

ARCHAEOLOGICAL OBSERVATION

**Farmoor Reservoir
Cumnor Road
Oxfordshire
OX2 9NS**

NGR: SP 443853 206025; SP 443853 206104

JOB N^o: BA1113FRO

Project Title: Farmoor Reservoir – Construction of New Reed-bed



Head Office: Chapel Walk Burgess Street Leominster Herefordshire HR6 8DE
Tel: 01568 610101

Winchester Office: Unit 25 Basepoint Business Centre Winnall Valley Road Winchester Hampshire SO23 0LD
Tel: 01962 832720

Email: neil@borderarchaeology.com Web: borderarchaeology.com

July 2011



Contents

1.	Non-Technical Summary.....	3
2.	Introduction.....	4
3.	Site Description.....	5
4.	Historical & Archaeological Background.....	5
5.	Methodology.....	8
6.	Results.....	10
7.	Discussion of Results.....	12
8.	Copyright.....	12
9.	References.....	12
10.	Appendix 1	14
11.	Appendix 2: Matrix	15
12.	Appendix 3: OASIS Data collection form.....	16

Table of Figures

<i>Fig 1: Location of reed-bed trench (Trench 1).....</i>	<i>4</i>
<i>Fig 2: South-facing section of Trench 1</i>	<i>12</i>
<i>Fig 3: Map showing locations of Archaeological sites in the Farmoor area, the red rectangle represents the reed-bed trench (adapted from Lambrick & Robinson, 1979, p4, Fig 1).</i>	<i>14</i>
<i>Fig 4: Post-excavation plan of Reed-bed Trench</i>	<i>20</i>
<i>Plate 1: Topsoil strip of middle section of Trench 1, facing west, showing alluvial clay (102)</i>	<i>10</i>
<i>Plate 2: Topsoil strip of the north end of Trench 1, facing north, showing alluvial clay (102).</i>	<i>11</i>
<i>Plate 3: South facing section of Trench 1 showing alluvial deposits (102) and (103), and natural sands and gravel (104).....</i>	<i>11</i>

Report specification:

Archaeological Observation: Sarah Ritchie MA AifA
Report compilation: Sarah Ritchie MA AifA
Report artwork: Sarah Ritchie MA AifA
Report editing: George Children MA MifA
Approval & Final: Neil Shurety Dip. M. GM.Inst.M



1. Non-Technical Summary

This report presents the results of a programme of archaeological observation carried out by Border Archaeology at Farmoor Reservoir Cumnor Road Oxfordshire.

The aim of the programme of archaeological work was to ensure the preservation by record of any surviving archaeological finds, features or deposits revealed during the course of groundworks, namely, the excavation of a new reed-bed, and to confirm that no impact on the archaeological resource occurred without the implementation of this programme of archaeological work.

These excavations revealed evidence of modern topsoil overlying a subsoil containing post-medieval pottery. This overlay alluvial deposits, probably laid down during seasonal flooding by the Thames, which, in turn, overlay natural sands and gravels. Natural was observed in this area at 61.51m OD. No significant archaeological deposits were observed.

2. Introduction

Border Archaeology was instructed by Claire Hallybone and Matt Prior on behalf of Thames Water, to undertake an archaeological observation of groundworks relating to the construction of a new reed-bed at the Farmoor Reservoir Cumnor Road Oxfordshire between NGR 443853 206025 and 443853 206104 (*Fig 1*) in compliance with the Thames Water Code of Conduct.

The site is bounded to the north and south by fields, the east by Farmoor Reservoir, and to the west by the River Thames. The ground level on the site is 61.51m OD. The site code is FRO11.

Copies of this report will be remitted to Thames Water, Hugh Coddington Esq, and the Oxfordshire Historic Environment Record.

