

ARCHAEOLOGICAL  
EVALUATION  
AT  
LONGNEY FLOOD DEFENCES,  
LONGNEY, GLOUCESTERSHIRE

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Illustrated by Carolyn Hunt

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Project 2571  
Report 1247



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# **Archaeological evaluation at Longney flood defences, Longney, Gloucestershire**

**Anna Deeks**

## **Part 1 Project summary**

An evaluation was undertaken on behalf of the Environment Agency (The Client) at Longney Flood Defences, Longney, Gloucestershire (NGR ref SO 375841 214413), as the Environment Agency intends to cut out the core of the old defences and this work was considered by the curator to have the potential to affect a site of archaeological interest. The evaluation trenches successfully identified earlier phases of flood defences, comprising well-compacted silt banks and evidence of an associated post hole structure. Artefactual evidence indicated that these earlier banks were of 18<sup>th</sup> century date. The dating of these earlier banks correlates well with the implications of the recent desk based assessment (Miller 2004), which concluded that this area of bank certainly predated the 1780's.

No evidence of flood defences pre-dating the post medieval period was revealed within the evaluation trenches. However, given the substantial build-up of the post-medieval and modern material it would seem quite feasible that any earlier earthworks are too deeply buried to have been observed within the limits of excavation.

## Part 2 Detailed report

### 1. **Background**

#### 1.1 **Reasons for the project**

An archaeological evaluation was undertaken at Longney flood defences, Longney, Gloucestershire (NGR SO 375841 214413; Fig 1), on behalf of the Environment Agency (The Client). The Environment Agency intended to cut out the core of the old defences, and this work was considered by the curator to have the potential to affect a site of archaeological interest.

#### 1.2 **Project parameters**

The project conforms to the *Standard and guidance for archaeological field evaluation* (IFA 1999). The project also conforms to a project proposal (including detailed specification; HEAS 2004).

#### 1.3 **Aims**

The purpose of the evaluation was to investigate a specific length of flood defence, which predated 1780 (Miler 2004), this earthwork, which is approximately 100m in length, is located at the northern end of the proposed flood defence works (Fig 2).

### 2. **Methods**

#### 2.1 **Documentary search**

Prior to fieldwork commencing a comprehensive desk based assessment of the flood defences was completed (Miller 2004). This assessment formed the background research for the evaluation.

#### 2.2 **Fieldwork**

##### 2.2.1 **Fieldwork strategy**

A detailed specification was prepared by the Service (HEAS 2004), and fieldwork was undertaken on the 17<sup>th</sup> May 2004.

A total of two trenches, amounting to just over 106m<sup>2</sup> in area, were excavated over the site area of 1.5ha, representing a sample of 7%. The location of the trenches is indicated in Figure 3. The limits of the archaeological investigations were set by the need to test those deposits due for disturbance by the insertion of a clay core into the centre of the existing bank. This disturbance will impact to one metre below the level of the existing riverside berm, and as such investigations were carried out to this depth. The limit of excavation was also informed by health and safety issues, and any excavation exceeding 1.20 metres below ground surface was stepped accordingly to allow for a safe working area.

Deposits considered not to be significant were removed using a 360° tracked/wheeled excavator, employing a toothless bucket and under archaeological supervision. Clean surfaces were inspected and selected deposits were excavated to retrieve artefactual material and environmental samples, as well as to determine their nature. Deposits were recorded according



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to standard Service practice (CAS 1995). On completion of excavation, trenches were reinstated by replacing the excavated material.

#### 2.2.2 **Structural analysis**

All fieldwork records were checked and cross-referenced. Analysis was effected through a combination of structural, artefactual and ecofactual evidence, allied to the information derived from other sources.

### 2.3 **Artefacts**

#### 2.3.1 **Artefact recovery policy**

All artefacts from the area of salvage recording were retrieved by hand and retained in accordance with the service manual (CAS 1995 as amended).

