre were both re-confirmed to be present. These were identified within the survey as lying immediately to the west of steps S5 and as a deeper anomaly below the north to south aligned services identified at the outfall of the fountain. This deeper service pipe has been confirmed by photographic evidence taken by Brian Powell and survey within the underlying tunnels.

7.4 Terraces (Task 304) (Plates 51 and 59)

7.4.1 A series of trial trenches (Trenches 25 to 35) measuring approximately 4 m by 1.50 m were excavated across the former parterre terraces (Fig. 5). The trenches were located according to the limited results of the topographic survey and from visible evidence of remains within the garden. The purpose of the excavations was to determine the former profile and character of the collapsed terraces in order to inform their reinstatement.

7.4.2 The terraces were originally designed by Nesfield as key elements of the garden architecture defining the terraced parterres by sharp faced earthworks. These have subsequently fallen into disrepair since the decline of the house and are presently poorly defined. All of the excavated trenches managed to record the surviving profile of the terraces located to the north and south of the fountain.

7.4.3 Trenches 25 to 29 confirmed that the northern terrace was focused according to the location of the lower tier of steps (S3, S5 and S6). The curving elements of the terrace

were confirmed and the terrace survives as a compacted reddish brown sandy silt that contains sandstone rubble. In all trenches the terrace was seen to have been subject to slumping (Fig. 7; Trenches 27 and 35). The terrace survived to a height of approximately 0.25 m to 0.30 m. The two southern terraces required reappraisal after the discovery of two further flights of steps (S30 and S31) to the north of the West and East pavilions. Visible earthwork remains and the results of the survey indicated that the lower of the two terraces ran between these steps. This location is more geometrically accurate as would have been expected of Nesfield's design. The upper south terrace, thought originally to be located between steps S25 and S26, is actually focused between the West and East pavilions. Trenches 30 to 35 recorded the profile of both terraces. A single course brick foundation was recorded in Trench 33 on the upper south terrace and this is thought to represent the edge of a former bed (Plate 59). This interpretation has been suggested due to its similar construction to bed footings recorded on both the tapered beds and quarter beds within the garden.

7.4.4 All the excavated trenches across the terraces were backfilled, however, a membrane was laid at the base of the trenches in order to allow them to be easily re-opened for re-instatement.

7.5 Steps (Task 305) (Plates 12, 14-18, 20-25, 29-34, 37, 38, 40-42, 47, 48, 52-54)

7.5.1 A total of eighteen flights of steps have been excavated and recorded across the South and East Parterres (Trenches 3, 5 to 7, 15 to 17, 21 to 22, 100 to 105) (Figs 5 and 8). The basic methods of step construction, in each case are the same, comprising a brick, sandstone and limestone base flanked by separately built 'stringers' and stop-off pads on either side. The bonds used in each base vary. A range of brick types have been used consisting of both re-used eighteenth century brick and nineteenth century brick, as have the two types of mortar mentioned above for S7. The stone work, sourced from forest of dean limestone, comprises both rough-cut, re-used and squared blocks with rubble. The general method employed in the base construction comprises rubble and stone work in-fill panels retained by a brick border. The brick work for the step treads overlay these. The 'stringers' and stop-offs were built separately to allow for the base to shift under the weight of the limestone treads without breaking bond with the 'stringers'.

7.5.2 Cylindrical ceramic drains flanked the steps with four soakaways constructed with stone gully surrounds positioned at the corners that linked to the path drains (see Plates 14 to 16). Originally each soakaway was covered by a metal drain cap, some of which survived *in situ*. Differing quantities of surviving limestone capping and treads, per flight of steps, was revealed, with S3, S9 & S10 being nearly complete.

7.5.3 Two additional flights of steps (S30 and S31) were revealed approximately 10 m to the north of the West and East pavilions during turf removal for the reinstatement of the main north-south aligned paths within the South parterre garden. Steps S30,

located to the north of the West pavilion had been heavily damaged (Plate 42), whilst Steps S31, situated to the north of the East pavilion, appear not to have been subject to such similar disturbance (see Fig. 6; Plates 37-38 and 40).

- 7.5.4 Steps S1, which form the access from the South parterre gardens to the Winter garden, were constructed entirely of limestone and were founded on an earlier sandstone structure (Plate 48). This earlier structure may represent the remains of a step base, or, structure related to the house prior to the construction of the Nesfield garden.
- 7.5.5 Further evidence of probable pre-Nesfield garden features were recorded during the excavations carried out over steps S12 (Plate 31). A sandstone structure was recorded beneath steps S12 and this may possibly represent the remains of an earlier balustrade or viewing platform as suggested from map evidence of 1817 and 1838 (Hughes, P. 1997; SY9 and SY12). Additional evidence of this structure is thought to have also been recorded at the bases of steps S2 and S4 suggesting that this earlier feature has been incorporated as part of Nesfield's northern east-west terrace that lies immediately to the south of the house. It may further be conjectured from this evidence that the upper terrace of the East parterre, immediately east of the house, may have utilised a continuation of this structural feature.
- 7.5.6 Archaeological monitoring and recording has also been carried out on the re-bedding of treads on steps S23 and S24. S1, S17, S18a & S18b had been smashed and reused as compacted rubble ramps (see Plate 41, steps S1). The steps have been recorded in detail with 1:20 plans and up to four elevations across the width to show the step profiles.
- 7.5.7 The surviving remains of the steps are the clearest illustration within the garden of the extent of its disrepair after the building fell into disuse. The stonework furniture of the steps has been largely robbed away and in a few instances extensive damage and disturbance has occurred to their footings.

7.6 **Beds (Task 306) (Plates 68 and 69)**

- 7.6.1 A single trench and two trial pits (Trench 24, Trial pit 1 (east parterre) and Trial pit 3 (south parterre)) were excavated in order to examine both their survival and construction. These were excavated through the edge of the south east tapered bed and within the northwestern Oval bed of the South Parterre, and the southern flower bed of the East Parterre (Fig. 5).
- 7.6.2 Trench 24 and Trial pit 1 (east parterre) were excavated to provide information on the precise nature of the construction of the beds kerbing and its relationship with the surrounding lawn. These trenches both revealed a similar construction sequence indicating that the bed area had been excavated first and filled with garden soil, followed by a re-cut to install the kerbing on a single course brick footing similar to

that recorded in Trench 33 excavated across the upper south terrace. The remnants of a deposit of gravel abutting the kerbing in Trial pit 3 could be indicative of the potential survival of internal decorative features.

- 7.6.3 Trial pit 3, measured 2 m by 2 m, and was excavated, subsequent to the removal of topsoil, within the north western Oval bed. This was excavated in order to examine the potential for elements of its internal decoration to survive as suggested by aerial photographs taken in the 1940's. Initial examination of the surface of the Oval bed immediately after the removal of topsoil produced no coherent evidence of patterning or design features, although, remnant fragments of white quartz and grey slate pertaining to materials used within the beds design were observed. The excavated trench reached a maximum depth of 0.27 m and produced evidence indicating that the bed had been subject to later machine rotation that has disturbed and destroyed the beds internal design.

7.7 **Quarter Beds (Task 307) (Plates 60 to 62)**

- 7.7.1 Two trial trenches (Trenches 18 and 19) measuring 3 m long by 1 m wide were excavated on a diagonal axis from the north western oval bed in the South parterre (Fig. 5). These were excavated in order to locate and examine the surviving character and extent of its associated north western and north eastern quarter beds. The exposure of elements of two of the quarter beds was thought a reasonable sample to clarify the likely location and preservation of the others. Recent re-examination of the quarter beds has shown this not to be the case as differential preservation of the bed footings was revealed.
- 7.7.2 The two excavated trenches located the brick footings that defined the inner edges of both of the beds. The north western beds edge was defined by a single course footing laid as a row of headers on beds constructed from nineteenth century red-brick. The north eastern beds footing edge on the other hand comprised only brick fragments packed into a construction slot.

7.8 **Paths (Task 308) (Plates 10-11, 13, 19, 26-27 and 50)**

- 7.8.1 A series of three trial trenches (Trenches 1, 8 and 10), measuring approximately 4 m by 1.50 m, were specifically excavated, as shown in Figure 5, to provide information on the precise location, character and profile of the former Nesfield paths to inform their restoration. Investigation of any evidence of associated drainage was also a key component of these works. Additional information regarding the precise dimensions of paths for reinstatement was also revealed during excavations undertaken on the steps.

- 7.8.2 Trench 1 was excavated across the connecting path situated between the west north-south aligned path and fountain circuit (Fig. 5). The path was shown to have been constructed within a shallow cut. The base of the cut was filled with a shallow silt layer that had been overlain by a layer of small rounded rubble. A compacted layer of metalling sealed the rubble and this was in turn overlain by the surfacing deposit of the path that comprised a fine multi-coloured gravel. A sondage was excavated within the trench at the northern edge of the exposed path to examine the presence of drains. No apparent evidence of associated drainage was revealed, however, later works revealed that drain runs had only been placed along the southern side of this path.
- 7.8.3 Two further trenches were excavated. Trench 8 was located across the east to west aligned path situated along the terrace immediately to the south of the house, and Trench 10 located across the north-south aligned western path (Fig. 5). A slate based ceramic French drain on the paths north edge was recorded in Trench 8. Trench 10 was excavated using a series of stepped cutaways to further examine the construction layers of the path and associated brick and stone soakaways.
- 7.8.4 Two types of drainage appear to have been utilised in association with the paths. These comprised the use of a combination of both french and closed circular ceramic drains which appear to have been integrated together to form the overall garden drainage system. French drains, where exposed, were located directly beneath the edges of the metallated east to west northern path (Trench 8), and were seen to be also incorporated as part of the system of drains recorded around steps S3. The recorded ceramic piped drains were associated with a series of brick built soakaways that are present at regular intervals along the edges of the paths within the garden. These soakaways have been plotted and their metal drain caps, where present, have been recovered.
- 7.8.5 Excavation in Trench 10 allowed for a detailed examination of the soakaways to be made. The soakaways appear to have served a number of functions. In the first instance they provided a means of integrating the flow of the drainage along the paths with the system of ceramic pipes entering and exiting each soakaway. The soakaways acted as a means of regulating the flow of water within the system dependant on the severity of its flow. Low levels of water entering the system would have been conveyed to the soakaway where it would dissipate at its base. A heavy flow of water within the system would not allow for dissipation to occur, and as such, each soakaway would fill to the height of the subsequent exit pipe which would then convey the flow of water to the next soakaway, and so on. The ceramic pipes that feed into the soakaways do so at a level well above the height of their base and it is thought that they are likely to have served a further function as silt traps. The drainage system of the garden is thought to feed down to the area of the fountain and exit the garden through its balustrade. The interior drainage of the garden is thought to form an integral part of the system of drainage recorded outside the garden during the excavations of the Ha-Ha.

