

**OLD PARK WEIR
WREST PARK
BEDFORDSHIRE**

ARCHAEOLOGICAL EVALUATION

Document: 2007/109
Project: WP1221

Compiled by	Checked by	Approved by
Wesley Keir	Hester Cooper-Reade	Hester Cooper-Reade

30 November 2007

Produced for:
BEA Landscape Design Ltd
On behalf of
English Heritage
East of England Region
Cambridge



Contents

List of Figures	4
Preface	5
Structure of the Report	5
Key Terms	6
Non-Technical Summary	7
1 INTRODUCTION	9
1.1 Background to Project	9
1.2 Site Location (Fig. 1)	9
1.3 Archaeological and Historical Background	9
2 METHODOLOGY	11
2.1 General Methodology	11
2.2 Archaeological Investigation and Recording	11
2.3 Survey and Digitally Rectified Photography	12
3 RESULTS	13
3.1 Introduction	13
3.3 Bank Deposits along the Western Edge of Old Park Water (Trench 1)	13
3.4 Old Park Weir (Trenches 2 and 3)	13
3.5 Structural History of the Weir	15
4 CONCLUSIONS	17
4.1 Interpretation	17
4.2 Significance	17
5 BIBLIOGRAPHY	19
6 APPENDIX 1 – CONTEXT SUMMARY	21
7 APPENDIX 2 – WEIR ELEVATION DRAWINGS	27



LIST OF FIGURES

- Figure 1: Site location map
Figure 2: Trench 1
Figure 3: Trench 2
Figure 4: Top of weir after removal of sections of the concrete capping
Figure 5: Junction of eastern bank wall, weir wall (208), 20th century retaining wall (205) and earlier retaining wall (209)
Figure 6: Trench 3

The figures are bound at the back of the report.



Preface

Every effort has been made in the preparation of this document to provide as complete a summary as possible within the terms of the method statement. All statements and opinions in this document are offered in good faith. Albion Archaeology cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party, or for any loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in this document.

This report has been prepared by Wesley Keir (Project Officer). Wesley Keir and Annette Hughes (Archaeological Technician) undertook the archaeological fieldwork. Measured survey was undertaken by Souterrain Ltd (Mercedes Planas).

Albion Archaeology is grateful to Edmund Hobday of BEA Landscape Design Ltd, who commissioned the work as part of the hydrological restoration scheme on behalf of English Heritage. Albion Archaeology would also like to acknowledge the assistance and cooperation of the following:

*The staff of Wrest Park Gardens, particularly Chris Slatcher
W M Plant Hire Ltd*

*Albion Archaeology
St Mary's Church
St Mary's Street
Bedford, MK42 OAS
☎: 01234 294006
Fax: 01234 294008
e-mail: office@albion-arch.com*

Version Number	Date of issue	Reason for Amendment
1.0	30/11/07	n/a

Structure of the Report

After the introductory Section 1, there is a summary of the methodology in Section 2, followed by the results of the archaeological evaluation in Section 3. Section 4 summarises the main conclusions and Section 5 is a bibliography. Detailed context information is contained in Appendix 1. Appendix 2 contains detailed elevation drawings of the weir. Figures are bound at the back of the report.



Key Terms

Throughout this report the following terms or abbreviations are used:

<i>Albion</i>	Albion Archaeology
<i>BCAS</i>	Bedfordshire County Archaeological Service
<i>BLARS</i>	Bedfordshire and Luton Archives and Records Service
<i>HER</i>	Historic Environment Record
<i>IFA</i>	Institute of Field Archaeologists
<i>Procedures Manual</i>	<i>Procedures Manual Volume 1 Fieldwork, 2nd Edition 2001.</i> Bedfordshire County Council
<i>SAM</i>	Scheduled Ancient Monument



Non-Technical Summary

Following on from a desk-based assessment and survey (Albion Archaeology 2007a) Albion Archaeology was commissioned by Bea Landscape Design Ltd, on behalf of English Heritage to undertake an archaeological evaluation of Old Park Weir. The evaluation was undertaken during September 2007 and was designed to compliment and augment the previous desk-based assessment and survey so that English Heritage can agree an appropriate restoration strategy for the weir.

Wrest Park (SAM no. BD48) is located on the southern margins of the greensand ridge at the eastern edge of the village of Silsoe and approximately 15 kilometres south of Bedford. Old Park Weir links Old Park Water with Serpentine Water and lies on the western edge of the current park. It is one of a number of weirs forming part of a complex water management system linking the various waters, canals and lakes, most of which were laid out in the 18th century.

The 40 hectare designed landscape at Wrest Park dates from the 1650s onwards, although the encircling canals including Old Park Water and the Serpentine achieved their present form during the landscaping works carried out by Brown 1758-1760. For the most part, however, Brown's designs were created by modifications in shape to earlier water bodies constructed from the period 1702 - 1720. Although the precise date at which the weir was built is unclear, it is known that Old Park Water and the Serpentine were completed around 1760 and that the great variation in levels necessitated at least the need for a bank (BLARS: crt 190/45). It is quite possible that Old Park Weir was created at this point, or soon afterwards, as the requirements for managing the water systems became more apparent.

The archaeological evaluation comprised the following:-

- 1. Removal of concrete capping to the weir in order to investigate the weir structure and construction.*
- 2. Excavation of a trench to investigate the western bank of Old Park Water and attempt to establish the impact of previous dredging works.*
- 3. Excavation of a trench against the upstream weir wall to investigate the main weir structure and its interface with the eastern retaining wall and eastern bank wall.*
- 4. Excavation of a trench to investigate the partially buried western retaining wall to the west of the wall.*
- 5. Draining a small area on the downstream side of Old Park Weir in order to investigate any surviving elements of the weir structure and construction.*
- 6. Monitoring during the removal of soil from a borrow pit to west of Old Park Water (outside the area of the Scheduled Monument).*

The evaluation results reflect a number of different episodes of repair and new-build associated with the weir. In particular, it has confirmed that the weir, as it stands today, is made up of the main weir wall and a retaining wall for Old Park Water. The main weir wall (208) and western portion of the retaining wall (305) are likely to date to the 18th century construction of the weir. However, the eastern portion of the retaining wall (205), which continues against the upstream side of weir wall (208), is a 20th century rebuild. A further wall (209) was revealed beneath the surface adjacent to the southern side of the eastern portion



of the retaining wall and is probably a remnant of the earlier retaining wall. In addition, a stone structure (207) was revealed perpendicular to the main weir wall. This is likely to be associated with the 18th century weir structure and may represent a buttress. The trench excavated through the edge of Old Park Water revealed a deposit that is likely to represent the originally constructed bank.



1 INTRODUCTION

1.1 Background to Project

Following on from a desk-based assessment and survey (Albion Archaeology 2007a) Albion Archaeology was commissioned by Bea Landscape Design Ltd, on behalf of English Heritage to undertake an archaeological evaluation of Old Park Weir. The work was undertaken in accordance with a Project Design (Albion Archaeology 2007b) agreed with English Heritage and Bea Landscape Design Ltd.

This current phase of works was designed to compliment and augment the previous desk-based assessment and survey so that English Heritage can agree an appropriate restoration strategy for the weir.

This report will be submitted to Bea Landscape Design Ltd for inclusion in their documentation relating to the hydrological restoration scheme. As commissioning agents Bea Landscape Design Ltd are overseeing the work and liaising directly with English Heritage.

1.2 Site Location (Fig. 1)

Wrest Park is located on the southern margins of the greensand ridge on a gentle south-facing slope, at the eastern edge of the village of Silsoe and approximately 15 kilometres south of Bedford. It is centred at National Grid Reference (NGR) TL 0910035100. The soil is a calcareous gley type of the Wicken association over gault clay.

Old Park Weir links Old Park Water with Serpentine Water and lies on the western edge of the current park. It is one of a number of weirs forming part of a complex water management system linking the various waters, canals and lakes, most of which were laid out in the 18th century.

1.3 Archaeological and Historical Background

Below is a general summary of the archaeological and historical background to Wrest Park. A detailed review of the historical development of the watercourses is contained in Albion Archaeology 2007a.

Wrest Park is Listed Grade 1 on the English Heritage Register of Parks and Gardens. In addition the house and garden areas are within a Scheduled Ancient Monument (SAM no. BD48). The park and surrounding land has been designated as a conservation area by Mid Bedfordshire Council.

The 40 hectare designed landscape at Wrest Park dates from the 1650s onwards, when Amabel (second wife of Henry Grey, 10th Earl of Kent), her son Anthony and his wife Mary began constructing a 'new' garden using Amabel's personnel wealth and, from 1871, that inherited by Mary after the death of her father. Although much of the visible form of the gardens dates from 1758-60 when the park was landscaped under the direction of Lancelot Brown, significant elements of the pre-existing formal garden survive, making Wrest Park one of the best remaining examples of pre-landscape formal gardening in England. The



encircling canals, including Old Park Water and the Serpentine, achieved their present form during the landscaping works carried out by Brown, although, for the most part, these were created by modifications in shape to earlier water bodies constructed from the period 1702 - 1720.