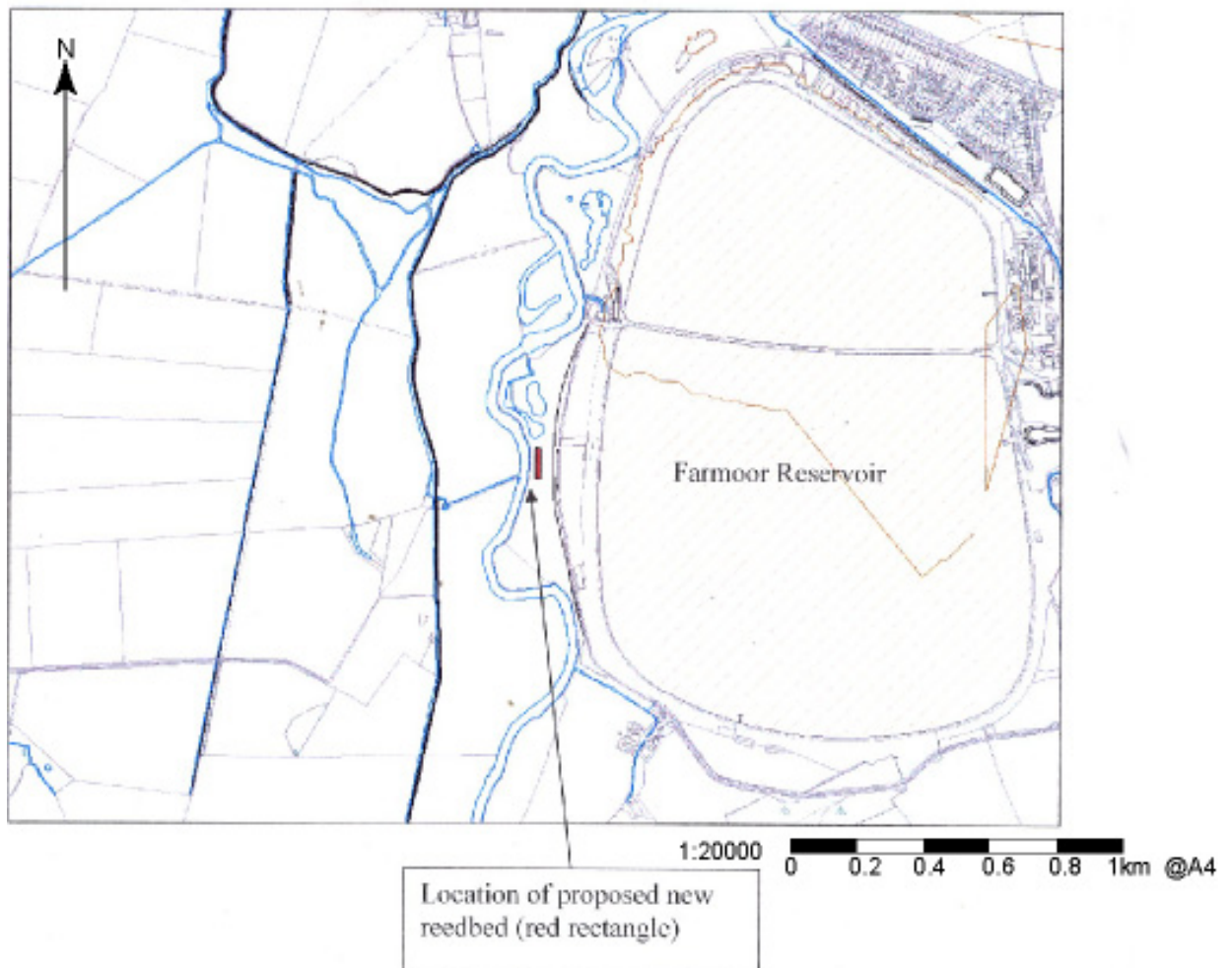


Fig 1: Location of reed-bed trench (Trench 1)



3. Site Description

The site lies on the floodplain to the east of the River Thames about 10km upstream from Oxford (*Fig 1*). Prior to construction of the reservoir, the floodplain at Farmoor was enclosed by the present course of the river and a large late Devensian buried river channel. A gravel terrace at the southwest corner of the floodplain forms a strip of land running 1.5km southwards by the river.

The soils in this area are classified as pelo-calcareous alluvial gleys of the THAMES series (814a), composed of stoneless, mainly calcareous clayey soils affected by groundwater and prone to flooding. The underlying geology consists of river alluvium (SSEW 1983).

There are three Nature Areas on the reservoir site, developed by Thames Water and their partners. Pinkhill Meadow was opened in 1992, Shrike Meadow in 2000 and Buckthorne Meadow opened in 2003. These areas are characterised by habitats such as willow scrub, grazing meadow, wet meadow, wader scrape, reed pools and ponds.