#### 2.3.2 **Method of analysis**

All hand retrieved finds were examined. A primary record was made of all finds on a Microsoft Access 2000 database. Artefacts were identified, quantified and dated and a *terminus post quem* date produced for each stratified context (see Table 3).

Pottery was examined under x20 magnification and recorded by fabric type and form according to the fabric reference series maintained by the service (Hurst and Rees 1992).

#### 2.3.3 **Artefactual Analysis**

A summary of the artefacts recovered can be seen in Table 1. The assemblage recovered from the evaluation came from four stratified contexts and as unstratified surface finds. The assemblage ranged in date from post-medieval to the modern period with the recovered pottery consisting of six sherds which were identified and grouped by fabric and context (see Table 2).

Other finds included a clay pipe stem, ceramic drain fragments, a glass bottle fragment, a tin can for fruit juice, a brick fragment and possible flint waste flake.

### 2.4 **The methods in retrospect**

The methods adopted allow a high degree of confidence that the aims of the project have been achieved

## 3. **Topographical and archaeological context**

The evaluated length of flood defences is situated along the east bank of the River Severn, in the parish of Longney, c7km south-west of Gloucester (Fig 1). The geology, soils and topography of the wider area reflect its position on the floodplain of a major post-glacial river, and its more recent history of reclamation for agricultural use. In summary, deep alluvial silts deposited by the river are contained by a ridge of Triassic and earlier rocks (capped by fluvio-glacial gravels) that lie c1.2km to the south of the present channel (Allen and Fulford 1990a, 19). The alluvial silts show that a varied wetland environment obtained in the area throughout most of the Holocene period (10,000BC to present), although the present soils and the marked differences in surface levels are largely the result of successive reclamations and improvements beginning in the Roman period (Miller 2004).

The preceding assessment (Miller 2004) concluded that the majority of the flood defences at Longney were of 20<sup>th</sup> century date, but have incorporated several lengths of earlier floodbanks. The length of bank evaluated during the current project represents one of these earlier earthworks, and evidently dates to before 1780. The dramatic difference in levels (1.86m) between the riverside berm and the inland field strongly indicates that the bank has been in place for a considerable length of time.

#### 4. **Results of structural analysis**

The results of the structural analysis are presented in Appendix 1, with Tables 1-3 summarising the artefacts recovered. The trenches and features recorded are shown in Figures 3 and 4.

##### *Trench 1 - Figure 4*

The section of this trench clearly showed successive phases of re-profiling and included modern layers of clay (105, 107, 108) material used to build up the river side of the flood defence, as well as more silty layers (102, 103, 104, 107) which had also been dumped presumably to profile the bank. These layers were abutting a series of earlier banks (109, 110, 111), which were composed of well-compacted silt. The uppermost bank (109) had evidently been truncated on its northern side (riverside) and no evidence of the material, which would have formed against the flood bank, was present. However in association with the second of the earlier banks (110) was a substantial posthole (112, 113), which truncated the northern edge of the bank (river side). The posthole was butted by a clayey silt layer, which had evidently accumulated against the posthole/revetment.

##### *Trench 2 - Figure 4*

The section also showed clear evidence of several phases of construction and use. Modern clay and sandy silt layers (201, 203, 204, 205, 206, 207) were present on both river and inland sides of the bank indicating that substantial reprofiling or reconstruction had taken place. An earlier silt bank was also revealed (208), although unlike those observed in Trench 1 it was not possible to discern more than one phase. The profile of the bank did not show any signs of truncation.

#### 5. **Artefactual discussion**

The discussion below is a summary of the finds and associated location or contexts by period. The importance of individual finds has been commented upon as necessary.

##### 5.1 **Prehistoric**

A single residual flint waste flake was recovered as a surface find from unstratified context 100.

##### 5.2 **Post-medieval**

A single sherd of post-medieval pottery was recovered from context 110. While undiagnostic of form it was identified as post-medieval orange ware (fabric 90) dating to the 18<sup>th</sup> century. While this sherd suggests a post-medieval *terminus post quem* date for context 110, it exhibits a high degree of abrasion suggesting a period of surface exposure prior to deposition. Therefore it is possible that this sherd is residual and may represent a latter date for this context.