- 7.8.6 Later repairs to the drainage system were recorded. This was evidenced by the use of later glazed ceramic pipes utilising male to female junctions. Examination of the drainage system showed it to be prone to blockage by silting facilitating the need for repair.
- 7.8.7 Path reinstatement works undertaken adjacent to Michaelangelo's Pavilion revealed a series of limestone slabs representing the surface of the coal supply tunnel, situated beneath the make-up of the path. This was cleaned, photographed and recorded in plan at a scale of 1:20 (Fig. 5; Trench 23).
- 7.8.8 Monitoring and recording works were further maintained during the excavation of a sondage along the edge of the fountain circuit (Trench 11). This was excavated by the Principal contractor (Capps and Capps) to examine the drainage in this location and assess whether or not the installation of new soakaways would be viable. The sondage uncovered evidence of a twentieth century repair to the earlier drainage system, characterised by the presence of a ceramic glazed male to female pipe, thus illustrating further the problems created by the silting up of the original system (Plate 27). In addition, further evidence of levelling deposits for the construction of Nesfield's garden were recorded as was a buried soil horizon.
- 7.8.9 All sections of drainage pipe excavated were completely silted up. Despite the use of silt traps a large volume of material would appear to have been carried in the system. Excavations around the steps were widened in order to examine any further outlying drainage and in most instances repairs were evident. These ranged from individual pipes to whole sections. The repairs appear to have been made with what ever materials came to hand rather than using any systematic method in the primary layout governing whether circular or u-shaped pipe was used.
- 7.9 **New Paths (Task 308) (Plates 2 to 7)**
- 7.9.1 Archaeological excavation and monitoring was undertaken during the construction of a new access and disabled path on the west side of the South parterre garden. Two 1 m by 0.50 m trial pits were excavated to a depth of 0.98 m and 1.10 m respectively within the working width of the new path (Fig. 5). These trial pits were required in order to investigate the results of previous geophysical survey, carried out by the Barlett-Clark Consultancy in 1997, that produced results of potential archaeological anomalies being present in the north west corner of the garden (Bartlett 1997; Plan No.1). These anomalies are believed to be associated with the location of the former medieval village as depicted by a painting dating to around 1680 (Pardoe, 1986; page 4, Left Top).
- 7.9.2 In order for the principal contractor to access the south parterre garden, prior excavation of the former western gated entrance to the gardens was required to both ascertain the precise extent of surviving below ground deposits and to determine the measures that would be required to ensure their preservation. Removal of the humic

overburden revealed the foundations of the former wrought iron gates, currently retained in the Witley Court store, and as illustrated in Shirley Evans' book (Evans, 1994; page 27) (Plates 2 and 3). The gated entrance consisted of a stone paved platform with gate fittings (Fig. 9). The brick footings of a counter part pier-base to that which is still extant to the south was recorded as was a continuation from this pier base of the balustrade, constructed as a brick wall, that butts the east to west wall surrounding the Stableyard and Winter garden. The disturbed remains of part of the dressed stonework of the former northern gate pier was also recorded lying approximately 1.50 m to the northwest of its original footings. The surviving surface of the former path was also recorded to the east and west of the gate platform.

7.9.3 Monitoring works carried out during topsoil stripping along the defined course of the new path further revealed the presence of a twentieth century manhole constructed of red brick. This was only partially exposed and was located immediately to the south of Trial-pit 1 (Plate 7).

7.9.4 The two hand excavated trial-pits were dug to a maximum depth of approximately 1 m (Plates 3 and 4). No evidence of surviving below ground archaeological features were recorded as had been suggested by the results of the geophysical survey. The trial-pits did however reveal that extensive levelling had been carried out by Nesfield during the gardens construction, and potentially this ground preparation has led to the disturbance/clearance of any potential earlier features/deposits in this area. The recorded soil profiles within the test pits comprised three compacted silt deposits with fragments of building material to a depth of a c. 850 mm from ground surface. Beneath this level in Trial-pit 1 was the remnant of what has been interpreted as a pre eighteenth century soil horizon that overlay the natural geology. In Trial-pit 2 this earlier soil horizon appears to have been removed. Bulk samples for environmental analysis were taken of this earlier soil horizon.

7.10 **Tree Planting (Task 309)**

7.10.1 Archaeological monitoring works and excavation were undertaken during the process of new planting along the reinstated paths within the south parterre. The archaeological works were concentrated in the north western corner of the parterre and adjacent to the central pathway between steps S4 and S5 (Fig. 5). The reason for focusing archaeological works within this area was to further determine the potential for the presence/survival of possible medieval settlement evidence previously suggested through pictorial and geophysical evidence.

7.10.2 The excavated tree hollows measured approximately 0.65 m in diameter by 0.70 m deep (Trial pits 4 to 8). The results of the excavations confirmed the presence of a sequence of deposits used to construct the parterre gardens but revealed no evidence to support the suggestion of earlier occupation activity in this area, as previously indicated by the results of excavation in Trial pits 1 and 2.

7.11 Services (Task 312) (Plates 67 and 70)

- 7.11.1 Additional archaeological monitoring and recording works were further carried out during the excavation of a water pipe service to the north of the house and pumphouse service to the east of the East and South parterre garden balustrade (Fig. 5). The pipe trench, measured approximately 0.25 m wide and reached a maximum depth of 1 m and its restricted width only allowed for archaeological observations to be made.
- 7.11.2 The trench excavated to the north of the house was partially cut through road make up layers. Deposits recorded within the trench contained brick fragments and decayed plaster/mortar suggestive of deposits accumulated during or after the construction or clearance of the fire damaged house to construct the road base. Only two further features, representing water drainage, were revealed during these works. These comprised a north to south aligned brick culvert that was sited along the north south orientation of the west wall of the North parterre, and a brick built drain associated with the road running east to west, north of the house. Both features are believed to have drained water away from the house into the lake that lies immediately to the north.
- 7.11.3 Two of three new drainage sumps were further archaeologically monitored during their excavation adjacent to the western north to south aligned path within the south parterre (Trial pits 9 and 10; Fig. 5). A similar sequence of deposits as those recorded in Trial pits 4 to 8 were recorded comprising topsoil overlying dumped levelling deposits used in the construction of the gardens.
- 7.11.4 The new pumphouse service trench was excavated c. 3 m to the east of the eastern balustrade of the gardens running southward from the road to the pumphouse. With the exception of revealing the man-hole access for the Flora fountain in the East parterre, no archaeological features or finds were revealed. A visual examination of the Flora service tunnel was implemented by lifting the man-hole cover. The interior was shown to be of brick construction and to remain in good condition. Examination of the 1997 base survey plan drawn by Landscape Architects revealed the location of the man-hole to correspond with the feature marked as 'under feature' on the survey.

8 FINDS

8.1 Pottery - by David H. Brown

- 8.1.1 An assemblage totaling 89 sherds and weighing 2,739 grams was recovered from 15 contexts. The pottery was sorted by context, ware, vessel type, sherd type, rim diameter and decorative technique and motif, and quantified by rim percent, weight in

grams, sherd number and maximum vessel count. Glaze colour and position was also recorded for earthenwares. A ceramic *terminus post quem* for each context is given, based on the earliest date of the latest piece present.

- 8.1.2 The assemblage is distributed quite evenly among most contexts and although contexts 417 and 429 were the most productive, there is little to indicate that these are in any way representative of more intense activity. Most of the contexts are topsoil, which would not be expected to produce large amounts of material. Context 704, the slump deposit, contained the only sherds of medieval pottery in the assemblage. These may be associated with the medieval house, but are clearly residual finds.
- 8.1.3 All the medieval material occurred in the same context (714), which is classified as terrace slump. If the terrace had been constructed by banking up soil derived from elsewhere, then such a process would naturally bring in residual pottery. The medieval sherds include two body sherds of unglazed coarseware and a body fragment of glazed sandy ware.
- 8.1.4 As might be expected in the excavation of a garden, flowerpots are the most common type present. Four of these have stamped lettering and although none of the legends are complete, one of them contains 'Ltd' which suggests that these pots displayed the names of either makers or suppliers. It is possible to discern the following: '...ULWELL...'; '...SON'; '...EYS LTD. SA...'; 'SIT...'. Research into contemporary local trades directories might lead to accurate identification of the names.
- 8.1.5 Domestic pottery is comparatively rare, with white refined earthenware the most common type. Plates, bowls, a cup and a chamber pot are all present. There are also a bone china bowl and plate, a Mocha ware bowl and an English stoneware blacking bottle. Most of these vessels are represented by small fragments, which is again typical of garden deposits. There are three potentially earlier pieces of post-medieval earthenware, two black-glazed and one with a clear glaze, and these may be residual. The latter piece is a small fragment.
- 8.1.6 A quantity of unstratified material was also recovered but this has not been recorded. It is comprised mainly of transfer printed and plain white refined earthenware, one base of which is marked 'Chemical porcelain Grainger & Co. Worcester and Manchester'.
- 8.1.7 This is a typical garden assemblage, dominated by flowerpots with a few small fragments of domestic pottery.

8.2 Ceramic Building Material - by Julian Munby and Sara Lunt

- 8.2.1 A total of 199 fragments of ceramic building material were recovered from the archaeological investigations undertaken at Witley court. These comprised white

glazed tile of modern date, yellow 'firebrick' with white glaze with curved profile and mixed tile and brick mostly of eighteenth/nineteenth century character.

- 8.2.2 A single decorated medieval 'Peacock tile' was also recovered from context 432 and this was kindly reported upon by Dr Sara Lunt. The tile fragment represents c. 40% of a square floor tile that has a cream-coloured slip, overlain by a purple-brown glaze on the body clay and a warm yellow glaze over the slip.
- 8.2.3 The surviving design shows part of the head, neck, wing, body and tail of a peacock with a head comb, placed diagonally on the tile and facing right, beak-to-beak with the head of another peacock. Parts of three petals survive to the left of the first peacock's head/neck. The peacocks have reserved eye, beak and feather details. Similar examples of this type of tile have been reported on by Eames, recovered from the Canynges Pavement, Bristol, which she dates to 1481 - 1515 (ibid. 247)
- 8.2.4 Tiles of Canynges type are widely distributed throughout England and Wales. Some may have been traded via the Severn from the commercial tileries of Bristol, whilst others were more likely to be the products of itinerant tilers. The fabric, glaze colours and the stamp of the Witley tile are different from those of the Bristol tiles; the glaze colour seems to match that described for the fifteenth/sixteenth century Worcester Group (ibid. 250), many of whose designs resemble those of the Canynges Pavement. The place of manufacture is unknown.

8.3 Plaster - by Julian Munby

- 8.3.1 Amongst the post-fire materials spread out into the garden were large fragments of decorative ceiling plaster, mostly moulded elements of a frieze adorned with egg-and-dart decoration.

8.4 Glass - by Leigh Allen and Julian Munby

- 8.4.1 A large assemblage of glass (26,050 g) was recovered from the archaeological investigations at Witley Court. The assemblage comprised window and vessel glass and numerous remnants of chandelier.
- 8.4.2 The window glass appears to come in two different thickness 7-8mm and 19-20mm. The thinner glass is either clear or with a slight yellow/green tinge. There are a number of fragments from context 431 that are cracked and crazed probably as a result of the fire. There are two fragments with curved edges from contexts 400 and 415. Large quantities of the thicker glass came from contexts 400, 415 and 584 and are believed to have originated from the orangery
- 8.4.3 The bottle glass is very fragmentary. Sherds from contexts 1030 and 1035 are modern with machine made rims. The rim and neck from the bottle recovered from context 429 probably dates to the early nineteenth century, the string rim has a double collar and the neck is slightly bulbous.

8.4.4 The recovered chandelier fragments include parts of bowls, stems and pendants of nineteenth century lead crystal chandelier with associated copper alloy fragments of candle holders.

8.5 Stone - by Julian Munby

8.5.1 The bulk of the worked stone, from known elements of the garden steps and balustrade, has been retained on site, for reuse or for replacement *in situ*. A quantity of small fragments of mainly oolitic architectural mouldings are presumably parts of the same.

8.5.2 Small pieces of stone include fragments of sandstone, slate and marble (probably from fireplaces). Two pieces of recovered slate contained letter trials for an inscription (eighteenth/nineteenth century).

8.5.3 Roofing material includes a quantity of slate, though this was also used in the construction of the gardens.

8.6 Metalwork - Leigh Allen

8.6.1 A total of 372 metal objects were recovered from the archaeological investigations undertaken at Witley court. The assemblage comprised objects of copper alloy, iron and lead. The items are all structural, associated with the fabric of the house and are for the most part undiagnostic.

8.6.2 A large proportion of the assemblage consists of structural nails, there are 16 copper alloy and 297 iron nails. Other structural fittings include brackets, handles from drawers or windows, a fragment from a large hinge plate probably from a door, sections of pipe-work, washers, screws and lengths of wire.

8.6.3 Notable amongst the objects are the metal components of a chandelier, a key, a decorative piece of ironwork and the large quantity of lead waste. The key from context 712 is for a mounted lock, it is very corroded and the details of the bow and the bit are totally obscured, this object should be x-rayed. A decorative fitting in the shape of a large sycamore leaf was recovered from context 620 it is constructed from thin iron sheet and is 188mm in length, like the key it is very corroded. This object again should also be x-rayed to see if it has any further detail on it, or if it was plated in any way.

8.6.4 A total of 12,456g of lead was recovered from the investigations, almost half this amount being recovered from a single context, 616. The lead assemblage consists of folded sections of neatly cut sheets, irregularly cut strips and scraps and large quantities of melted lead and spills.