4. Historical & Archaeological Background

Farmoor Reservoir was constructed in two phases during 1962-5 and 1974-6 and is situated within an area of known prehistoric activity, as revealed by excavations carried out on the gravel terraces to the west of the Thames at Stanton Harcourt, Eynsham and Cassington. Assessments of land-use in this area during the later prehistoric and Roman periods suggest that the gravels were probably cleared at a relatively early date in view of the extensive Neolithic and Bronze Age activity identified around Stanton Harcourt (Benson & Miles 1974, 46-50) and that arable agriculture may have been practised on the lighter and more easily worked alluvium, rather than the heavier Oxford Clay.

An intensive programme of rescue excavation and palaeoenvironmental analysis was carried out in advance of reservoir construction in 1974-5. These investigations revealed a substantial body of evidence relating to changing patterns of settlement and land-use activity on the floodplain and the first gravel terrace, located just to the north of Lower Whitley, from the early Iron Age through to the later Romano-British period. The results of this work are viewed as having some considerable significance for Iron Age and Roman archaeology generally, contributing to the study of river floodplain development and providing important new evidence for the environmental and economic aspects of Iron Age and Roman settlement regionally (Lambrick & Robinson 1979, 140)

The earliest evidence obtained during the course of the excavations, however, comprised an assemblage of early prehistoric animal bone recovered from fluvial deposits in the gravels. This assemblage included mammoth teeth and fragmentary remains of ox, bison and rhinoceros, which appear to have been deposited during the accumulation of the gravel sheet.



Located approximately 500-700m east and southeast of the site of the proposed reed-bed, the excavations also revealed a series of Iron Age deposits spanning the early and middle Iron Age and extending into the Romano-British period, identified initially from aerial photography. Iron Age settlement activity (PRN D8341) was located at NGR SP 444 055 while at NGR SP 444 056 a Romano-British farmstead (PRN D8342) was investigated, which the Oxfordshire HER details as representing 1st-2nd century occupation comprising a small circular hut or enclosure with a wide entrance facing northeast, and a pit containing a double, possibly ritual horse burial. These features were superseded by several pits, a 4th century stone-lined well and substantial occupation layers. Attached to the settlement was a drove-way and field system containing further pits and wells and two corn-driers.

The earliest occupation evidence dated 6-500 BC was comparatively slight, comprising storage or rubbish pits of early Iron Age date situated above the level of winter flooding on the relatively dry ground of the gravel terrace. The presence of daub and slag indicated, respectively, the likelihood of construction activity and small-scale ironworking.

Occupation resumed following a cessation of early Iron Age activity and an ensuing break in the archaeological record. The middle Iron Age settlement was markedly different in character, comprising three small ditched enclosures for circular, probably turf-built houses associated with yards or stock pens on the open floodplain. Other small, probable stock enclosures were revealed on the edge of the gravel terrace, possibly representing a separate phase of settlement, one of which incorporated a palisaded yard and semicircular post-built structure, possibly a workshop. A marked change was evident also in the fabric and style of the pottery and Lambrick & Robinson equate this development to the change from Iron Age A to B or from La Tène I to La Tène II.

At that time, the area appears to have been open pasture supporting an exclusively pastoral economy. The fertile grasslands appear to have been periodically enriched by seasonal inundation and occupied for only part of the year during the drier spring/summer months, suggesting a pattern of seasonal transhumance. An absence of common perennial plants favouring disturbed ground indicates the transitory nature of these farmsteads, with each remaining in use for a period of perhaps only 3-5 years.

These conclusions have subsequently been supplemented by the results of more recent work carried out in 1990 at NGR SP 440 067, located to the north of the proposed reed-bed site, where further evidence of middle Iron Age settlement activity was revealed. A watching brief undertaken during the course of conservation and landscaping work at Pinkhill Meadows revealed an east-west linear ditch (PRN 16060) containing six late prehistoric sherds, while further to the south was a burnt area and to the east the investigation recovered a fragment of hammer-stone.