The system of canals at Wrest Park is man-made and relies on a series of built structures to control and retain water. The present pumped system was adapted in 1972 and relies on a circulating pump since the original spring in the Bath Ground no longer flows. The banks of the water bodies are formed in natural clay and prone to erosion, particularly if there is regular fluctuation in the water levels (Land Use Consultants, 1993). Ongoing repairs of the banks and weirs still involve puddling of the clay to prevent leakage (Slatcher pers. com.). The farm ditch entering at the north-west corner has significant catchment and also carries storm water run-off from the A6 Silsoe bypass. It appears to have some silt load which has caused deposits at slack points in the system such as the head of Old Park Water and its overflow (Land Use Consultants, 1993).

Although the precise date at which Old Park Weir was built is unclear, it is known that Old Park Water and the Serpentine were completed around 1760 and that the great variation in levels necessitated at least the need for a bank (BLARS: crt 190/45). It is quite possible that Old Park Weir was created at this point, or soon afterwards, as the requirements for managing the water systems became more apparent.

Various works to repair and restore elements of the water management system have been undertaken since the late 1940s. However, this work has been of varied success and in some cases has contributed to the current drainage and erosion problems which exist around the park. In 1983, The Department for Ancient Monuments and Historic Buildings commissioned an historical survey of Wrest Park and began to develop a management strategy for the continuing restoration of the gardens (Land Use Consultants 1983, 1993). These reports on the historical background and development of the gardens were drawn up by Land Use Consultants and contain useful summaries of the chronological development of the park, copies of many of the relevant maps and plans and documentary references, many of which refer to the Estate Records held in the Lucas Archive at BLARS.

Previous archaeological investigations within Wrest Park Gardens include a survey of garden features and archaeology (Albion Archaeology 2002) and several excavations and geophysical surveys carried out by BCAS/Albion Archaeology (Dawson, 2001) and the Ampthill & District Archaeological and Local History Society (BLARS 120 SIL acc, 12056) during the late 1980s and 1990s. Most recently, a desk based study and survey of Old Park Weir (Albion Archaeology 2007a) was undertaken.



2 METHODOLOGY

2.1 General Methodology

Albion Archaeology is a Registered Archaeological Organisation with the Institute of Field Archaeologists and adheres to the IFA Code of Conduct and all the relevant standard and guidelines. Albion's own standards are outlined in Albion Archaeology's *Procedures Manual for Archaeological Fieldwork and the Analysis of Fieldwork Records* (2001). Guidance contained in English Heritage's *Management of Archaeological Projects* (1991) is also followed.

The work was carried out according to a Written Scheme of Investigation (Albion Archaeology, 2007b), approved by English Heritage. Copies of the report will be deposited with English Heritage and the county HER. In addition the results will be uploaded onto the OASIS website. All archival material will be kept together and, subject to agreement with the site owner, deposited with Luton Museum.

The overall objective of the work was to evaluate and assess the potential impact of restoration works on below-ground archaeological and structural remains associated with the Old Park Weir and Old Park Water. In order for this to be achieved the following investigative works were undertaken:-

1. Removal of concrete capping to the weir in order to investigate the weir structure and construction.
2. Excavation of a trench (Trench 1) to investigate the western bank of Old Park Water and attempt to establish the impact of previous dredging works.
3. Excavation of a trench (Trench 2) against the upstream weir wall to investigate the main weir structure and its interface with the eastern retaining wall and eastern bank wall.
4. Excavation of a trench (Trench 3) to investigate the partially buried western retaining wall to the west of the wall.
5. Draining a small area on the downstream side of Old Park Weir in order to investigate any surviving elements of the weir structure and construction.
6. Monitoring during the removal of soil from a borrow pit to west of Old Park Water (outside the area of the Scheduled Monument).

2.2 Archaeological Investigation and Recording

- Any stripping of overburden or removal of modern structural material was monitored to identify *in situ* deposits and structures associated with the weir and surrounding water courses.
- Machine excavation of the trenches was undertaken using a flat-bladed bucket where ever possible.
- A bulk, minimum 0.20m, was left *in situ* between the weir structure and the machine excavated trench. This was removed by hand in order to expose wall surfaces.



- During the opening up of the trench through the western bank of Old Park Water, top soil and undifferentiated deposits was removed by machine. Deposits revealed below these layers were hand cleaned and recorded.
- Removal of concrete capping on the weir was took place under archaeological supervision. The concrete capping was left *in situ*, where it was considered likely that removal might damage the structure below
- All disturbed soil was scanned for artefacts.
- All revealed archaeological features and deposits were recorded in accordance with Albion's *Procedures Manual*.
- Archaeological features, structures and deposits were recorded in plan and section/elevation form where appropriate.

2.3 Survey and Digitally Rectified Photography

A combination of survey and digitally rectified photography was used to record the areas of the weir walls that were previously below the waterline and consequently not recorded during the previous survey of the weir.

A Leica Total Station TCR 705 was set up using control points established during the previous survey of the weir (Albion Archaeology 2007a). The previously unrecorded parts of the elevations of the three walls of the weir were then surveyed using the reflectorless mode of the instrument, recording all visible coursework and any cracks within the structure.

The survey was complemented by digitally rectified photography to record the detail of the stonework. This method comprised the use of survey targets, which were arranged to include at least four of each on every photograph. The targets were then surveyed. Photographs were taken by a 5.0 mega-pixel resolution digital camera. Each photograph was then computer-rectified and the details of features digitised in AutoCAD.

The updated elevation drawings of the weir are presented in Appendix 2.



3 RESULTS

3.1 Introduction

The archaeological evaluation was undertaken between the 17th and 21st September 2007. The evaluation included the excavation of two trenches located so as to investigate the structure of the weir and retaining wall (Trenches 2 and 3), and a further trench (Trench 1) investigating the impact of dredging works on the western bank of Old Park Water.

In addition, sections of the concrete capping were removed from the middle and eastern ends of the weir so that the nature of its construction could be more fully examined. To enable the lower part of the weir to be examined, a coffer dam was created using bags of soil placed near to the downstream side of Old Park Weir and the area within was drained.

The evaluation revealed that the weir comprises of two main structural elements, the main weir wall and a retaining wall for Old Park Water that has been partially replaced in the 20th century. Trench 1 revealed a bank deposit that probably dates back to when Old Park Water achieved its present form in the 18th century.

The results are discussed in depth below, whilst detailed archaeological context information is listed in Appendix 1.

3.3 Bank Deposits along the Western Edge of Old Park Water (Trench 1)

Following removal of topsoil and subsoil deposits of up to 0.6m thick, a mid-brown clay layer (107) was revealed at a depth of 52.87m OD (Fig. 1). It was overlain by alluvial clay (102), probably derived from repeated flooding to the area adjacent to Old Park Water, and partially overlay clay (105) deposited for the lake bed. The location and nature of layer (107) indicates it is a remnant of a deliberately created bank and likely to date back to when Old Park Water achieved its present form in the 18th century.

A later sandy layer with frequent modern brick (106) (Fig. 1), and probably associated with 20th century containment of Old Park Water, also overlay layer (107). The remains of a line of wooden posts, likely to once have formed a fence designed to retain this layer, are still visible.

3.4 Old Park Weir (Trenches 2 and 3)

Investigation of Old Park Weir revealed that the current form of the weir comprises two structural elements, the main weir wall and a retaining wall, partially replaced in the 20th century. The two walls are clearly defined by an existing gap in the concrete capping on the top of the weir. The earlier weir wall (208) is that which is visible on the south side, whilst the wall (205) visible from the north appears to be a 20th century rebuild.

In addition, the currently visible eastern part of the retaining wall appears to be a continuation of 20th century wall (205), whilst the fabric in the western part of the retaining wall (305) indicates it is contemporary with the earlier weir wall (208).



A portion of wall revealed in plan to the east of the weir and adjacent to the southern side of the eastern portion of the retaining wall is likely to be a remnant of the earlier retaining wall that was replaced by wall (205).

The above features are discussed in more detail below.

3.4.1 Weir wall (208)

As reported in Albion Archaeology (2007a), weir wall (208) is constructed of random blocks of iron-rich greensand, and capped with a concrete sill (Figs. 3 and 4). Its southern face has been entirely re-pointed using cement. However, removal of the concrete capping revealed randomly sized rough hewn greensand blocks (53.07m OD) that have been bonded together with a yellow lime and sand mortar (Fig. 4). Although substantially repaired, this indicates the weir wall has not been completely rebuilt. The visible width of the wall at this point measured 0.55m wide.

Draining of a small area adjacent to the downstream side of the weir enabled the full depth of the south face of the weir to be recorded. The results of the measured survey are illustrated in Appendix 2. The full height of the weir wall measured 2.3m, the lowest 0.5m of which appeared to be cement rendered and was stepped out onto a hard base (50.96m OD) which extended approximately 2m to the south. Due to overlying water, the fabric used for this base was not able to be identified, but it was overlain by a fairly compact layer of small stones.

The conclusion of the previous survey, that the bank walls of the weir are not tied into the main weir wall (208), was corroborated. Examination of the eastern bank wall shows this clearly, but the cement pointing makes it harder to discern with regard to the western bank wall. However, it appears that both bank walls are of a similar construction, using similar lifts of stone with the larger blocks to the base. The main weir wall (208) contains more random stonework throughout.