8.7 Animal Bone - by Bethan Charles

- 8.7.1 A total of 16 fragments (418g) of animal bone were recovered during the excavations. The calculation of the species recovered from the site was done through the use of the total fragment method. The bone was recorded at OA with access to the in-house reference collection and published guides.
- 8.7.2 The material was recovered from garden deposits dated to the post-medieval period and was mostly in moderate condition with some attritional damage. However, some fragments particularly those collected from context 568, 571 and 686 were in very poor condition and could not confidently be identified to species.
- 8.7.3 The five fragments that were identified to species included a cattle metatarsal (420) a domestic fowl coracoid (448), two left rabbit femurs (1030) and a fragment of red deer antler tine (429). The antler tine fragment was the only identified element with evidence of cut marks. However, cut marks were observed on unidentified medium (sheep/pig size) shaft fragments recovered from context 448 and 1035. Carnivore tooth marks likely to be a result of dog gnawing were identified on bones from context 448 and 1035.
- 8.7.4 The material from the site is likely to represent domestic/kitchen refuse. The small quantity of material does not provide much information regarding the status and economy of the site other than the presence of the animals. Further excavations may, however, provide further material that may provide information regarding the diet and husbandry techniques practised at the site during the post medieval period.

8.8 **Environmental - *Elizabeth Huckerby***

- 8.8.1 Two samples were taken from the evaluation for the evaluation/assessment of charred plant remains. The two samples derived from the excavation of test pits through garden soil horizons. The sample from context 426 is thought to relate to either part of the initial nineteenth century garden landscaping or an earlier garden/landscape horizon. The second from context 420 was from a soil horizon thought to possibly relate to the earlier eighteenth century landscape prior to the construction of the Nesfield garden.
- 8.8.2 The samples, which were 20 litres in volume, were processed with a modified Siraf flotation machine; the flots were collected on a 250 micron mesh and air dried. The flots were scanned with a Leitz/Wild binocular microscope and all plant material was recorded on a scale of 1-4 (1=rare and 4=abundant) and provisionally identified. The matrix components were noted.
- 8.8.3 The flots from contexts 420 and 426 were 10 ml and 40 ml in volume respectively. Charcoal, coal and cinder was recorded in both samples and the sample from context 426 had abundant well preserved charcoal in it. Fragments of charred cereal grains and *Triticum spelta* (spelt wheat) glume bases were also identified in this context.

Charred weed seeds, including *Plantago* sp (plantain), sp (grass) and Fabaceae (legume), were also recorded in this context.

- 8.8.4 There were abundant uncharred seeds, which may or may not be modern, in both samples. The taxa recorded included *Sambucus* (elderberry), *Rubus* (blackberry), *Solanum* sp (a diverse genus that includes nightshades, tomatoes and potatoes). They all produce woody seeds, which potentially can be preserved uncharred in non waterlogged conditions. If this is the case in these two samples it would suggest that differential preservation of the plant record has taken place resulting in a skewed data set. Both samples contained modern roots, stems and wood.

9 DISCUSSION AND INTERPRETATION

9.1 Reliability of field investigation

- 9.1.1 The suite of investigative techniques employed during the fieldwork were designed in order to produce an integrated and detailed examination and record of the surviving archaeological remains whilst maintaining progress ahead of the reinstatement works. The areas of archaeological intervention were determined according to the needs of the schedule of reinstatement works within the garden.

- 9.1.2 The fieldwork has allowed for an accurate record to be made of surviving garden features/deposits where reinstatement works have allowed investigation to be undertaken.

9.2 Overall interpretation: Summary of results

- 9.2.1 The excavation and survey work has been successful in providing a more detailed examination of the constructional development of the gardens. Limited surviving evidence of features/deposits relating to pre-Nesfield garden/landscape features were recorded, however, the majority of recorded features and deposits related to surviving elements of the Nesfield gardens, their potential later adaptation and ultimately their decline. The discoveries are summarised phase-by-phase in the following sections.

9.3 Medieval

- 9.3.1 The archaeological investigations have produced no further clear evidence of surviving medieval features/deposits believed to be associated with the medieval house, as depicted in the north western corner of the South parterre (Pardoe, B. 1986). Examination of this area, from which geophysical survey had recorded potential archaeological anomalies, produced only a sequence of compacted soils, interpreted as nineteenth century levelling deposits for the creation of William Nesfield's garden. A buried soil horizon containing animal bone and CBM was recorded, and this is dated posthumously to the seventeenth/eighteenth century.

- 9.3.2 The excavated sample within the area of anomalies identified by the geophysics was very limited. The compacted nature of the recorded soils within this area and the material contained within them such as brick rubble is believed to have given false positive results to the geophysical survey (Bartlett, A. pers comm).
- 9.3.3 The only evidence of medieval date recorded by the investigations was derived from residual artefactual material recovered from later contexts. This comprised three sherds of pottery dating to the thirteenth century from slumped terrace deposits and a single decorated tile fragment, depicting a peacock, of Canyngnes type, dated to the fifteenth/sixteenth century. This tile was recovered from the swept out burnt deposits of the house recorded above steps S5.

9.4 **Post-medieval, pre-Nesfield Garden Features**

- 9.4.1 Little, archaeologically, is known of the gardens that pre-date the creation of William Nesfield's design at Witley Court, but both cartographic and pictorial evidence does provide some detailed insight into their earlier design and evolution. A portrait of Witley Court painted in the late seventeenth century depicts the gardens immediately to the rear of the house as enclosed by walls and defined by terraces with a central stepped pathway (Gray 1997; page 18). From this date, no further information regarding their development is known until the early nineteenth century where the garden is shown to have been radically altered according to a design by George Repton. This was undertaken as part of extensive alterations to the house carried out by Lord Foley. Depicted in a portrait of 1843 Repton created balustrading and terracing to the south and east of the house, that contained flower beds and simple parterres, overlooking the surrounding deer park, thought to have been enclosed around the sixteenth century (Gray 1997; page 30).
- 9.4.2 The excavations undertaken within the gardens appear to have produced some limited evidence of surviving pre-Nesfield garden features and deposits, the most significant of which is the remains of sandstone footings relating to an earlier walled structure, believed to be orientated between and beneath steps S2, S4 and S12. This appears to follow the alignment of Nesfield's upper north terrace in the South parterre gardens. During excavation it was assumed that these earlier sandstone footings related to the balustrade created by Repton in the early nineteenth century. Brief analysis of cartographic evidence, however, would appear to suggest that these features lie further to the south of Repton's projected balustrade. This discrepancy could arise from errors within the early mapping of Witley Court's garden, or could equally suggest that the structures identified relate to a design that pre-dates that of Repton.
- 9.4.3 Further footings relating to an earlier structure were also recorded beneath steps S1 immediately south of the Winter garden. Tool marking was evidenced on the sandstone blocks which appear to have been faced. The solid construction of the

footings would suggest that they relate to the presence of a more substantial structure such as a pavilion, rather than to the presence of an earlier balustrade wall.

9.4.4 A buried soil, believed to represent the surface of an earlier garden/landscape which pre-dates that constructed by Nesfield was recorded at the northern end of the South parterre garden and immediately to the north east of the fountain path circuit. This ground surface in the north west of the gardens contained fragments of animal bone and CBM and is thought to date to around the seventeenth/eighteenth century. A portrait of 1843 depicts the landscape to the south of the house, formerly part of the deer park, to be relatively level in its general topography (Gray 1997; page 23). This impression is however likely to be misleading as the general topography of the landscape south of the house comprises a gently sloping valley. This natural topographic feature appears to have been utilised by Nesfield in constructing his design for the garden.

9.5 Nesfield's 'Monster Work'

9.5.1 The garden created by William Nesfield at Witley Court between 1853 and 1860 was designed to compliment the modernisation of the house, by Samuel Daukes, in the classical Italian style. The key elements of Nesfield's design are well documented in the *Witley Court Conservation Plan*, produced by English Heritage, and in *Nesfield's Monster Work* by Shirley Evans, both of which provide a comprehensive description of the garden as originally conceived by Nesfield (Nicol Jones and Lomax 1999; Evans, S. 1994).

9.5.2 Much is known, from documentary evidence, of the gradual removal of architectural fixtures and fittings from the house and gardens after its acquisition during the Second World War by demolition contractors. The full effect and extent of this later disuse and robbing to surviving elements of the garden, however, was not known. The survey and limited excavations carried out within the South and East parterre gardens have enabled an examination and record to be made of some of the key elements of Nesfield's garden design, and these have provided valuable information regarding the gardens construction and for guiding its restoration.

9.5.3 Archaeological investigations carried out over the areas of paths, terraces and steps have demonstrated that, on the whole, they remain reasonably intact despite later disturbance and robbing. The excavation of the paths confirmed their original alignments and the documented use of blue gravel by Nesfield as a decorative surfacing material. In addition, they provided significant new information regarding the character and function of the drainage system created within the garden. A system that appears to have been prone to extensive silting and which has over time required frequent repair.

9.5.4 Topographic survey and excavation has provided greater detail regarding the original design of the gardens by identifying previously extant elements in both the South and

East parterres. Two additional flights of steps unearthed to the north of the West and East pavilions has allowed for a reassessment to be made regarding the location of the southern terraces within the garden. Terrace excavations and survey have confirmed that the lower southern terrace runs on an alignment between these two steps, with the upper southern terrace located between the two pavilions, such an alignment is shown in a plan of the flower gardens at Witley Court taken from the *Gardeners' Chronicle* of 1873 (Hughes 1997; Appendix IV). The re-establishment of the precise location of these terraces brings the South parterre garden back to its originally designed symmetry.

- 9.5.5 A more detailed insight into how the garden was constructed has also been established, predominantly by the excavations undertaken in the area of the new pumphouse on the eastern extent of the South parterre. These have demonstrated that the balustrade and tunnel entrance to the fountain had been constructed within what appears to be a natural depression in the original topography of the garden, as evidenced to the west and east of the gardens. The balustrade, contemporary with the construction of the fountain tunnel entrance, was shown to have substantial footings reaching a depth of c. 2.50 m, founded on the natural geology. Undoubtedly some excavation of natural deposits in this area would have been additionally required to be undertaken, in conjunction with the use of the natural valley, especially for the construction of the fountain chamber and its associated water system. It appears that materials excavated during the construction of the fountain system were re-used as levelling deposits across the garden, as evidenced in Trench 11 for example, where compacted silty clay deposits containing frequent sandstone fragments were shown to overlay the earlier humic garden/park soil horizon.
- 9.5.6 The Perseus and Andromeda fountain is one of the spectacular highlights of Witley Court. It is listed Grade I and when in operation it must have had an extravagance and grandeur that matched that of the newly enlarged house. However, this opulent visual display could only be made possible by the construction of a network of functional brick service tunnels beneath it whose utilitarian character and design is in sharp contrast to the aesthetic sculpture above ground. The tunnels housed the complex system of piping required to supply the vast amount of water required while the fountain was in full use. The fact that these tunnels are not publicly accessible and are rarely seen gives them a particular interest and significance in allowing a glimpse into how a large country house and garden such as this functioned.
- 9.5.7 Although the tunnels themselves are in relatively good condition the pipe work has been substantially removed. There are several pressure control boxes surviving together with many cut off pipes in the vault and other pieces of evidence of former pipes. These include evenly spaced brick pipe brackets on the floor of Branches E and I and a mounded floor surface in Branches G and H suggesting buried pipes. Among other significant features are pipes at the north end of the tunnel network, which leave

this set of tunnels and continue north-east to link with the fountain in the east parterre garden.

- 9.5.8 Limited additional information regarding the water management system for the fountain has been recorded. Geophysical survey and photographic evidence has confirmed the presence of services running from the Perseus and Andromeda fountain to the Flora fountain. Excavation and geophysical survey have also shown that the outfall for the Perseus and Andromeda fountain feeds to two north to south aligned culverts that appear to run toward the house. In addition, a further deeper service pipe appears to run beneath the two culverts, but as yet its purpose is not clearly understood. The north to south aligned services could be traced to the point where they run beneath steps S5, but beyond this point their orientation and function remain uncertain. The excavations and tunnels survey were able to confirm the lack of an exit to the fountain tunnels thought to have been present immediately to the north of the fountain basin.