### 5.3 Modern

The remaining five sherds were all identified as modern fabrics. These consisted of four sherds of miscellaneous late stoneware (fabric 81.4) each from a single context (contexts 108, 109, 208 and unstratified context 100). The remaining sherd was a fragment of modern stone china (fabric 85; context 108) with the remains of a 'Willow Ware' pattern.

Other modern find consisted of field drain fragments (contexts 108 and 208), a shard of glass from a bottle (context 208), a clay pipe bowl (unstratified context 100), a fruit juice can (unstratified context 100) and a brick fragment (unstratified context 100). All were datable to the modern period of 18<sup>th</sup>–19<sup>th</sup> century.

From the above analysis the following contexts have had a modern *terminus post quem* attributed: contexts 108, 109, 208 and unstratified context 100.

### 5.4 Significance

With only one sherd of, potentially residual, post-medieval pottery in the assemblage and the remaining assemblage of early modern date, suggests that the site has been modified or interfered with during the modern period.

Context	Material	Type	Total	Weight (g).
100	Ceramic building material	Brick	1	14
100	Clay pipe	Bowl	1	18
100	Pottery	Modern	1	48
100	Flint	Waste flake	1	2
100	Tin	Drink can	1	132
108	Ceramic building material	Drain	6	130
108	Pottery	Modern	2	6
109	Pottery	Modern	1	50
110	Pottery	Post-medieval	1	7
208	Ceramic building material	Drain	1	9
208	Glass	Bottle sherd	1	4
208	Pot	Modern	1	20

Table 1: *Quantification of the assemblage by context.*

Context	Fabric	Fabric Name	Total	Weight (g)
100	81.4	Miscellaneous late Stonewares	1	48
108	81.4	Miscellaneous late Stonewares	1	2
108	85	Modern stone china	1	4
109	81.4	Miscellaneous late Stonewares	1	50
110	90	Post-medieval orange ware	1	7
208	81.4	Miscellaneous late Stonewares	1	20

Table 2: *Quantification of assemblage fabrics by context.*

Context	<i>Terminus post quem</i>
100	Modern
108	Modern
109	Modern
110	Post-medieval
208	Modern

Table 3: *Contexts and their assigned terminus post quem dates*

## 6. **Structural discussion**

### 6.1 **Roman**

The evaluation trenches did not identify any archaeological features or finds of this date. However as the safe working limit of excavation precluded the examination of the entire depth and width of the bank it remains possible that a Roman bank may be buried deep below the evaluated deposits.

### 6.2 **Medieval**

The evaluation did not identify any archaeological features or finds of this date. As noted above, given the depth of the post-medieval and modern deposits it is quite likely that any such remains are deeply buried and were below the limit of excavation.

### 6.3 **Post-medieval**

Former banks were observed in both evaluation trenches, in both cases the banks were butted by several layers of modern material on the river side of the defence, and in one case (205) material had also been dumped on the inland side of the bank. Evidence of ancillary structures associated with the earlier bank (110) were observed in Trench 1, comprising a substantial post hole (113, 114) which presumably formed part of a revetment. A number of sherds dating to 18<sup>th</sup> century were retrieved from the former bank from Trench 1; however as the bank was composed of what appears to be redeposited river silt the dates provided by these artefacts should not be viewed as absolute.

### 6.4 **Modern**

The majority of the layers observed in both Trenches 1 and 2 have been dated to the modern period on the basis of artefactual material. This material relates to substantial reconstruction work carried out in the 1950s and 1960s (T. Thorne *pers comm.*).

## 7. **Significance**

The evaluation trenches successfully identified earlier phases of flood defences, comprising well-compacted silt banks. Artefactual evidence indicates that these earlier banks are of 18<sup>th</sup> century date, however a certain level of caution should be exercised in light of the provenance of the silt, which is likely to be material dredged from the river. Ancillary structures, in the form of a substantial posthole, were also observed and provide further information on the nature of the earlier banks. The dating of these earlier banks correlates well with the implications of the recent desk based assessment (Miller 2004), which concluded that a defensive bank at this location was in place by the 1780's. The fieldwork results suggest that the 18<sup>th</sup> century flood defence was better preserved in the vicinity of Trench 1 and may have been completely rebuilt further west (Trench 2) at a later date.