Due to the modern rebuild of the eastern Old Park Water retaining wall (205), the northern face of the original weir wall was not visible within the excavated trench adjacent to the north side of the weir (Trench 2). However, an associated stone structure (207) was revealed perpendicular to and towards the midpoint of the weir, at a depth of 52.42 m OD (Fig. 3). It was constructed of large, rough hewn greensand blocks bonded together with a mortar similar to that used in the original wall (208). An iron bar, which probably functioned as a tie bar, was attached to the northern end of the structure and extended towards the original weir wall. The function of this structure is unknown, though it may form a type of buttress to the weir wall. However, if it is connected, to the original weir wall was not visible, though it had been built over by later wall (205).

3.4.2 Old Park Water retaining wall (205)/(209)/(305)

The upstream side of the western portion of the retaining wall (305) was examined in Trench 3 (Fig. 6). It was similarly constructed to that of weir wall (208), using rough hewn random coursed sandstone blocks and re-pointed using cement. A concrete cap has also been added. The wall was sat on foundations (306) of coursed rough hewn sandstone blocks, though smaller than that used in the wall, bonded together with a yellow sand and lime mortar. It was contained within a foundation trench [303] that was cut into the clay (302) of the lake bed.



The nature of this western portion of the retaining wall markedly differs to that of the current eastern portion of the retaining wall which appears to be a 20th century rebuild (see below).

Following removal of the concrete capping on the top of the weir, its northern face was clearly revealed to be part of a separate wall to that visible from the southern side (Figs. 3 and 4). This wall (205) was largely constructed using a concrete mix of sand and small stones and rendered with cement. In addition, courses of greensand blocks, bonded together with sand and cement, have been added to the top and capped with the concrete sill.

The wall was sat on concrete foundations (206) at 52.15m OD and within a trench [202] that had been backfilled with clay silt and contained frequent brick fragments and modern materials such as plastic.

Wall (205) was built against the upstream side of weir wall (208) and over the top of the possible buttress (207). It continues around the eastern side of Old Park Water and appears to be a 20th century rebuild of part of the retaining wall, presumably built to reinforce the weir and help prevent leakage onto the adjacent gardens.

The construction of this 20th century wall may be related to the work which is shown in a photograph contained in the Head Gardner's Archive and dated to 1948. It appears to show in the distance, shuttering placed near to the northern side of Old Park Weir.

A small area was examined on the east side of the weir adjacent to the eastern portion of the retaining wall (Fig. 5). Here a greensand block wall (209) was observed in plan at 52.9m OD, just beneath the current ground surface adjacent to the south side of retaining wall (205). It measured approximately 0.5m wide and is likely to be the remains of the earlier eastern portion of the retaining wall, contemporary with and possibly joined to weir wall (208).

3.4.4 20th Century deposits adjacent to the weir (200), (201), (300), (301)

Modern deposits of up to 0.9m thick were revealed within Trenches 2 and 3, overlying the clay of the lake bed and foundation trenches of walls (205) and (305) (Figs. 3 and 6). These deposits comprised of two distinct layers, both containing brick fragments and modern materials. The uppermost layer consisted of a relatively loose mixture of clay silt and limestone pieces, whilst the lower was a firmer yellow-brown clay.

These deposits have created a bank of material that currently sits adjacent to the northern side of the weir, presumably to help prevent leakage.

3.5 Structural History of the Weir

As a result of the present investigation it is possible to add to the developmental sequence of Old Park Weir as postulated in Albion (2007a). However, in the absence of specific documentary evidence some of this still remains conjectural.

1. The joining of the Serpentine with Old Park Water appears to have taken place around 1760 when documents record that the difference in levels, 'more than



- could be overcome by digging', which necessitated a bank of earth 'which planting and shrubs must conceal' (BLARS: crt 190/45).
2. Flooding in the south of the park (see Turner, 1991) and possible associated problems with the area between Old Park Water and Serpentine necessitate the building of Twin Waters Weir and Old Park Weir. In the case of the Twin Waters Weir, Turner (1991) suggests that this would have occurred shortly after completion of the 1760 works when problems such as flooding would have become apparent. It is likely that the main weir wall (208) and retaining walls (209) and (305) date from around this time. There is no sluice. The construction of the bank walls may have mirrored the current layout although this is uncertain.
 3. Sometime between 1901 and 1924, but probably prior to the Great War, a sluice was added to improve the management of water between Old Park Water and the Serpentine. Prior to the war, the park was well-maintained, although little substantive works took place. Improvements or repairs, including an element of structural re-building would be entirely consistent with the general maintenance of the park. Though the original assumption that the bank walls were completely replaced is less clear, they were subject to substantial work at this time or possibly later (at least prior to the restoration works in 1971) and may have been rebuilt using the original stone. These walls are not tied into the main weir wall.
 4. During the 20th century, but seemingly prior to the 1971 works, the eastern portion of the retaining wall was rebuilt (wall 205). This new part of the retaining wall was built in front of the then existing retaining wall (209) and in front of the weir wall (208). Also within this period, the original weir wall (208) and western portion of the retaining wall (305) were re-pointed and capped with concrete. The bank of material (200), (201), (300) and (301) on the northern side of the weir is likely to have been added once the eastern portion of the retaining wall was rebuilt (205) and the above mentioned repair works were completed.
 5. The 1971 works replace the wooden sluice gates with a concrete drain and tighten the angle of the sluice itself. The new build is clearly discernible by the use of machine-cut blocks; the outline of the old curve can be seen where the sluice edge on the serpentine side joins that canal. The 1971 plan appears to show the eastern bank wall as shorter than the present one. Yet, despite slumping and cracking, the eastern bank wall is clearly of one build. An alternative scenario is that the bank walls were re-built after, rather than before, the re-alignment of the sluice, possibly as a result of erosion caused by the faster flow of water towards the eastern bank opposite the outfall of the sluice. The concrete capping on weir wall (208) was also repaired and replaced.



4 CONCLUSIONS

4.1 Interpretation

The results of the present investigation reflect a number of different episodes of repair and new-build associated with the weir. In particular, it has confirmed that the weir as it stands today comprises two main structural elements, the main weir wall and a retaining wall for Old Park Water. The main weir wall (208) and western portion of the retaining wall (305) are likely to date to the 18th century construction of the weir. However, the eastern portion of the retaining wall (205), which continues against the upstream side of weir wall (208), is a 20th century rebuild. A further wall (209) was revealed beneath the surface adjacent to the southern side of the eastern portion of the retaining wall and is probably a remnant of the earlier retaining wall.

In addition, a stone structure (207) was revealed perpendicular to the main weir wall. This is likely to be associated with the original weir structure and may represent some sort of buttress.

The trench excavated through the western edge of Old Park Water revealed a deposit that is likely to represent a bank contemporary with the 18th century landscaping of Old Park Water.

4.2 Significance

The present investigation has helped to clarify the structural history of the weir and identify those parts that are likely to date to its original construction. Though there has been much 20th century repair work and other structural elements added, a substantial amount of the earlier structure of the weir survives.

Though likely to have been truncated to some degree, remains of the 18th century bank of Old Park Water appear to have survived the numerous dredging works that are known to have taken place.





5 BIBLIOGRAPHY

Albion Archaeology 2001, *Procedures Manual, Volume 1: Fieldwork*. 2nd Edition

Albion Archaeology 2002, *Wrest Park, Bedfordshire. Survey and Recording of Garden Features and Archaeological Remains*. Report No. 2002/73

Albion Archaeology, 2007a, *Hydrology Restoration: Archaeological Survey, Wrest Park Gardens, Silsoe, Bedfordshire*. Report 2007/47

Albion Archaeology 2007b, *Old Park Weir, Wrest Park, Bedfordshire. Project Design for an Archaeological Evaluation*. Report No. 2007/19.1a

Dawson, M. 2001, A brief introduction to the archaeology of Wrest Park, Bedfordshire IN *Bedfordshire Archaeology* Vol. 24, p.81-96

Land Use Consultants 1983, *Historical Survey of Wrest Park*

Land Use Consultants 1993, *Historical Survey of Wrest Park, Wrest Park Masterplan (2) for Restoration and Management*

Turner, M. J. B. 1991, *Development of the Waterways at Wrest Park, Silsoe*





6 APPENDIX 1 – CONTEXT SUMMARY





Trench: 1

Max Dimensions: Length: 7.20 m. Width: 1.50 m. Depth to Archaeology Min: 0.1 m. Max: 0.75 m.

Co-ordinates: OS Grid Ref.: TL 08925 35019

OS Grid Ref.: TL 08932 35019

Reason: Investigate the western bank of Old Park Water.

Context:	Type:	Description:	Excavated:	Finds Present:
100	Topsoil	Loose dark brown clay silt . Maximum thickness 0.18m.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
101	Subsoil	Firm mid brown silty clay . Maximum thickness 0.38m.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
102	Alluvium	Firm mid brown grey clay . Maximum thickness 0.17m.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
103	Layer	Dark brown clay silt . Maximum thickness 0.10m. Lake silt.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
104	Layer	Maximum thickness 0.04m. Layer of small sub-angular stones and clay silt. Unknown if have been washed in naturally or deliberately deposited. Though if have been deliberately deposited, their function is unclear.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
105	Layer	Firm mid blue grey clay . Minimum thickness 0.10m. Clay deposited for lake bed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
106	Layer	. Maximum thickness 0.25m. Layer of friable red brown sand with frequent brick fragments. A modern layer that would probably have been held back by a timber retaining fence (as represented by the visible remains of upright timbers) and designed to help prevent erosion of the bank..	<input checked="" type="checkbox"/>	<input type="checkbox"/>
107	Layer	Firm mid brown clay . Minimum thickness 0.10m. Re-deposited clay to make up a bank. Probably represents the original bank of the lake.	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Trench: 2

Max Dimensions: Length: 5.00 m. Width: 1.00 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: TL 08915 34883

OS Grid Ref.: TL 08920 34884

Reason: Investigate construction of weir wall.