9.6 Later Innovations and Maintenance

- 9.6.1 Limited evidence of what may be interpreted as a later adaptation to Nesfield's original garden design was also revealed, represented by a probable bed footing located along the upper south terrace of the South parterre. Photographic evidence indicates that the positioning of beds along the southern parterres of the garden did not form part of Nesfield's original design (Hughes 1997; SP15). The recorded footing is thought to relate to the later introduction of circular and rectangular beds by George Westland, Head gardener at Witley Court from 1867 to 1881. These are shown to be located along the upper south terrace in a plan taken from *The Gardeners' Chronicle* of 1881 and from a sequence of photographs taken in 1880 (Hughes 1997; SP 18-19).
- 9.6.2 Later disturbance of the general fabric of the garden was evidenced through the regular maintenance that seems to have been required to be undertaken on the drainage system. This often necessitated creating bypasses to the original piping, as evidence through the use of later nineteenth/early twentieth century male to female pipe work. The introduction of later services to the house was further recorded during the excavation of the foundations of steps S16 which had been partially reconstructed above a large service pipe that had been required to be laid through the original footing (Plates 52 and 53). The addition of further services evidenced by the presence of a man hole was also noted in the north western corner of the South parterre.

9.7 Decline and Destruction

- 9.7.1 Extensive evidence of the decline of the gardens following the fire in the east wing of the house has been recorded, most notably by deposits that overlay step foundations situated immediately to the south of the house. Recorded within the overburden removed from the surfaces of the foundations of steps situated to the north of the

Perseus and Andromeda fountain and south of the house was a layer of burnt deposits that produced the majority of the finds assemblage from the site. Amongst this assemblage were fragments of internal stucco wall plaster, chandelier crystal and extensive remains of Orangery glass and window lead. This evidence clearly demonstrates the sweeping out of the burnt remnants from the house into the garden following the devastating fire, as previously evidenced from earlier evaluative work (OA 2002a).

- 9.7.2 The general decline and gradual removal of architectural elements of the garden followed this partial destruction of the house and its purchase by demolition contractors. Steps located within the South and East parterre gardens have been extensively robbed of their external furniture and have on the whole, along with the paths, been allowed to grass over. This has undoubtedly allowed the paths and footings of the steps to survive in a moderately well preserved state.
- 9.7.3 The earthen terraces, once a principal visual design feature of the gardens have been subject to heavy erosion and slumping through lack of maintenance, and today are barely visible in the overall sloped topography of the South parterre. The excavations have provided important information regarding their surviving character and profile and have guided their reinstatement. The location and arrangement of the majority of beds within the South parterre has also been lost. The original edging materials once used to define the beds has predominantly been removed and where footings have been located by the excavations they are in a variable state of moderate to poor preservation. Limited investigation carried out within the former beds of the South parterre would further appear to suggest that, unlike the East parterre, original internal design elements have been lost, although, fragments of slate and quartz used within the designs were noted to be present. Many elements of the planting scheme have also further been lost, however, some locations can still be evidenced within the garden by the occasional earthwork depression or area of differential growth.
- 9.7.4 The enclosing balustrade of the garden has been subject to extensive robbing, but investigations undertaken along its eastern extent has produced a number of disturbed/displaced pieces of balustrade stonework, all of which can be removed and retained for reinstatement.
- 9.7.5 Later re-use of three flights of steps, located at the entrance to the winter garden (S1) and at the entrance between the North parterre to the East parterre (S17 and S18a), was evidenced by the dumping of a compacted brick rubble over the original step footings creating a ramp (see Plate 41). The purpose for the ramping of these areas is uncertain, but one suggestion may be that this was undertaken by the demolition contractors to aid the removal of stonework from the site.

9.8 Significance

- 9.8.1 The archaeological survey and excavation works undertaken within the gardens of Witley Court have enabled a more accurate and detailed understanding and record to be made of their preservation and construction. Although the archaeological interventions within the gardens have been limited by the need to mitigate the areas impacted by the restoration works, they have produced significant new evidence of pre-Nesfield garden features and deposits, as well as providing important detailed information regarding the construction, development and ultimately the decline of the Nesfield garden.
- 9.8.2 The archaeological works have further provided important information that has guided elements of the restoration project, particularly with respect to determining precise dimensions of garden features, their location, and as in the case of the garden drainage their form and function.
- 9.8.3 The site clearly has potential for the archaeological investigation of other garden remains that could guide future restoration work, and throw more light on remains of earlier pre-Nesfield phases. In the light of what is now known about the physical remnants of the garden, it still remains to undertake a detailed correlation of historical and visual evidence for the great garden in its heyday.

Oxford Archaeology
May 2004

APPENDICES

APPENDIX 1 PHOTOGRAPHIC NARRATIVE OF PERSEUS AND ANDROMEDA FOUNTAIN RESTORATIONS

OA and Capps and Capps recorded the development of work on the fountain in order to provide a pictorial narrative of the restorations work. Additional photography was also undertaken by English Heritage of the fountains restoration works. It had been hoped that a selection of their images could be used within the narrative presented within this report, however no images have been forthcoming since their request. The pictorial narrative therefore presented in this document is formed only from a compilation of OA and Capps and Capps images.

The plates are numbered F1-F67 (F=Fountain)

Plates F1-F7 - The fountain before and during the early stages of scaffolding. The patina on the stonework is distinctive and created by layers of algae and moss. F3 shows the earliest stages of scaffolding the sculpture which involved the erection of a bridge across the pond, this involved a team of scaffolders working in the water for several days. F5 shows the main scaffolding nearing completion a walkway has been constructed round the base and there are two tiers to allow access to the main sculptural group. The scaffolding was later roofed and the sides protected with plastic sheeting, this effectively hid activity from public view and all subsequent photographs are of small elements of the work in progress.

Plates F8-F14 - Interior shots taken in the tunnels which serve the fountain. This network of brick tunnels beneath the lawn and pond has been reused during the recent restoration and new piping has been installed to serve the fountain. As can be seen on the pictures the tunnels were complete and in good condition prior to 2002.

Plates F15-F35 - The main stages of restoration, missing elements are replaced. In some cases this involved cutting away a decayed detail creating a new joint and adding a small block to be carved in situ. F23 and F24 show the elaborate scaffolding tower which allowed full access to the main sculpture. F32 and F33 show the remodelling of Andromeda's face which had fallen away in places. The new large nose was the first stage of this process it was later reduced and reshaped to recreate the face's profile.

Plates F36-F37 - The two small plinths for the (missing) statues of the cherubs riding astride sea monsters. These were later replaced (F59) and during this process these parts of the scaffolding were given additional roofs and tiers.

Plates F38-54 - These pictures all show the later stages of the restoration in late 2002 and early 2003> Areas of cleaned and added stonework are clearly visible for example Perseus's

face has been cleaned (F40, F43 and F52) as has the monsters head (F41). Newly carved elements such as the dolphin's replaced tails (F44) and Andromeda's hand (F53) were caved off site. Andromeda's face (F46) and the bowls of the clam shells were redressed in situ. Many elements required no repair and were in good condition, in places the patina provided an aesthetically pleasing result and the stonework remained uncleaned (F51, F54). F55 to F58 show further restored elements to the sculptural group, whilst F59 shows one of the two newly carved cherubs to be relocated on the plinths either side of the central fountain group.

Plates F60-67 - These pictures all show the result of the final completed fountain restoration, clearly illustrating the grandeur of the fountain as it had been originally conceived. Images F63, F64, F65, F66 and F67 all incorporate views of the restored fountain in context with the completed restoration of former associated missing garden elements such as the parterre paths, quarter and oval planting beds and additional planting elements.



F 1



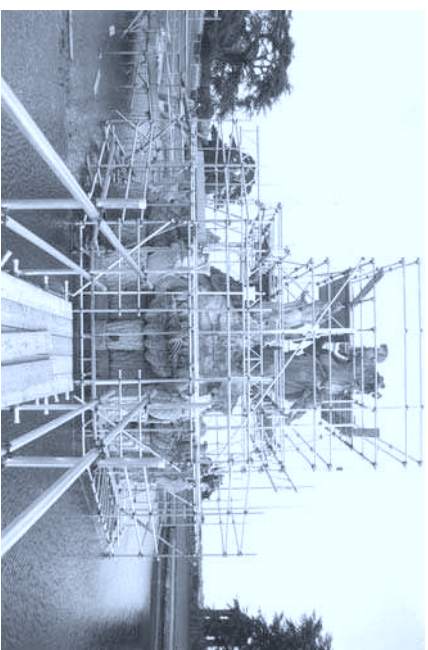
F 2



F 3



F 4



F 5



F 6



F 7



F 9



F 11



F 10



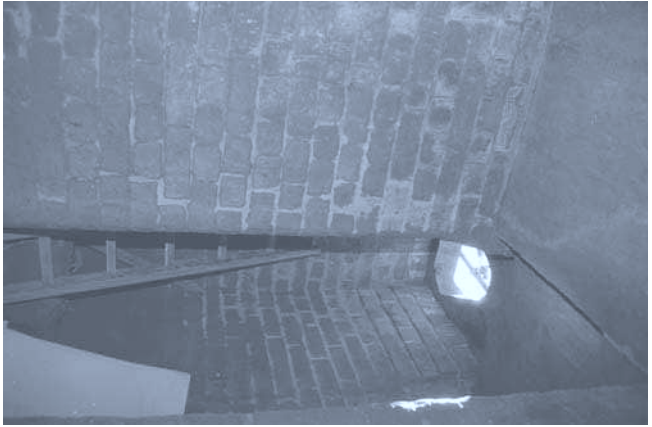
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F 8



F 13



F 14



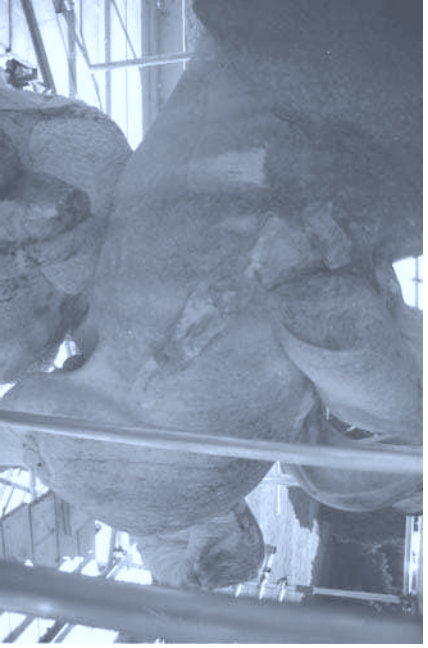
F 15



F 16



F 17



F 18



F 23



F 21



F 19



F 20



F 22



F 24



F 29



F 27



F 25



F 30



F 28



F 26



F 31



F 32



F 33



F 34



F 35



F 36



F 37



F 38



F 39



F 40



F 41



F 42



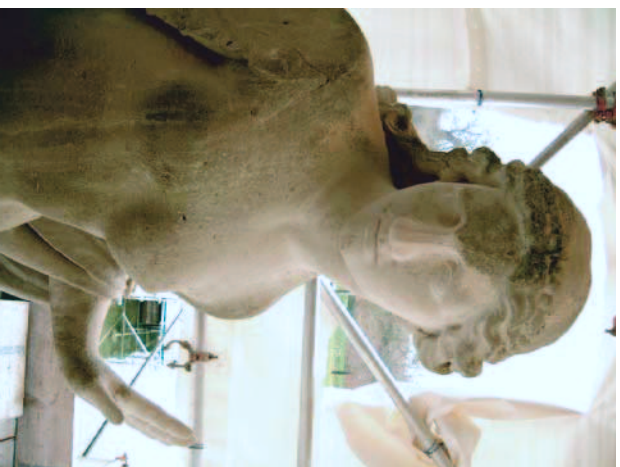
F 43



F 44



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F 46



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F 48



F 53



F 51



F 49



F 54



F 52



F 50



F 59



F 60



F 57



F 58



F 55



F 56



F 61



F 62



F 63



F 64



F 65



F 66



F 67

APPENDIX 2 BIBLIOGRAPHY AND REFERENCES

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APPENDIX 3 SUMMARY OF SITE DETAILS