No evidence of flood defences pre-dating the post-medieval period was revealed within the evaluation trenches. However given the substantial build-up of the post-medieval and modern material it would seem quite feasible that any earlier earthworks are too deeply buried to have been observed within the limits of excavation.

## 8. **Publication summary**

The Service has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, the Service intends to use this summary as the

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basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

*An evaluation was undertaken on behalf of the Environment Agency (The Client) at Longney Flood Defences, Longney, Gloucestershire (NGR ref SO 375841 214413), as the Environment Agency intends to cut out the core of the old defences and this work was considered by the curator to have the potential to affect a site of archaeological interest. The evaluation trenches successfully identified earlier phases of flood defences, comprising well-compacted silt banks and evidence of an associated post hole structure. Artefactual evidence indicated that these earlier banks were of 18<sup>th</sup> century date. The dating of these earlier banks correlates well with the implications of the recent desk based assessment (Miller 2004), which concluded that this area of bank certainly predated the 1780's.*

*No evidence of flood defences pre-dating the post medieval period was revealed within the evaluation trenches. However, given the substantial build-up of the post-medieval and modern material it would seem quite feasible that any earlier earthworks are too deeply buried to have been observed within the limits of excavation.*

## 9. **The archive**

The archive consists of:

1	Fieldwork progress records AS2
2	Trench record sheets AS41
1	Photographic records AS3
1	Sample records AS17
22	Abbreviated context records AS40
2	Scale drawings
1	Box of finds

The project archive is intended to be placed at:

Cheltenham Art Gallery and Museum  
Clarence Street  
Cheltenham  
Gloucestershire  
GL50 3JT

## 10. **Acknowledgements**

The Service would like to thank the following for their kind assistance in the successful conclusion of this project, Giles Matthews and Tim Thorne (Environment Agency) and Charles Parry (Archaeological curator).

## 11. **Personnel**

The fieldwork and report preparation was led by Anna Deeks. The project manager responsible for the quality of the project was Derek Hurst. Fieldwork was undertaken by Anna Deeks and Alvaro Mora-Ottomano, with finds analysis by Angus Crawford and illustration by Carolyn Hunt.

12. **Bibliography**

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13. **Abbreviations**

SMR Sites and Monuments Record.

## **Appendix 1 Trench descriptions**

**Trench 1**

Maximum dimensions: Length: 14.40m Width: 4.20m Depth: 0.60-1.90m

Orientation: North-South

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
101	Topsoil	Compact dark brown silty clay with frequent root action and worm sorting. Contains occasional medium flecks of charcoal.	0.00-0.08m
102	Bank layer - dumped consolidation layer	Very compact mid grey brown silt	0.08-0.22m
103	Bank layer - dumped consolidation layer	Compact mid yellow/brown clayey silt with small sub-rounded stones (20%)	0.22-0.28m
104	Bank layer - dumped consolidation layer	Compact dark grey/brown clayey silt	0.36-0.50m
105	Bank layer - dumped consolidation layer	Compact mid greyish blue clay with occasional medium sub-angular stones (5%)	0.28-0.60m
106	Bank layer - dumped consolidation layer	Dark black silt	0.60-0.66m
107	Bank layer - dumped consolidation layer	Compact mid red/brown sandy clay	0.80-0.96m
108	Bank layer - dumped consolidation layer	Compact mid grey/blue clay.	0.96-1.38m
109	Former bank	Soft mid grey/brown silt, redeposited material dredged from the river.	0.68-1.14m
110	Former bank	Firm light brown silt, redeposited material dredged from the river.	1.14-1.90m
111	Former bank	Soft light brown silt, redeposited material dredged from the river.	1.20-1.90m
112	Fill	Firm grey/black clayey silt	1.42-1.84m
113	Post hole cut	Vertically sided posthole cut, only observed in section leaning northwards (towards the river). Associated with bank (110) and butted by alluvial material (114)	1.42-1.84m
114	Alluvial material	Compact grey/brown clayey silt	1.20-1.54m