Context:	Type:	Description:	Excavated:	Finds Present:
200	Dump material	Mixture of loose dark brown clay silt and frequent limestone pieces. Maximum thickness 0.17m.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
201	Dump material	Firm mid yellow brown clay . Maximum thickness 0.7m.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
202	Foundation trench	Linear E-W profile; vertical dimensions: max breadth 0.75m, min depth 0.2m Foundation cut associated with wall (205). Only partially excavated.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
203	Backfill	Loose mid brown clay silt . Contained frequent CBM, greensand pieces and modern material including plastic.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
206	Foundation	Foundations for wall (205) comprised of a concrete mix of yellow sand and small stones. 0.08m+ thick.	<input type="checkbox"/>	<input type="checkbox"/>
204	Layer	Firm blue grey clay . Clay deposited for lake bed.	<input type="checkbox"/>	<input type="checkbox"/>
205	Wall	Modern wall largely constructed of a concrete mix of yellow sand and small stones which has been rendered with cement. Courses of greensand blocks bonded with cement have been added at the top and capped with a concrete sill. The wall has been built adjacent to the north side of the weir wall (208) and continues round the east side of Old Park Water. Wall measured between 0.3 and 0.6m wide and up to 1.15m high.	<input type="checkbox"/>	<input type="checkbox"/>
207	Stone structure	Stone structure aligned N-S, perpendicular to and overlain by wall (205). Comprised of irregular, random coursed rough hewn greensand blocks that have been bonded with a yellow sandy mortar. Measured 1m wide, 0.3m+ deep and 1m+ long.	<input type="checkbox"/>	<input type="checkbox"/>
208	Wall	Weir wall, constructed of two strings of rough hewn greensand blocks that have been bonded with yellow sandy mortar. The top of the wall has been capped with a concrete sill, whilst the south face of the wall has been re-pointed with cement. The bottom of the wall steps out and has been cement rendered. Wall measures 2.3m in height and 0.55m wide at the top.	<input type="checkbox"/>	<input type="checkbox"/>
209	Wall	Wall constructed of greensand blocks (only observed in plan). Overlain by current turf and located adjacent to south side of modern wall (205). Probably the remains of the original eastern retaining wall of Old Park Water and probably joins weir wall (208). Visible width is 0.4m.	<input type="checkbox"/>	<input type="checkbox"/>



Trench: 3

Max Dimensions: Length: 1.70 m. Width: 1.00 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: TL 08908 34884

OS Grid Ref.: TL 08910 34883

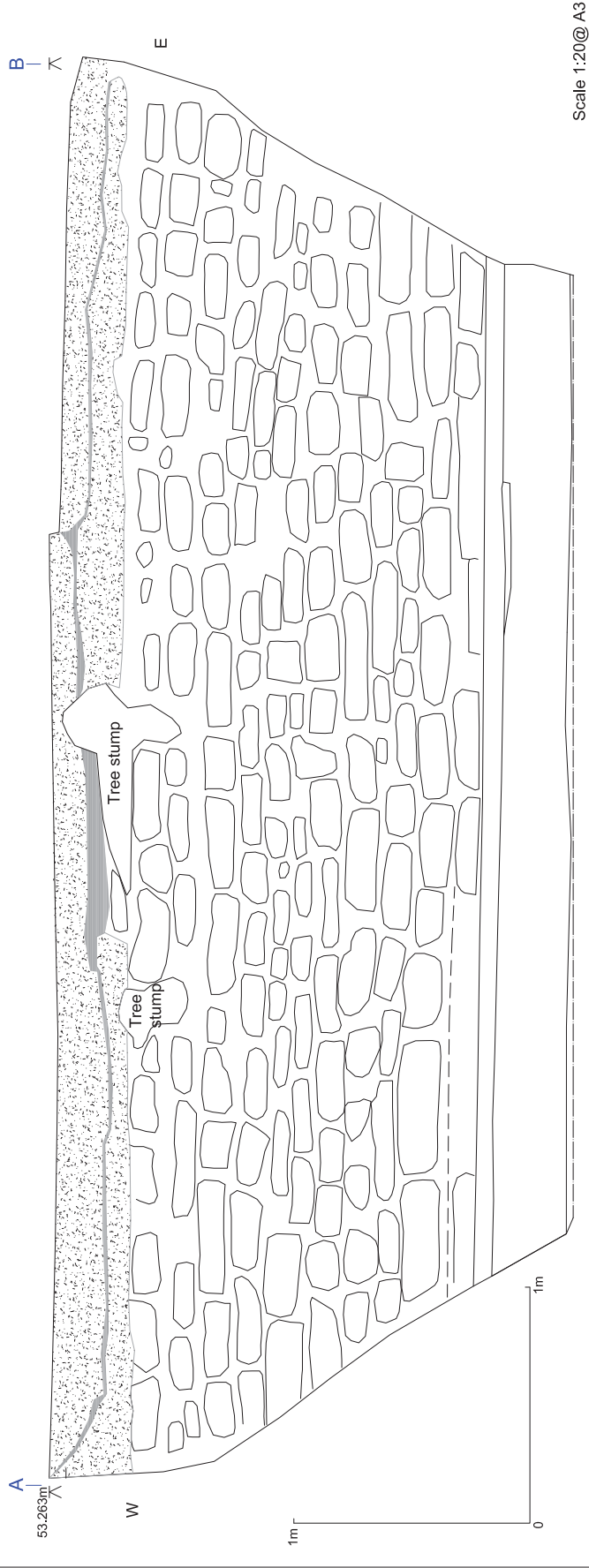
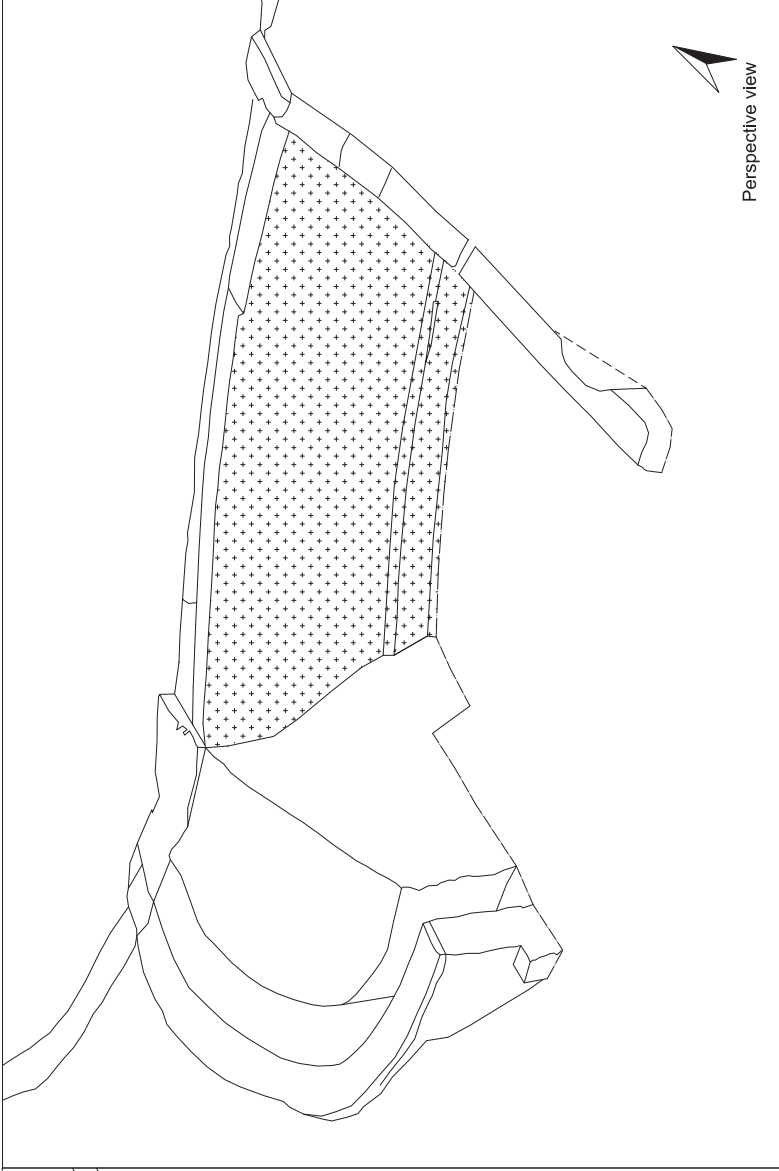
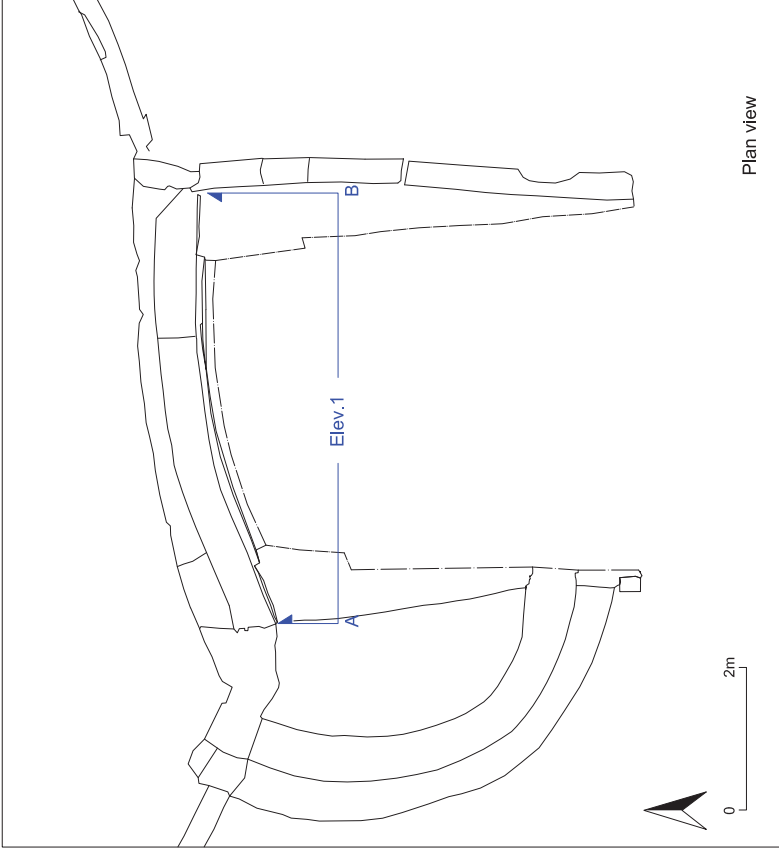
Reason: Investigate construction of Old Park Water western retaining wall.