Site name: Witley Court

Site code: WOWC 02

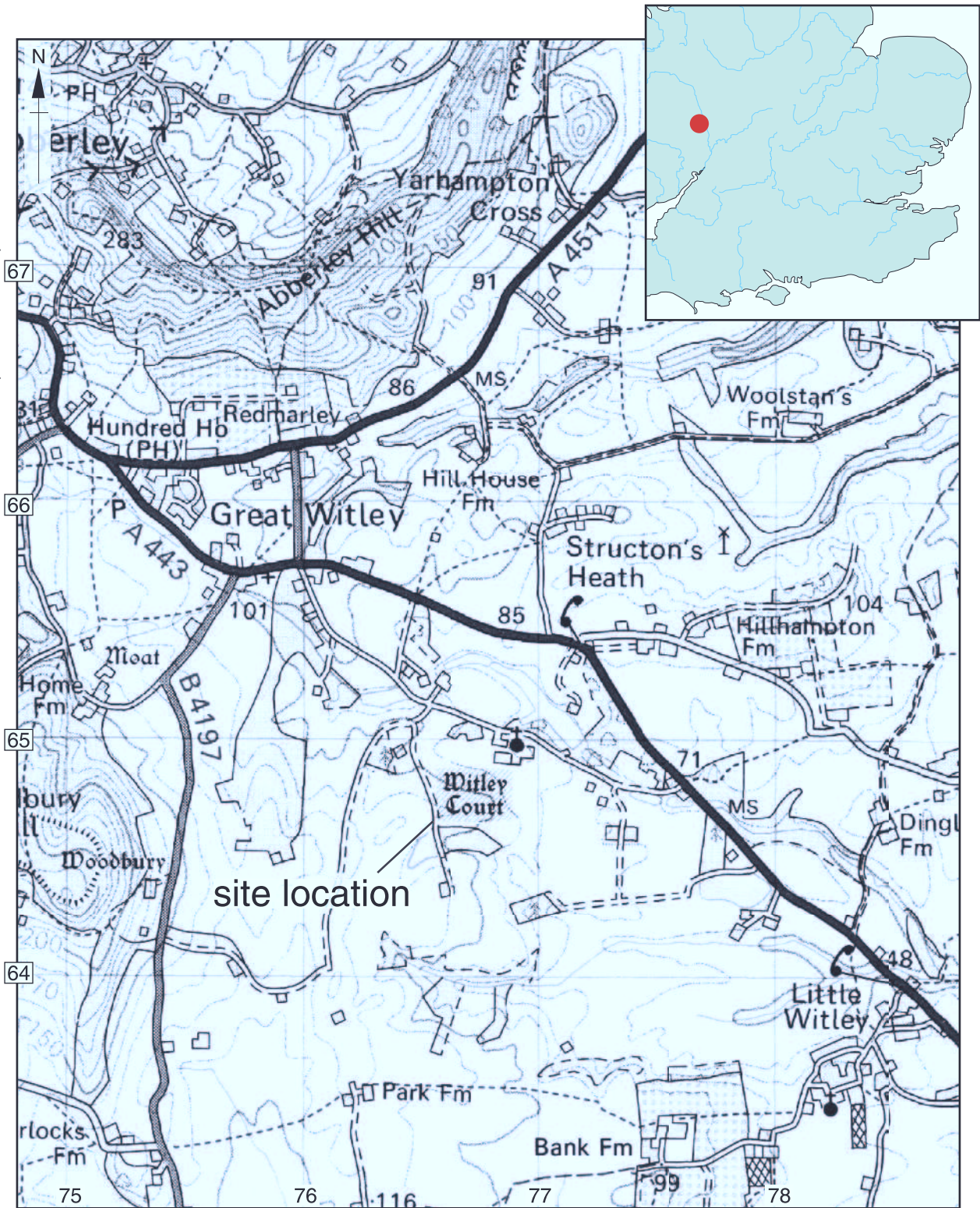
Grid reference: NGR SO 769 648

Type of evaluation: Survey and Excavation

Date and duration of project: 06/05/2002 to 07/05/04

Summary of results: Archaeological investigations have produced evidence relating to garden structures and deposits that would appear to pre-date the construction of William Nesfield's garden in c. 1850. Extensive surviving features and deposits of Nesfield's garden were recorded, generally in a good state of preservation, and this evidence has allowed for a more detailed examination of the gardens design and construction to be obtained. Later alterations to the completed gardens was also revealed as was extensive evidence of its later decline.

Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with English Heritage West Midlands Region in due course.



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Scale 1:25,000

Figure 1: Site location.

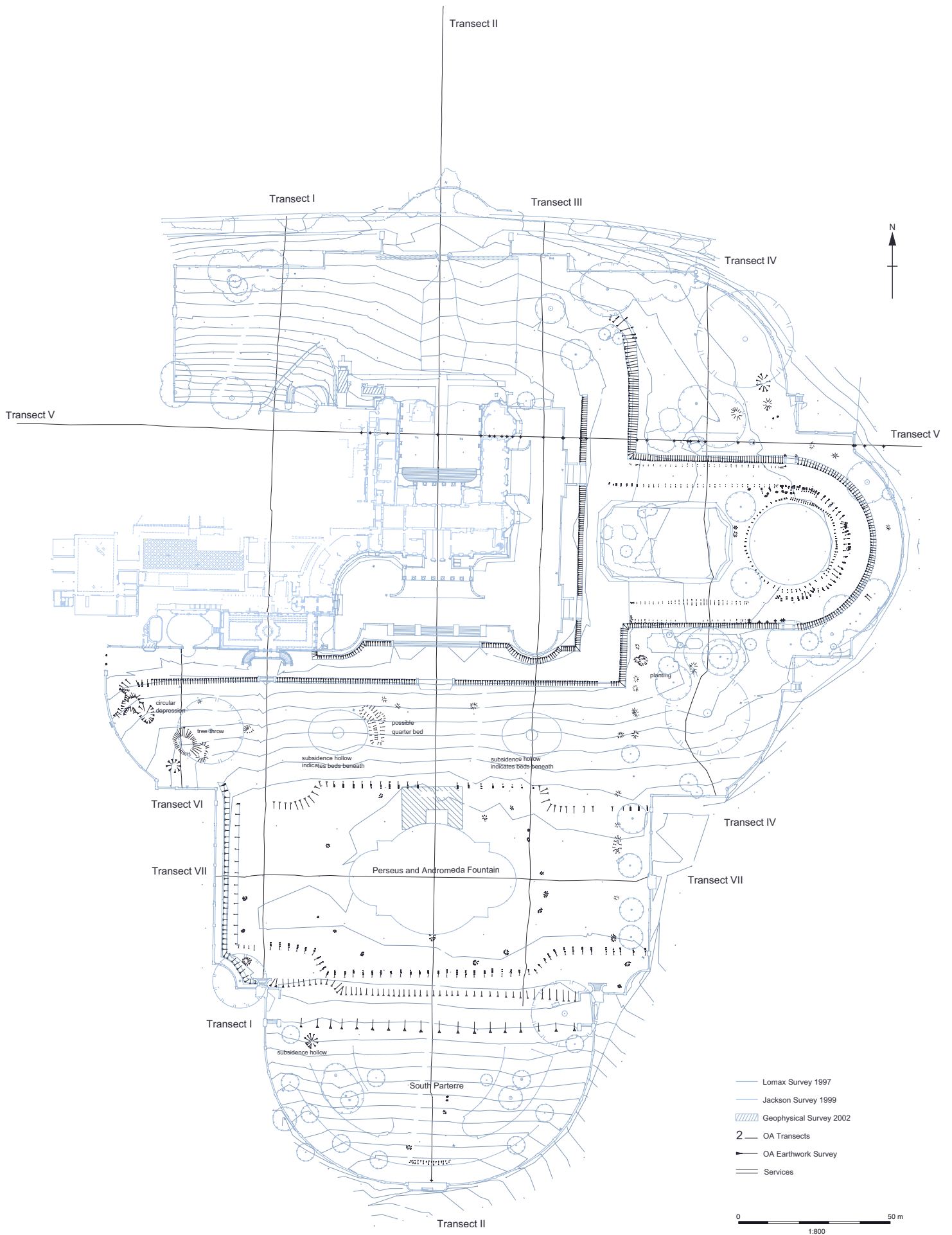


Figure 2 : Topographical Survey of the Gardens

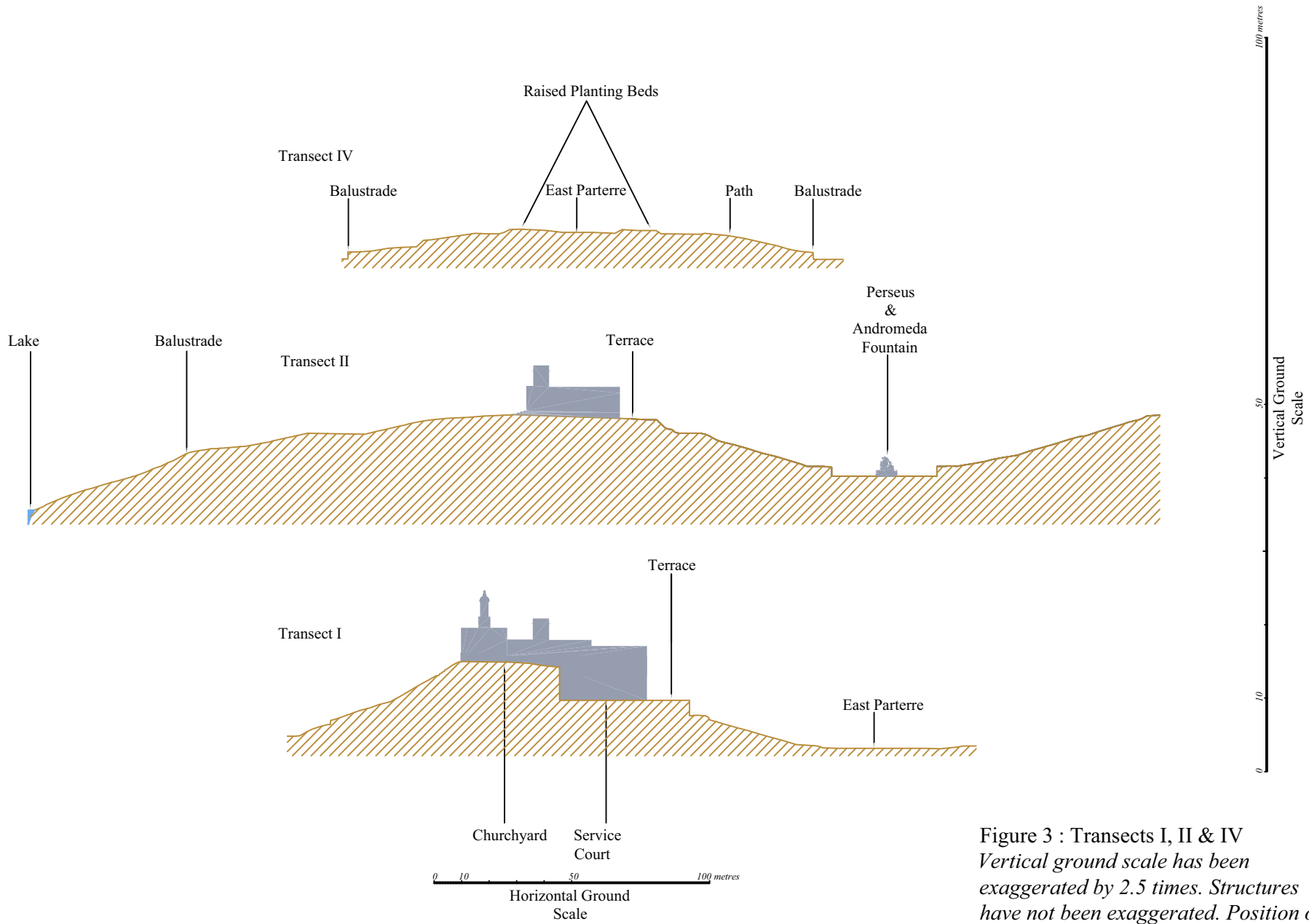


Figure 3 : Transects I, II & IV
 Vertical ground scale has been exaggerated by 2.5 times. Structures have not been exaggerated. Position of fountain is approximate.