**Trench 2**

Maximum dimensions: Length: 11.40m Width: 4.00m Depth: 0.10-1.60m

Orientation: North-South

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
201	Bank layer - dumped consolidation layer	Compact mid red/brown silty coarse sand	0.00-0.70m
202	Top soil	Compact dark brown silty clay with frequent root action and worm sorting. Contains occasional medium flecks of charcoal.	0.00-0.10m
203	Bank layer - dumped consolidation layer	Compact mid red/brown sandy silt with rare charcoal flecks (5%)	0.10-0.34m
204	Bank layer - dumped consolidation layer	Compact mid blue/grey clay with unsorted medium sub-angular stones (5-8%). Very similar to 205	0.34-0.66m
205	Bank layer - dumped consolidation layer	Compact mid blue/grey clay with unsorted medium sub-angular stones (5-8%).	0.60-0.70m
206	Bank layer - dumped consolidation layer	Compact dark red/brown sandy silt with rare charcoal flecks (5%)	0.0.68-0.84m
207	Bank layer - dumped consolidation layer	Compact light grey/green clay	0.80-1.12m
208	Former bank	Compact dark grey/brown silt with rare small unsorted sub-angular stones (5%) and charcoal flecks (5%)	0.12-1.60m

<b>Report Name and Title</b>	Archaeological Evaluation at Longney Flood Defences, Longney, Gloucestershire	
<b>Contractors Name and Address</b>	The Environment Agency Riversmeet House, Newtown industrial Estate Tewkesbury GL20 8JG	
<b>Site Name</b>	Longney flood defences, Longney, Gloucestershire	
<b>Grid Reference(8 fig)</b> <b>SO 375841 214413</b>	Planning Application Number	N/A
<b>SMR number/s of site</b>		
<b>Date of Field Work</b>	17 <sup>th</sup> May 2004	
<b>Date of Report</b>	8 <sup>th</sup> June 2004	
	<b>NUMBER AND TYPE OF FINDS</b>	
Pottery	Period	Number of sherds
	Post medieval	1
	Modern	5
Other:	Period	Quantity
Ceramic building material	Post medieval	3
Flint	Prehistoric	1
Clay pipe	Post medieval	1
Glass	Modern	1
Tin	Modern	1
	<b>NUMBER AND TYPE OF SAMPLES COLLECTED</b>	
Sieving for charred plant remains	No of Features sampled	0
	No of buckets	0
C14/scientific dates	No and Type	0
	Result	N/A
Pollen	No of Columns/spot samples	0
	Name of pollen specialist	0

Bone	Number of buckets sieved for bone 0 <i>Quantity Recovered</i> <i>Period</i>
Insect	No of Columns/spot samples 0 Name of pollen specialist 0
Other	Type and specialist N/A
Summary of the report	<p>An evaluation was undertaken on behalf of the Environment Agency (The Client) at Longney Flood Defences, Longney, Gloucestershire (NGR ref SO 375841 214413), as the Environment Agency intends to cut out the core of the old defences and this work was considered by the curator to have the potential to affect a site of archaeological interest. The evaluation trenches successfully identified earlier phases of flood defences, comprising well-compacted silt banks and evidence of an associated post hole structure. Artefactual evidence indicated that these earlier banks were of 18<sup>th</sup> century date. The dating of these earlier banks correlates well with the implications of the recent desk based assessment (Miller 2004), which concluded that this area of bank certainly predated the 1780's.</p> <p>No evidence of flood defences pre-dating the post medieval period was revealed within the evaluation trenches. However, given the substantial build-up of the post-medieval and modern material it would seem quite feasible that any earlier earthworks are too deeply buried to have been observed within the limits of excavation.</p>