Context:	Type:	Description:	Excavated:	Finds Present:
300	Dump material	Loose dark brown clay silt . Up to 0.7m thick. Contained frequent limestone pieces.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
301	Dump material	Firm mid orange brown clay . 0.3m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
302	Layer	Firm blue grey clay . Clay deposited for lake bed.	<input type="checkbox"/>	<input type="checkbox"/>
303	Foundation trench	Linear E-W profile: vertical dimensions: min breadth 0.2m, min depth 0.2m Foundation trench for wall (305).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
304	Backfill	Loose dark orange brown silty clay	<input checked="" type="checkbox"/>	<input type="checkbox"/>
306	Foundation	Rough hewn random coursed greensand pieces bonded with a yellow sandy mortar. Smaller stones than that used in wall (305). Foundation material for wall (305).	<input type="checkbox"/>	<input type="checkbox"/>
305	Wall	Retaining wall on west side of Old Park Water. Wall constructed of rough hewn random coursed greensand blocks. Has been re-pointed with grey cement and a concrete sill has been added. 0.55m wide and 0.7m high.	<input type="checkbox"/>	<input type="checkbox"/>









7 APPENDIX 2 – WEIR ELEVATION DRAWINGS



**Wrest Park,
Silsoe,
Bedfordshire**

Elevation 1:
South-facing
wall of weir

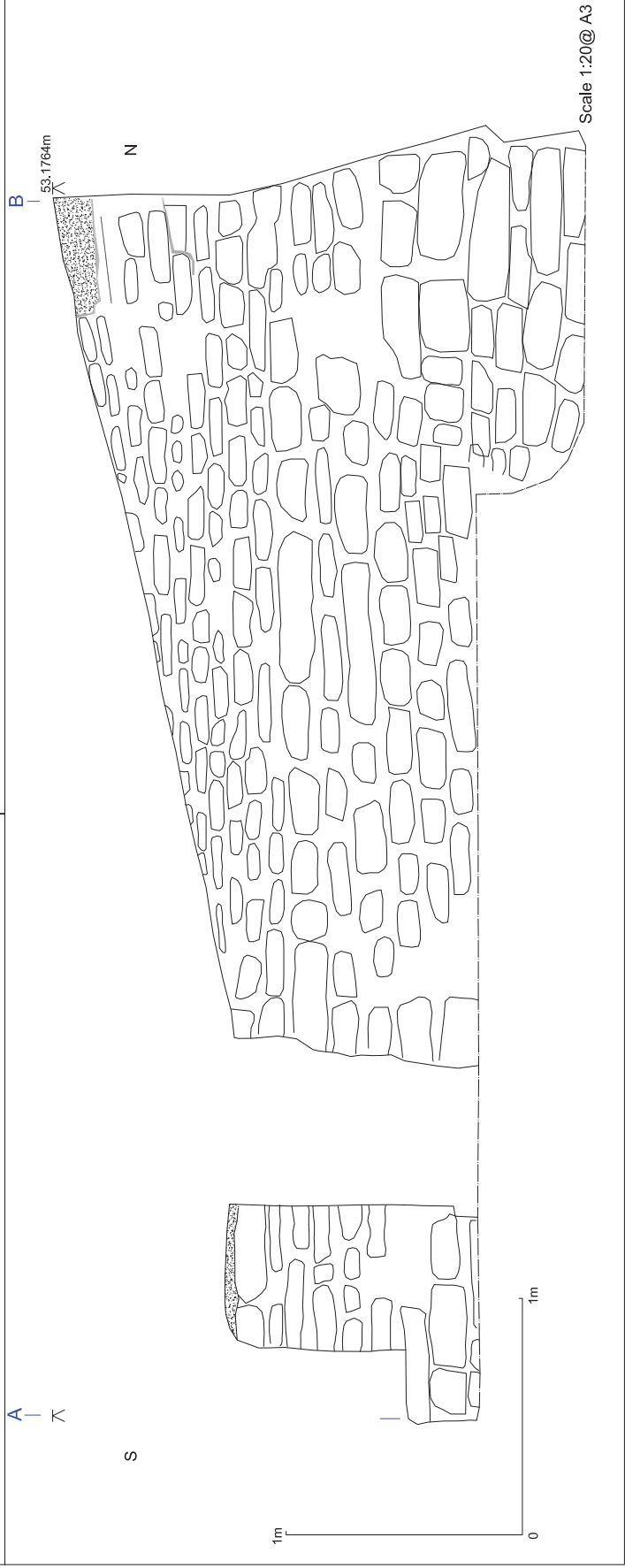
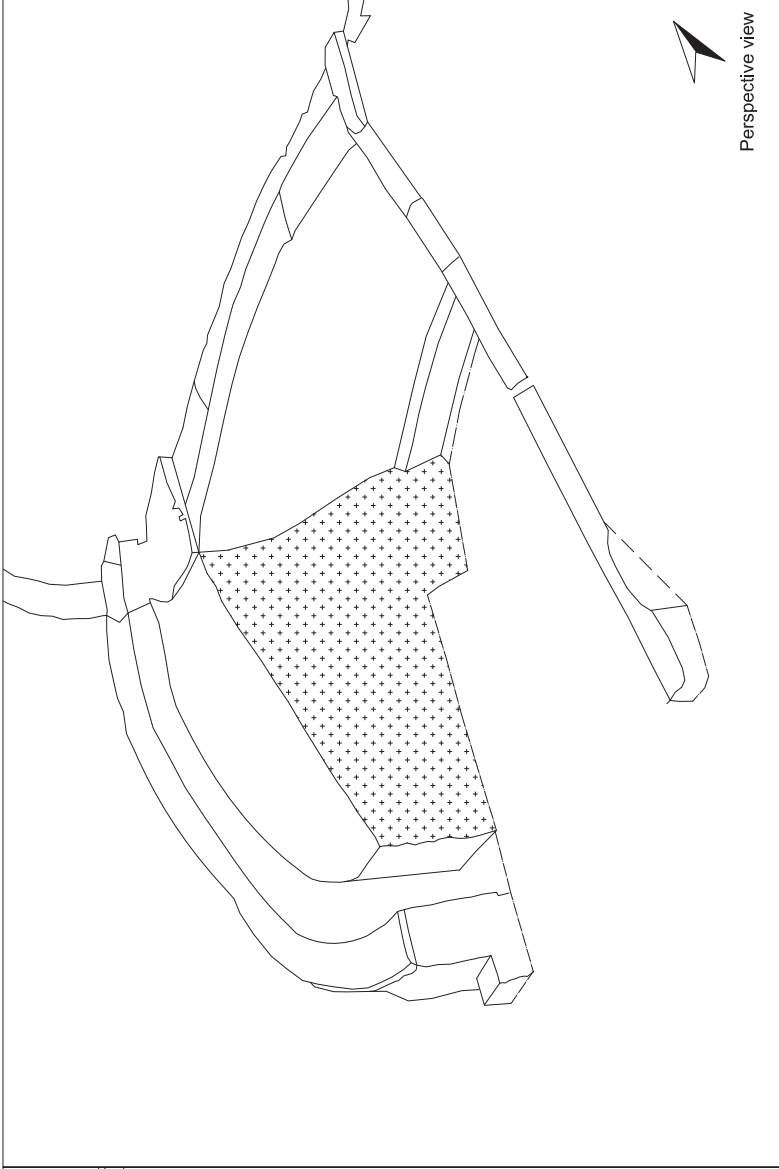
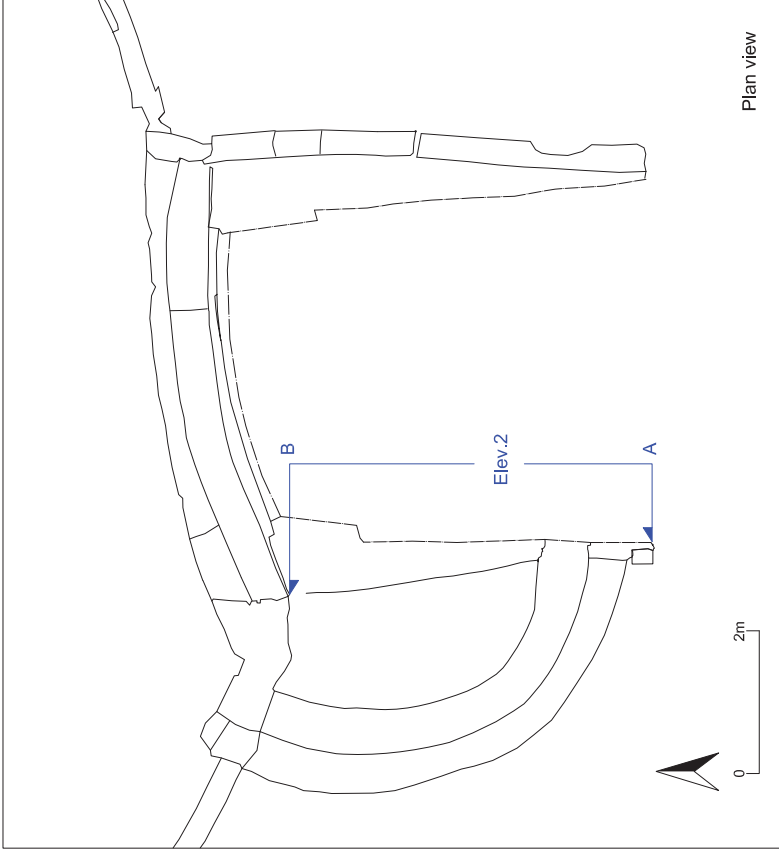
-  Crack in wall
-  Concrete capping
-  Poorly-defined wall
-  Water level