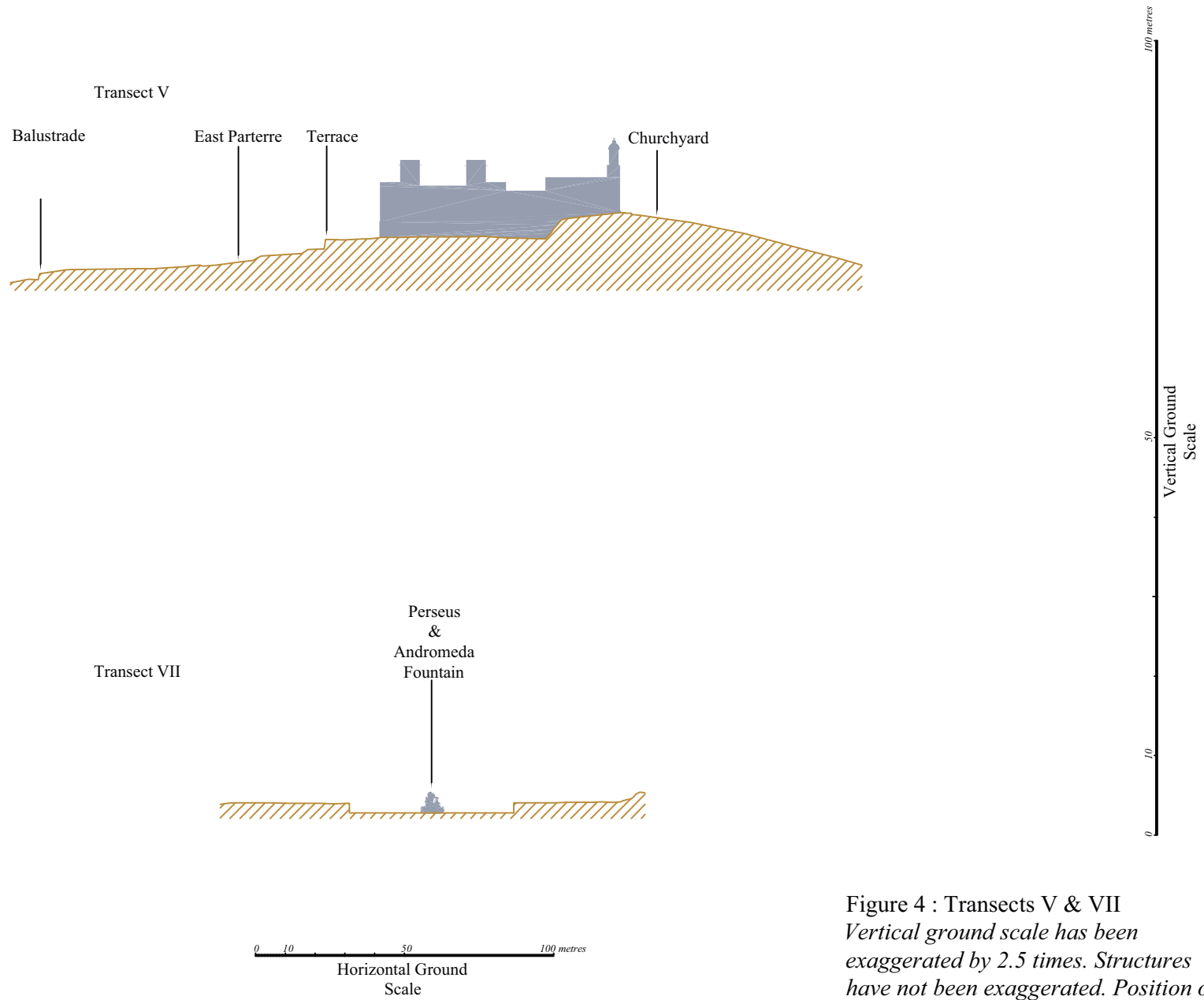


Figure 4 : Transects V & VII
 Vertical ground scale has been exaggerated by 2.5 times. Structures have not been exaggerated. Position of fountain is approximate

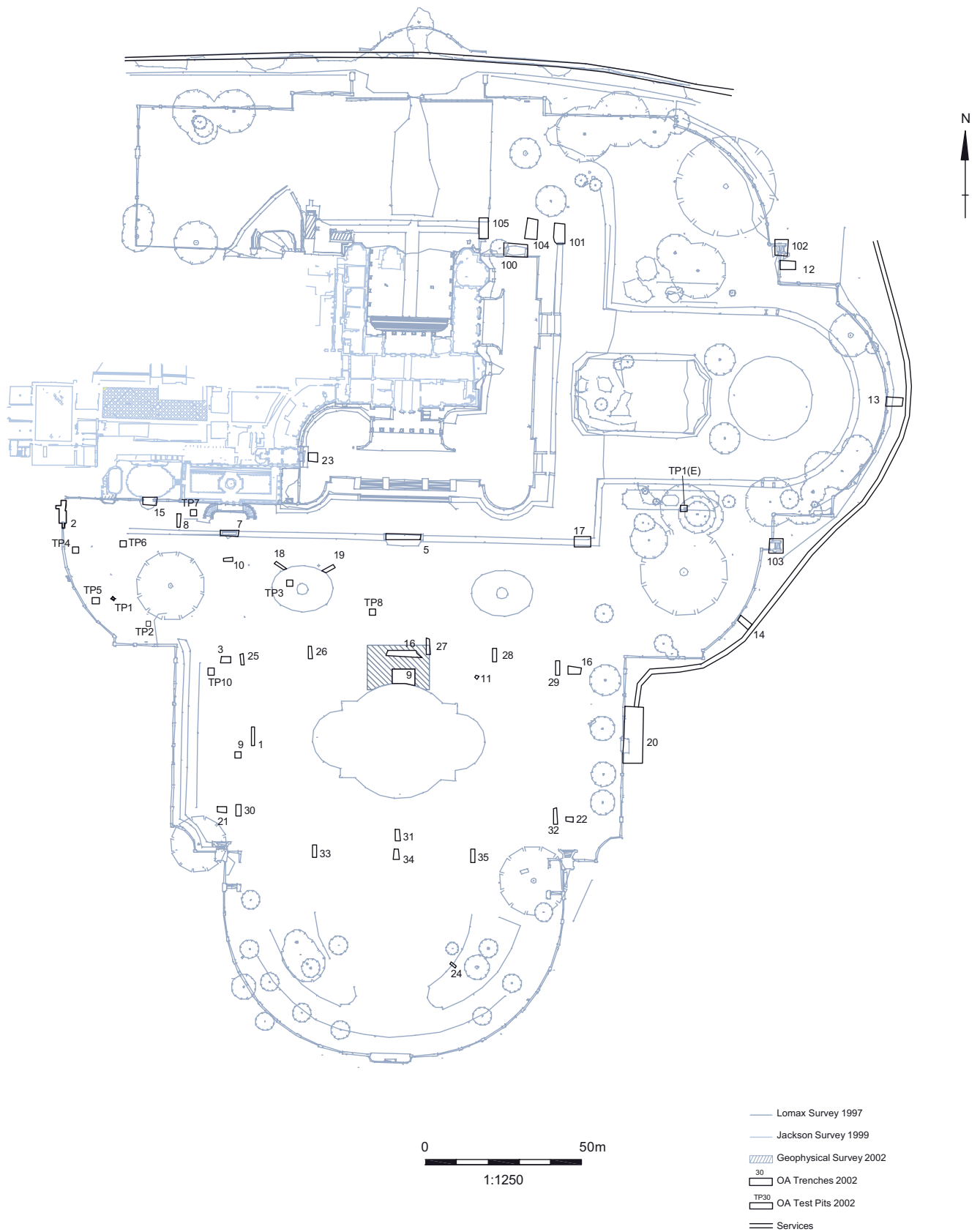


Figure 5 : Trench Location Plan on Base Survey

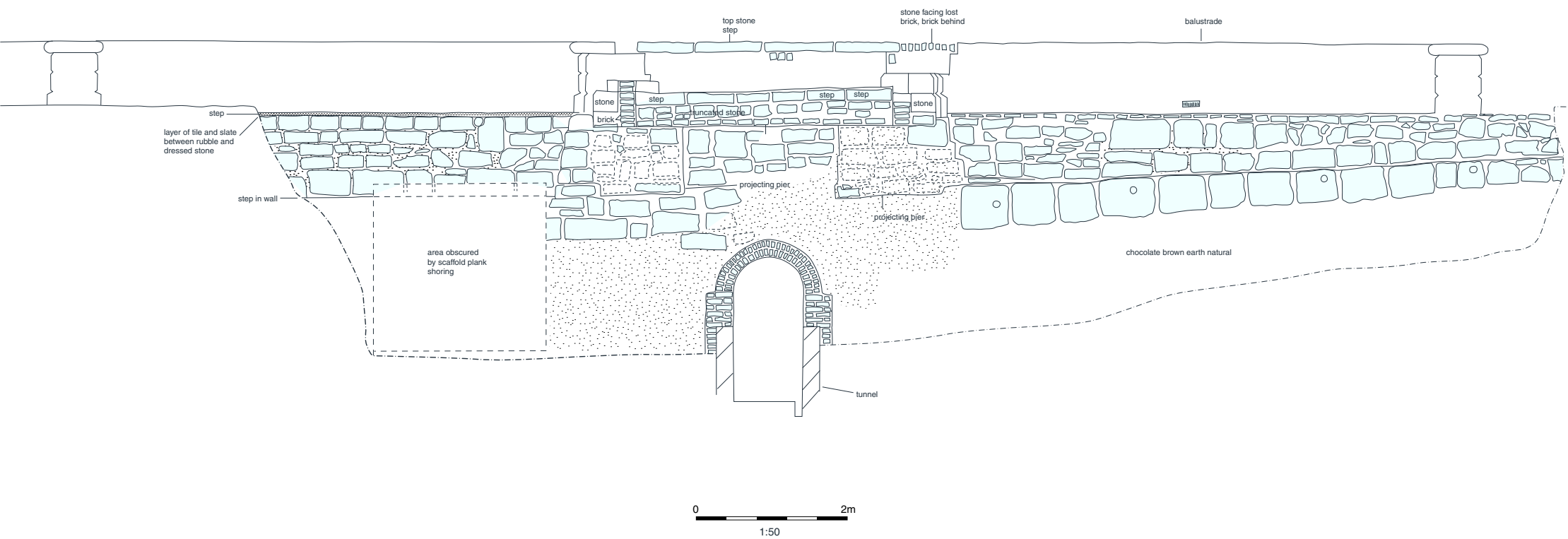


Figure 6 : Elevation of Balustrade, Steps S7 and Tunnel entrance in area of new Pumphouse excavations (Trench 20)