Lambrick & Robinson (1979, 135) suggest that 'the purpose of the farmsteads was to maximize the value of the floodplain grassland, and the specialization which is clearly apparent in them is evidence for a more complicated economy than one based on individual mixed farming'. After the middle Iron Age, there appears to have been a significant increase in the rate of alluvial deposition on the floodplain and evidence for occupation is lacking, although it is possible that the grasslands continued to be exploited.

A significant change in land-use and farming practice coupled with a greater degree of permanence and a clearer expression of land rights occurred during the Romano-British



period. Habitation of the floodplain ceased, while a system of small, probably hedged fields or paddocks was established on the gravel terrace with access provided by a drove-way. A farmyard appears to have been established by the late 4th century, probably associated with a building, although direct evidence for this is lacking. Gardens with box hedges also appear to have been laid out at this time, as suggested by the presence of box fruits and leaves. Grain was evidently brought to the site for processing, with evidence for the de-husking and milling of spelt wheat recovered from a corn-drier and pits. A pastoral economy seems likely to have continued and Lambrick & Robinson suggest the paddocks were probably used for intensive stock management, while the floodplain was almost certainly used for hay as well as for grazing, as indicated by the discovery of the broken blade of a large hay scythe near the drove-way.

Based on the character of the plant assemblage recovered from the site, which varies according to the relative proportions of weed seeds present at different times, Robinson (1978, 42) concludes that the Iron Age settlements might have been temporary whilst those of Roman date were more likely to have been of a more permanent nature. This is further substantiated by the location of the Roman settlements, which were confined to the higher ground, the first gravel terrace, with the grassland divided up into small fields or paddocks by ditches and perhaps hedges and laid out alongside drove-ways. These field systems, however, do not extend on to the floodplain, which was still probably open grassland. Despite these significant developments, the over-riding impression is one of continuity. Robinson (1978, 42) concludes that 'whilst man's effects on the grassland in the Roman period suggest land ownership rather than vague rights, much of the old way of life may have remained. No evidence of substantial Roman buildings on the first gravel terrace has been discovered. Perhaps they were still living in turf structures as is possible for the Iron Age. Even transhumance may not have completely ceased.'

During the early medieval period, Farmoor fell within the district of *Hornemere*, which occupied an area enclosed by the northern loop of the Thames, the river at this point forming the northern extent of Wessex and a natural frontier with Mercia. By the 7th century, the Saxon *Horningas* were becoming subject to Christian influence under Birinus (600-49), the first bishop of Dorchester, who actively established churches throughout Wessex during his ministry.

In the 10th century, the river meadows at Farmoor came into the possession of the Benedictine Abbey at Abingdon, as attested by the Domesday entry for *Hornimere* Hundred, which refers to Cumnor and associated outlying areas. The entry states: 'The abbey of Abbdone holds Comenore. It has belonged to the abbey TRE and since. In the time of King Edward the Confessor it was assessed at 50 hides. There is land for 50 ploughs but now assessed at 30 hides. On the demense are 9 ploughs and there are 60 villeins and 69 bordars with 26 ploughs. There are 4 serfs and 2 mills worth 50s. and from the fisheries 40s; and there are 200 acres of meadow. There is a church. TRE it was worth £30, and afterwards, as now, £50.'

The Roman field system was converted to open arable land, although the floodplain remained a common meadow for the village of Cumnor on which manorial tenants held rights until 1814, when the then Earl of Abingdon, whose family obtained the lordship in 1682, enclosed the commons by Act of Parliament. The open fields and common meadows were subsequently divided up and leased to farmers; several surviving farmsteads, including Lower Whitley Farm, situated at the southwest corner of the reservoir, are able to trace



their origins back some 300 years to this period of reorganisation. The quality of the land remained relatively low, however, due largely to poor drainage, as attested by the results of a survey carried out on behalf of the 2nd Earl of Abingdon in 1726, which stated that 'there is a large Quantity of Common Ground upon this Mannor, commonly called Cumner Mead . . . But the wett Ditches growing full of weeds as other stops, much lessens the real value of the feed, for the water lying upon the land in Winter impoverish it much and the cattle straying out of the Common is attended with a constant expense.'

Many of the farms were sold into private ownership in 1920 and some of the land was used for gravel extraction after the Second World War. The first of the reservoirs at Farmoor supplied by water from the Thames opened in 1967 and in 1976 Farmoor 2 was completed. In 1988, a 40km trunk main was built from Farmoor to Swindon to supplement the supply at peak times. As part of the ongoing development of ancillary works, construction of an advanced water treatment works was completed in 1995.