Surveyed by: M. Planas &
M. Wilson

Drawn by: M. Planas





Date: 20/09/07

Scale 1:20@ A3

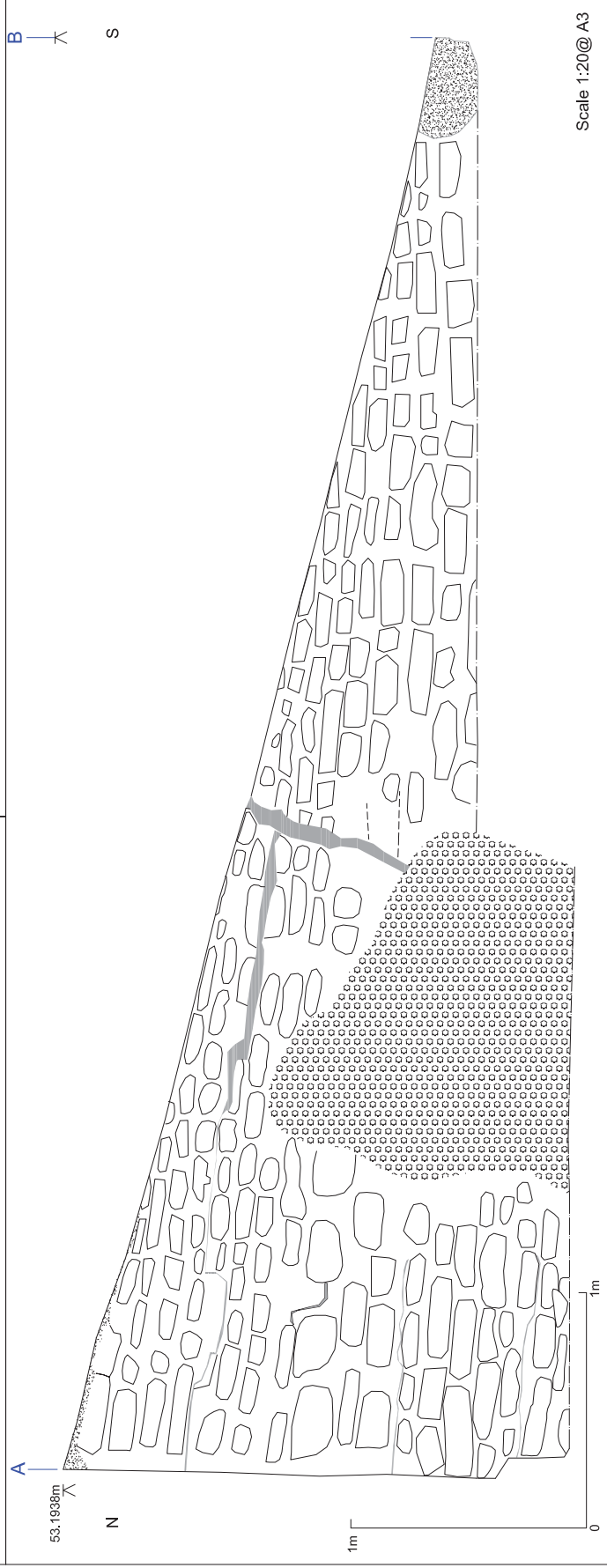
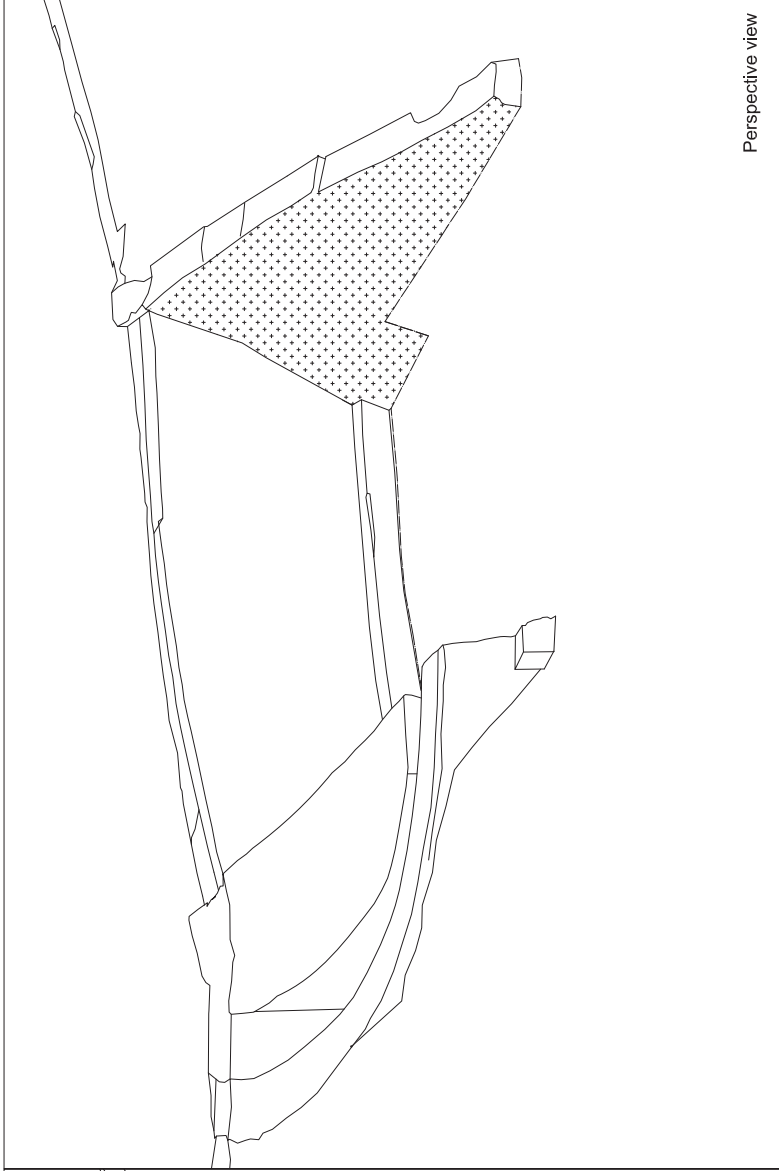
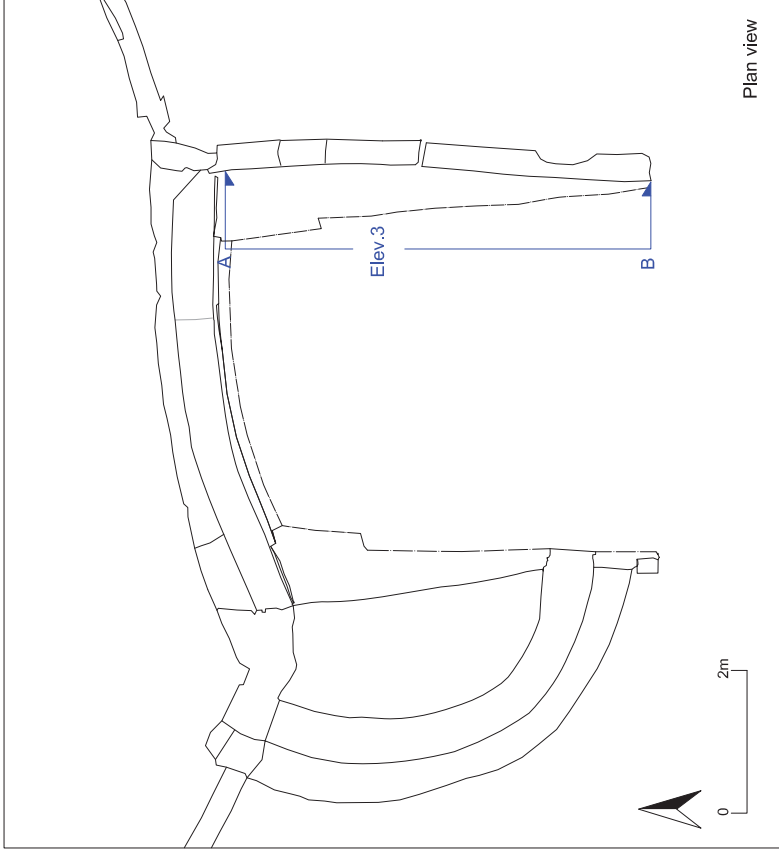