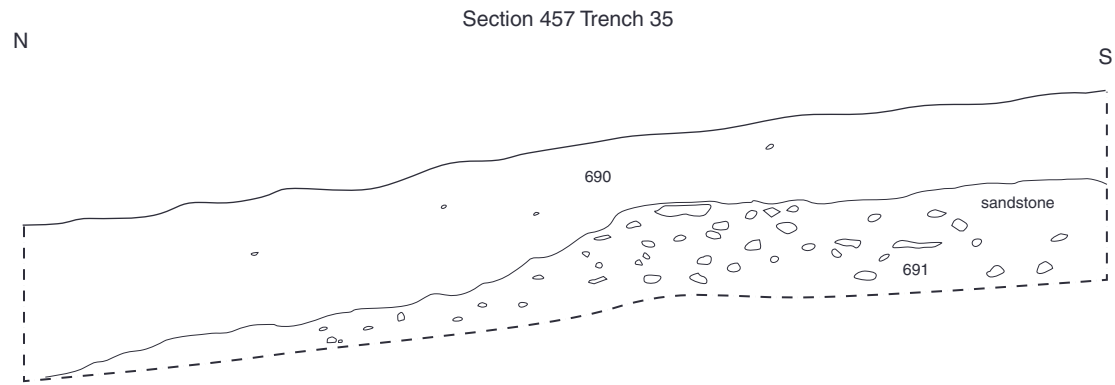
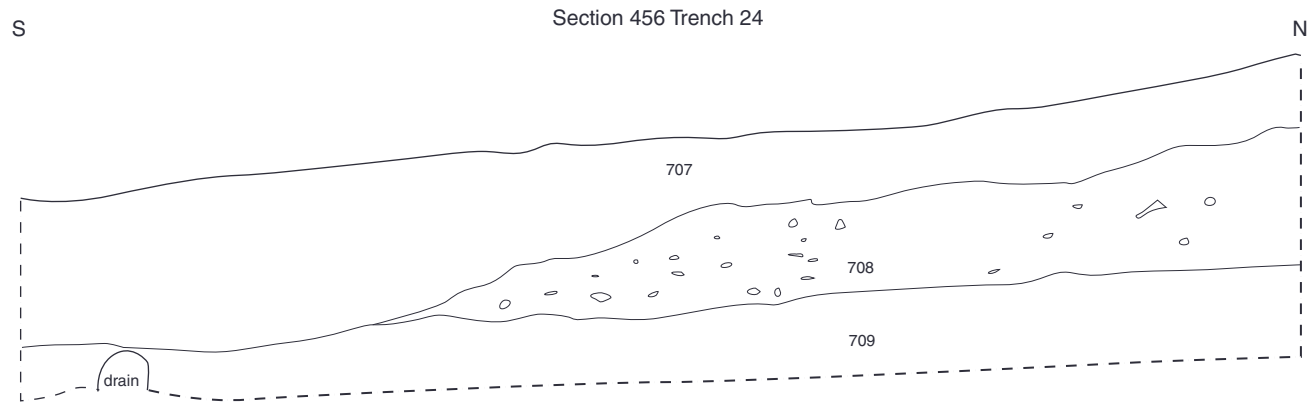
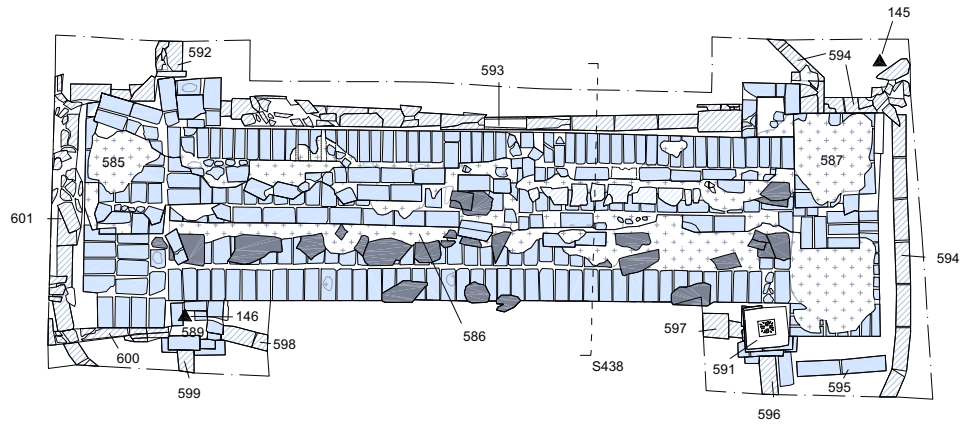
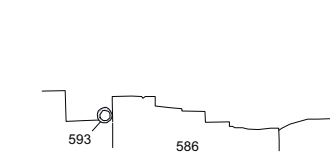


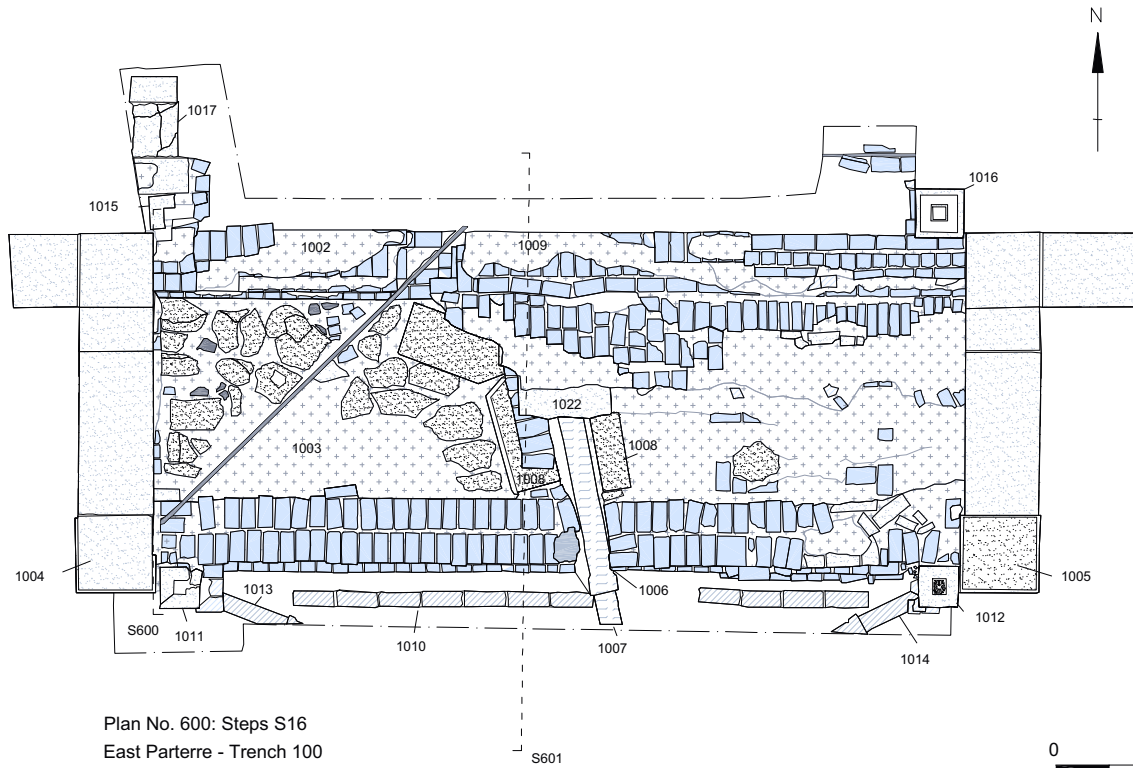
Figure 7 : Representative sections of former North and South Terraces in South Parterre, Trenches 27 and 35



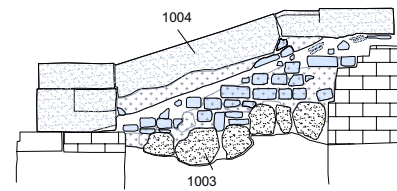
Plan No. 436: Steps S31
South Parterre - Trench 22



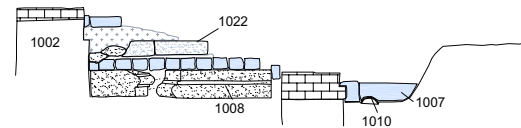
Section 438



Plan No. 600: Steps S16
East Parterre - Trench 100



Section 600



Section 601

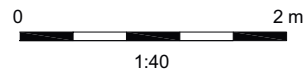
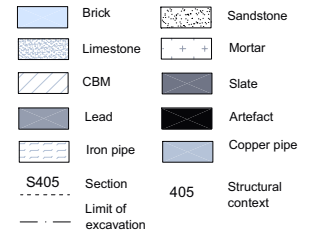


Figure 8 : Representative Plans and Elevations of Steps S16 and S31

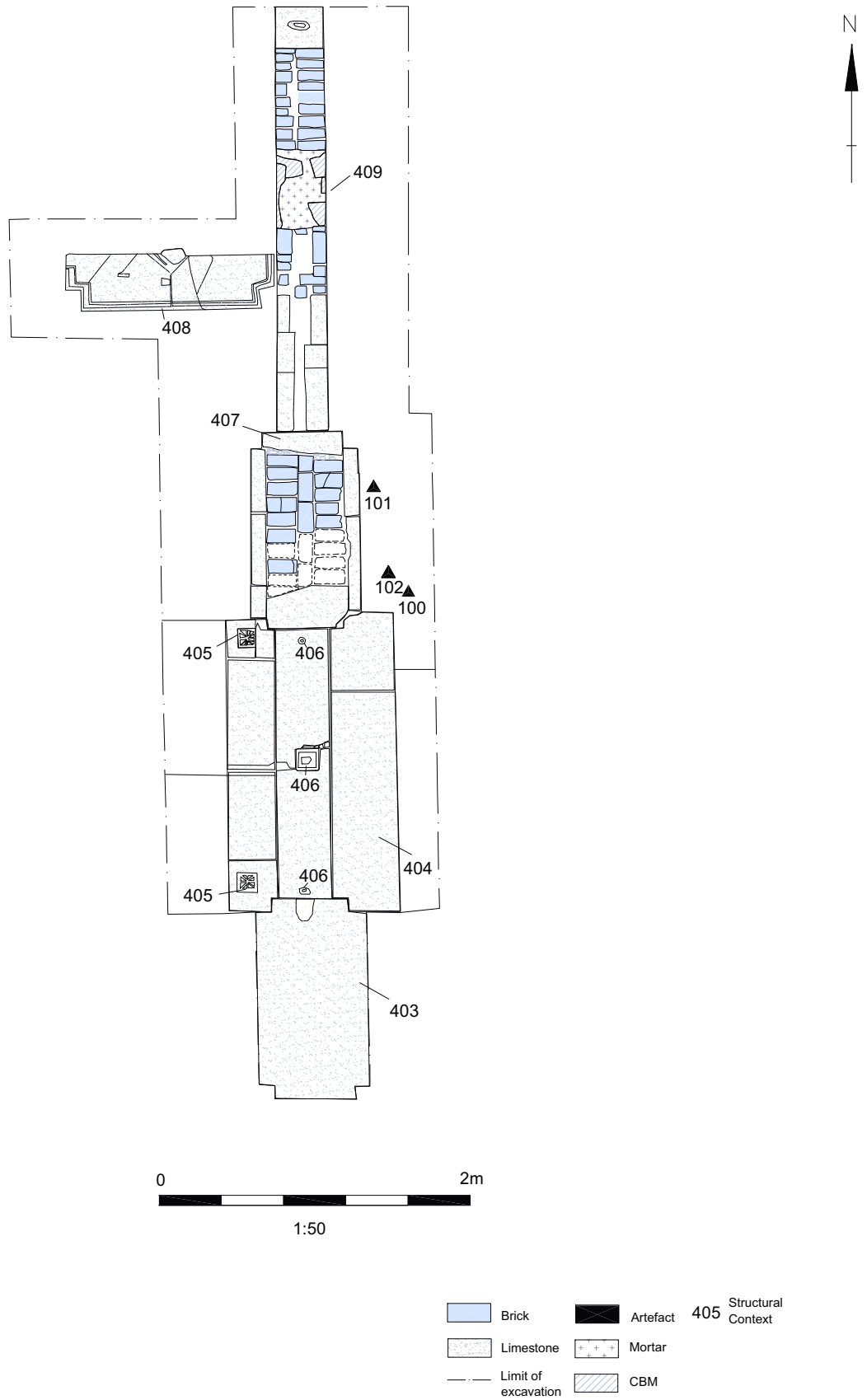
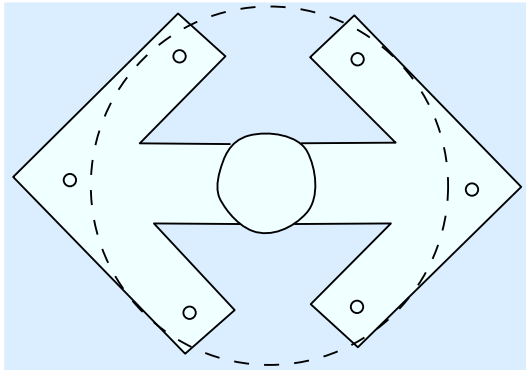
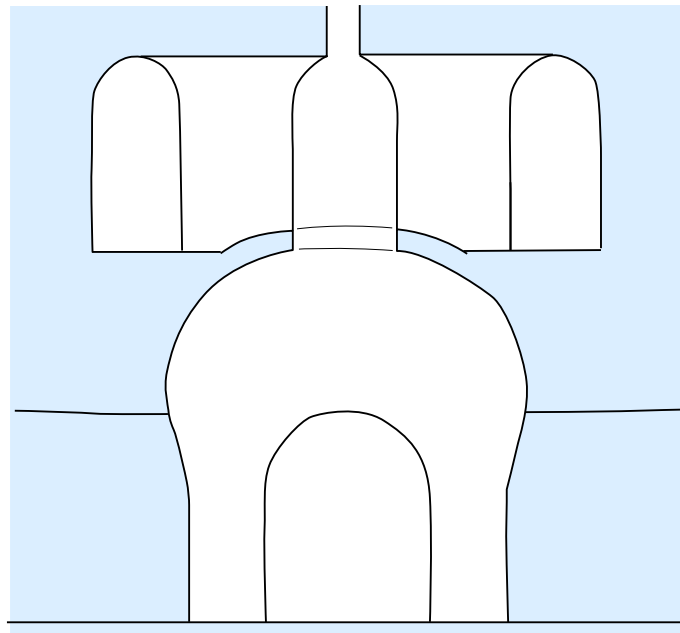


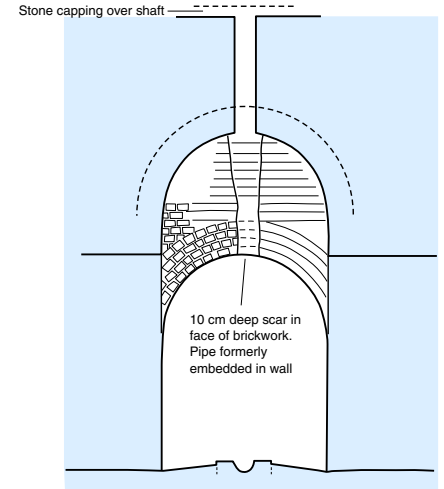
Figure 9 : Plan of north west gated entrance to Sout parterre gardens, Trench 2.



Plan through gallery above domed chamber



Section B - B' through central domed chamber



Section A - A' through chamber at west end

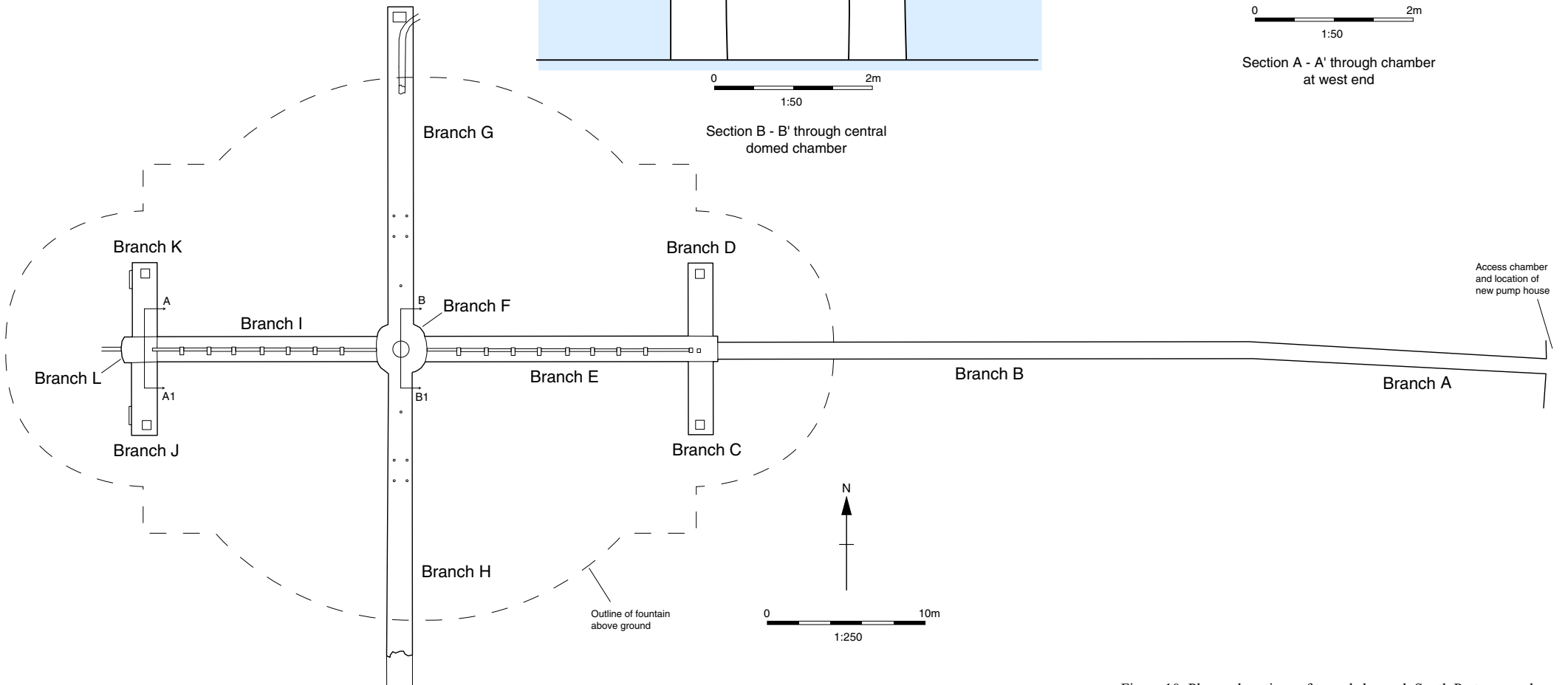


Figure 10: Plan and sections of tunnels beneath South Parterre gardens



Plate 1 - Conducting field survey of South Parterre gardens. Looking north west.



Plate 2 - Trench 2, excavation of north west gated entrance to south parterre gardens. Looking south.



Plate 3 - Trench 2, excavation of north west gated entrance to south parterre gardens. Looking north.



Plate 4 - Turf stripping commenced on new disabled access path at north west corner of South Parterre garden. Looking south east.



Plate 5 - Trial pit 1, excavated along course of new disabled access path. Looking south.



Plate 6 - Trial pit 2, excavated along course of new disabled access path. Looking west.



Plate 7 - Service manhole recorded along course of new disabled access path. Looking north.



Plate 8 - excavation of steps S4. Looking east.



Plate 9 - monitoring works carried out during removal of step stonework, steps S2. Looking north.



Plate 10 - Trench 8, excavations to define limits of path and to examine associated drainage. Looking east.



Plate 11 - Trench 8, excavations to define limits of path and to examine associated drainage. Looking north.



Plate 12 - Existing survival of step foundations S7. Looking south.



Plate 13 - Trench 10, excavation to expose extent of path and examine drainage. Looking east.



Plate 14 - Trench 3, re-excitation of steps S3 and detailed examination of associated drainage. Looking north.



Plate 15 - Trench 3, re-excitation of steps S3 and detailed examination of associated drainage. Looking south.



Plate 16 - Trench 3, re-excitation of steps S3 and detailed examination of associated drainage. Looking east.



Plate 17 - Trench 7, surviving foundations of steps S2. Looking west.



Plate 18 - Trench 7, surviving stringer of steps S2. Looking west.



Plate 19 - Turf removal completed on north to south aligned western path of South Parterre garden. Looking south.



Plate 20 - Trench 3, surviving step foundations S3. Looking north.



Plate 21 - Trench 3, detail of step foundations and stringer of S3. Looking west.



Plate 22 - Trench 5, surviving step foundations of S4 with former path width re-exposed. Looking north.



Plate 23 - Trench 5, surviving step foundations S4. Looking north.



Plate 24 - Trench 5, detail of surviving stringer S4. Looking west.



Plate 25 - Trench 5, surviving eastern stringer of steps S4. Looking west.



Plate 26 - Central path and fountain path de-turfed. Looking south.



Plate 27 - Trench 11, trial pit excavated by garden contractor to examine drainage. Looking south west.



Plate 28 - Stratascan team at work conducting geophysical survey in fountain outfall area using ground probing radar. Looking south.



Plate 29 - Trench 6, surviving step foundations S5 with central path being prepared for re-surfacing. Looking north west.



Plate 30 - Trench 17, excavation of step foundations S12. Looking north west.



Plate 31 - Trench 17, wall footing 527 exposed beneath step foundations S12. Looking north.



Plate 32 - Trench 16, excavation of step foundations S6. Looking north east.



Plate 33 - Trench 16, excavation of step foundations S6. Looking north west.



Plate 34 - Trench 16, detail of surviving stringer of steps S6. Looking north.



Plate 35 - Trench 9, excavation of fountain outfall area. Looking south.



Plate 36 - Trench 9, detail of iron pipe in fountain outfall area. Looking south.



Plate 37 - Trench 22, excavation of step foundations S31. Looking south.



Plate 38 - Trench 22, detail of surviving stringer and drainage of steps S31. Looking south.



Plate 39 - Trench 3, reinstated stonework on steps S3. Looking west.



Plate 40 - Trench 22, excavated step foundations S31 with south eastern Temple in background. Looking south.



Plate 41 - Trench 15, brick constructed ramp exposed overlying step foundations S1. Looking north.



Plate 42 - Trench 21, excavation of step foundations S30. Looking south east.



Plate 43 - Trench 20, top of fountain tunnels exposed. Looking west.



Plate 44 - Trench 20, drainage exposed during excavation of new pumphouse. Looking north.



Plate 45 - Trench 20, detail of drainage recorded in area of new pumphouse. Looking north.



Plate 46 - Trench 3, reinstated stonework on steps S3. Looking north.



Plate 47 - Trench 20, excavation of step foundations S7 with exposed top of fountain tunnel in foreground. Looking north west.



Plate 48 - Trench 15, excavation of step foundations S1 after brick ramp removed. Looking north.



Plate 49 - Trench 13, excavated trench to examine ha-ha that revealed drainage from East Parterre garden through balustrade. Looking south.



Plate 50 - Preparation of paths for re-surfacing with steps S5 in foreground. Looking north.



Plate 51 - Trench 26, examination of former South Parterre terrace. Looking east.



Plate 52 - Trench 100, excavation of step foundations S16 in East Parterre garden. Looking south west.



Plate 53 - Trench 100, detail of service that cut step foundations S16. Looking south.



Plate 54 - Trench 100, detail of surviving stringer of steps S16. Looking east.



Plate 55 - Trench 102, shows current surviving state of step foundations S11 in East Parterre gardens. Looking north.



Plate 56 - Trench 103, shows current surviving state of steps S9. Looking west.



Plate 57 - Trench 101, excavation of step foundations S18b. Looking east.



Plate 58 - Trench 104, excavation of step foundations S18a. Looking south west.



Plate 59 - Trench 33, showing excavation of trench to examine surviving terrace. Single course brick footing exposed. Looking north east.



Plate 60 - Trench 18, excavation to reveal inner edge of north west quarter bed. Single course brick footing exposed. Looking north west.



Plate 61 - Trench 18, detail of brick footing of north west quarter bed. Looking north west.



Plate 62 - Trench 19, excavation to reveal inner edge of north east quarter bed. Single course brick footing exposed, but fragmentary. Looking north west.



Plate 63 - Trench 20, fountain tunnel entrance exposed. Looking west.



Plate 64 - Trench 20, arched foundation of steps S7 above fountain tunnel. Looking south.



Plate 65 - Trench 20, detail of tunnel entrance structures. Looking west.



Plate 66 - Trench 20, continued excavation of steps S7. Looking west.



Plate 67 - Service trench excavated along east side of eastern balustrade of gardens for new pumphouse. Looking north.



Plate 68 - Trial Pit 1 (East Parterre), examination of construction and survival of bed kerbing in east parterre. Looking north west.



Plate 69 - Trial Pit 3, excavated in north west oval bed that revealed no evidence of former inner design. Looking west.



Plate 70 - Drain recorded during monitoring works carried out along service trench excavated to the north of the house. Looking north.