**Wrest Park,
Silsoe,
Bedfordshire**

**Elevation 2:
East-facing
wall of weir**





-  Crack in wall
-  Concrete capping
-  Poorly-defined wall
-  Water level

Surveyed by: M. Planas &
M. Wilson
Drawn by: M. Planas
Date: 20/09/07



**Wrest Park,
Silsoe,
Bedfordshire**

**Elevation 3:
West-facing
wall of weir**

-  Crack in wall
-  Tree stump
-  Concrete
-  Water level

Surveyed by: M. Planas &
M. Wilson
Drawn by: M. Planas
Date: 20/09/07

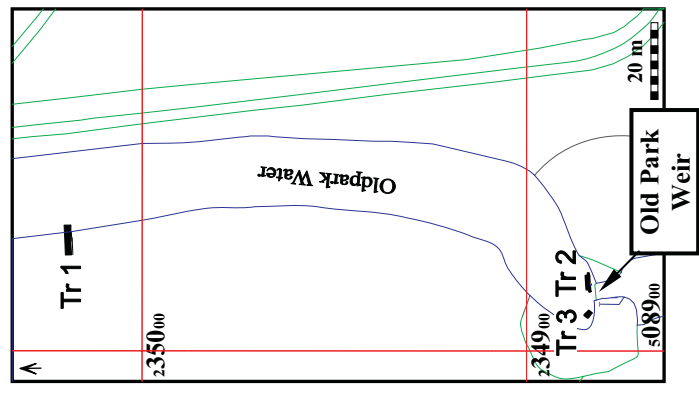
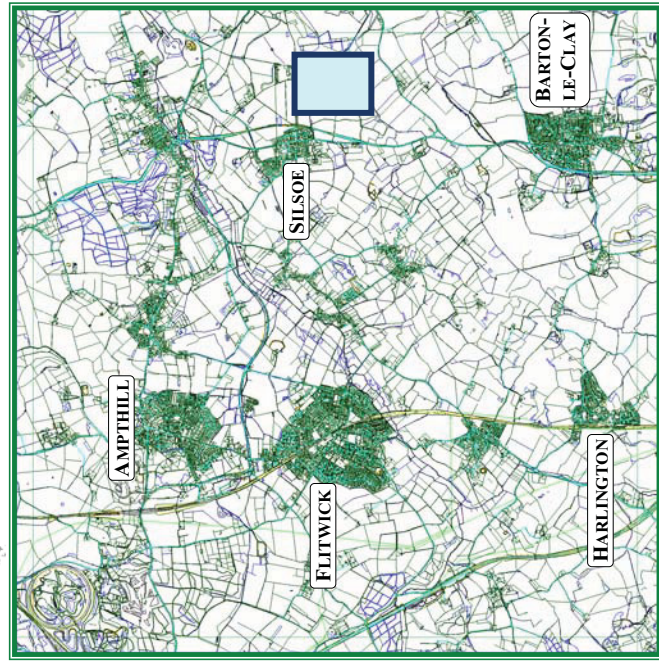
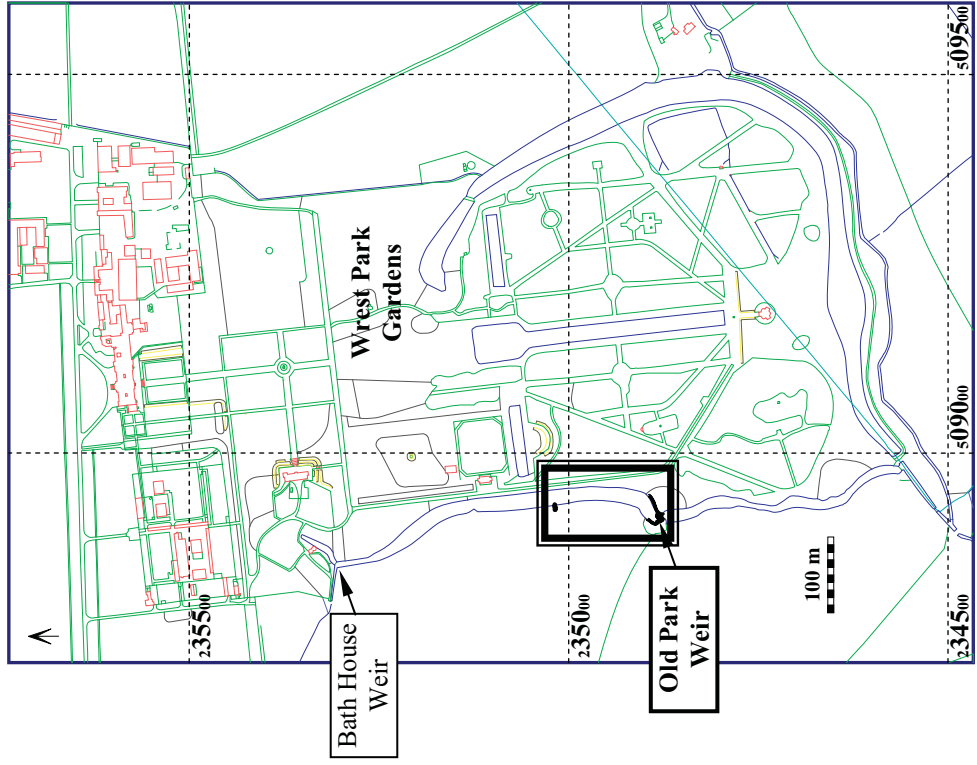
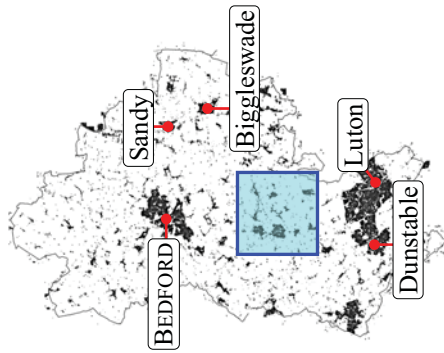
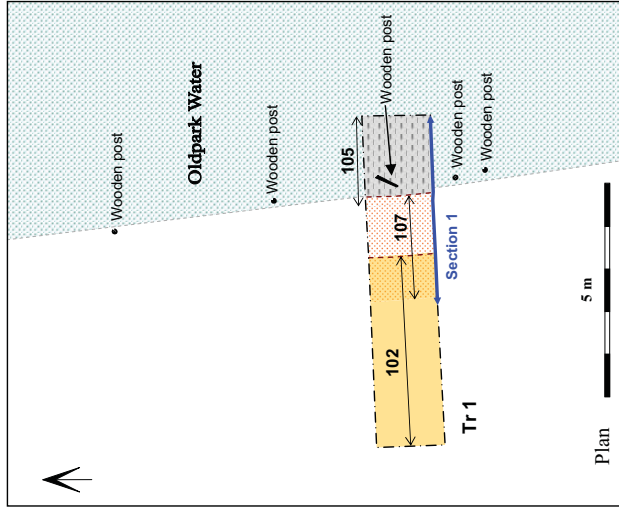
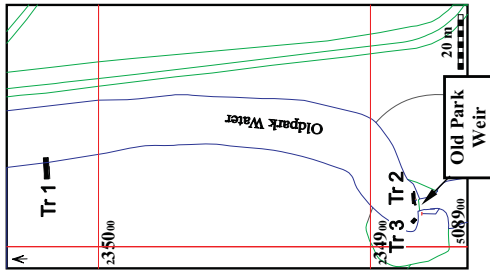


Figure 1: Site location map

Base map reproduced from the Ordnance Survey Land-line Map (2004), with the permission of the Controller of Her Majesty's Stationery Office, by Bedfordshire County Council, County Hall, Bedford. OS Licence No. 100017358(LA). © Crown Copyright.



Trench 1, looking west



Trench 1, looking east. scale 40cm



Interface between layers 107 and 105. scale 40cm



Interface between layers 102 and 107. scale 40cm

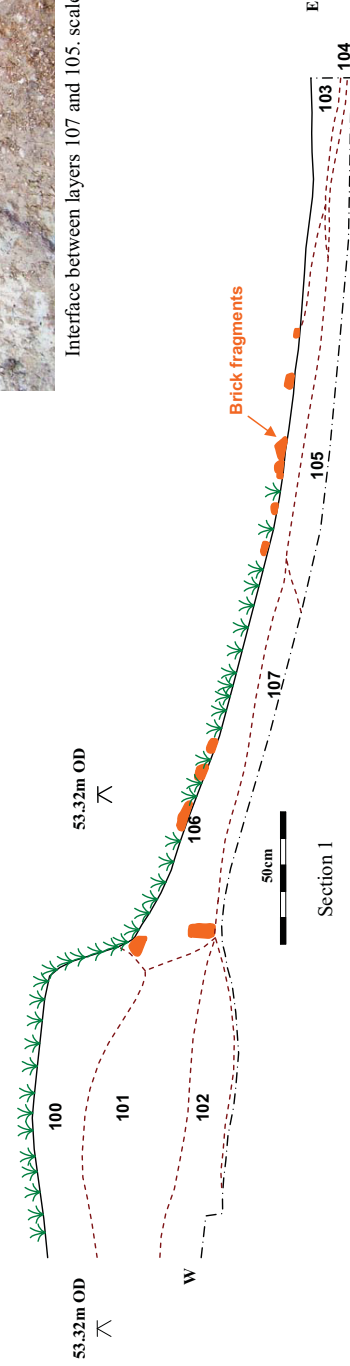
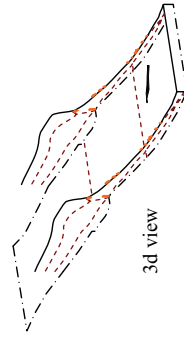
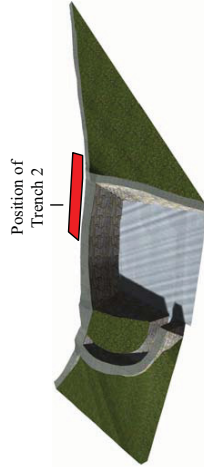


Figure 2: Trench 1

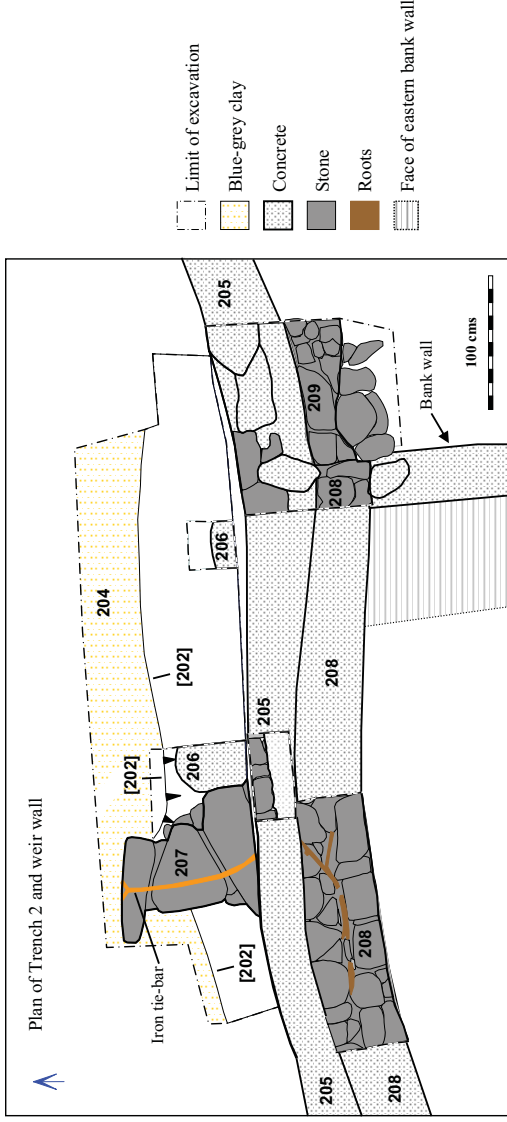
Base map reproduced from the Ordnance Survey Land-line Map (2004), with the permission of the Controller of Her Majesty's Stationery Office, by Bedfordshire County Council, County Hall, Bedford. OS Licence No. 100017338(LA). © Crown Copyright.



Old Park Weir, looking north-east.
Scales 2m in 50cm increments



3d model



Trench 2 and weir retaining wall (205), looking south-east.



Trench 2, looking east.
Scale 40cm



Trench 2, retaining wall (205), looking south.
Scale 40cm



Trench 2, possible buttress (207), looking west.
Scale 40cm

Figure 3: Trench 2

Base map reproduced from the Ordnance Survey Land-line Map (2004), with the permission of the Controller of Her Majesty's Stationary Office; by Bedfordshire County Council, County Hall, Bedford. OS Licence No. 100017358(LA). © Crown Copyright.



Top of weir wall (208) after removal of concrete capping. Looking east. Scale 40cm

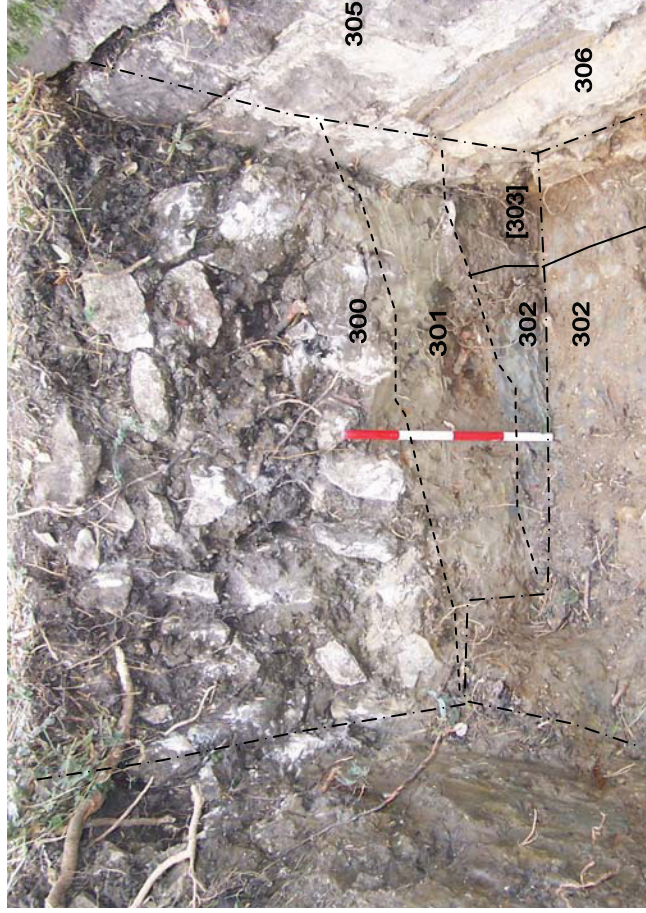
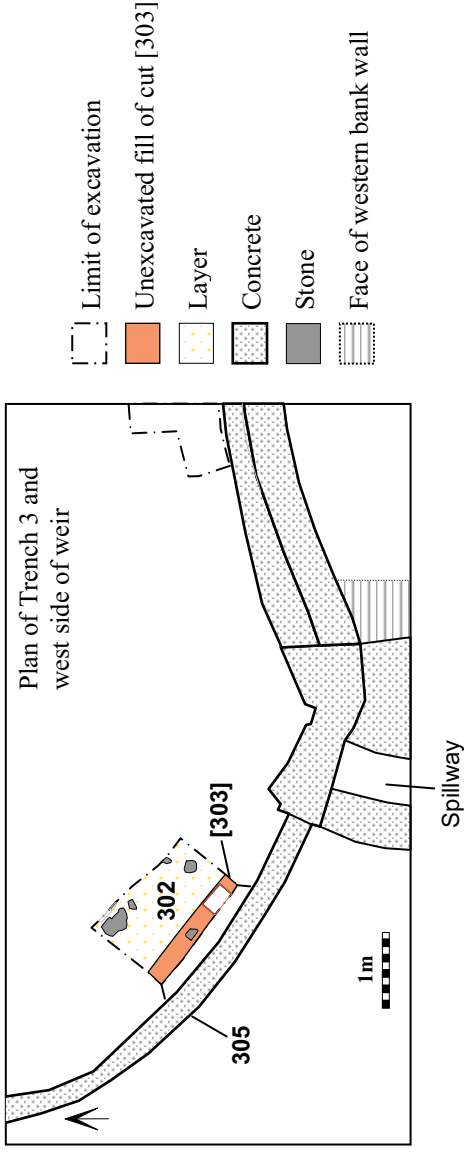
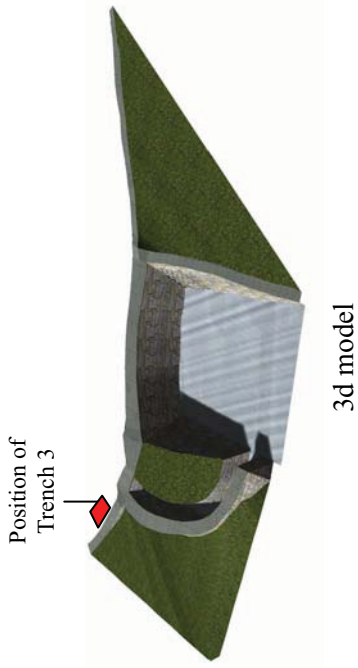


Top of weir wall (208) (top of picture) and 20th century retaining wall (205) (bottom of picture), after removal of sections of the concrete capping. Scale 40cm

Figure 4: Top of weir after removal of sections of the concrete capping



Figure 5: Junction of eastern bank wall, weir wall (208), 20th century retaining wall (205) and earlier retaining wall (209). Scale 40cm



South-east side of Trench 3. Scale 40cm



Trench 3; retaining wall (305), looking south-west. Scale 40cm

Figure 6: Trench 3