5. Methodology

5.1 Summary Description of Works

This programme of archaeological observation was carried out in accordance with practices established by the Institute for Archaeologists in *Standard and Guidance for an archaeological watching brief* (2008). Border Archaeology adheres to the IfA *Code of conduct (2010)* and the revised *Code of approved practice for the regulation of contractual arrangements in field archaeology* (2008) and is fully cognisant of the English Heritage *MORPHE* methodology and the provisions of *Planning Policy Statement 5: Planning for the Historic Environment*

The reed-bed trench was excavated between the 20th June and the 1st July 2011, and was subject to archaeological observation, the aim being to identify, record, and, where appropriate, further investigate any surviving deposits, features or structures of archaeological significance.

The groundworks monitored by archaeological observation entailed excavation of a single reed-bed trench measuring 142m × 16m × 2.25m by machine in a controlled manner using a toothless bucket. Spoil and removed material were examined for artefacts.

Full written, graphic and photographic records were made in accordance with Border Archaeology's *Field Recording Manual* (2008). Levels were established in relation to a temporary benchmark (TBM) traversed-in from an OS benchmark on a footbridge to the north of the site.

Plans and sections were produced on gridded, archivally stable polyester film at scales of 1:100, 1:50, 1:20 or 1:10, as appropriate. All site drawings are numbered and listed in a drawing register, these numbers being cross-referenced to written site records.

A photographic record was compiled using a high-resolution 12 MPX digital camera. Each photograph, other than general shots of work in progress, contains an appropriate scale and



records are indexed and cross-referenced to the written record. Details concerning subject and direction of view are maintained in a photographic register, indexed by frame number.

The progress of the evaluation was recorded & assessed by the Company's General Manager George Children MA MIFA using the Company's ISO 9001 procedures.

The site record comprises one Archaeological Observation Recording Sheet, one section drawing at 1:50, one top plan at 1:100, five context sheets, and 27 photographs.

The site records can be found under the site code FRO11 and will be deposited with the Oxfordshire Museums Service.

5.2 *Recovery, processing and curation of artefactual data*

All associated artefacts recovered were retained, cleaned, labelled and stored according to *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (IfA 2008) and *First Aid for Finds* (Watkinson & Neal 2001).

All artefacts were bagged and labelled with the site code and context number before being removed off-site and assemblages have been examined according to typological or chronological criteria and conservation needs identified. The ceramic evidence has been identified and assessed in relation to existing national and regional research frameworks for Roman, Saxon and medieval pottery.

Conservation, if required, will be undertaken by an approved conservator on advice provided by a suitable specialist and in accordance with United Kingdom Institute for Conservation (now part of ICON, the Institute of Conservation) guidelines.

5.3 *Environmental Strategy*

No deposits considered suitable for environmental sampling were identified during the course of the fieldwork.

6. Results

Reed-bed (Trench 1)	
Location	Between 43763 06590 & 43741 06447
Dimensions	16m × 142m × 2.25m
Modern ground level	61.59m OD
Depth of archaeological deposits seen	N/A
Level of base of trench	59.40m OD
Natural observed	61.11m OD

The reed-bed trench (Trench 1) was located in a field bounded to the east by Farmoor Reservoir and to the west by the River Thames, and located to the north at NGR: 43763 06590 and to the south at NGR: 43741 06447. The ground level in this area measured 61.59m OD. The trench consisted of 0.25m of loose dark brown silty topsoil (100), overlying 0.2m of firm light brownish-yellow silty clay subsoil which contained very infrequent fragments of pottery and ceramic building material (CBM) (101).



Plate 1: Topsoil strip of middle section of Trench 1, facing west, showing alluvial clay (102)

Beneath this, at 61.11m OD, lay a metre of firm light yellowish-brown clay (102). (102) was very clean, with no inclusions. The trench being located within the floodplain of the Thames River, this deposit has been interpreted as alluvial deposition from numerous episodes of



flooding. (103) consisted of 0.46m of light grey clay, again interpreted as alluvial flood deposition. This overlay the natural terrace sands and gravels (104) and excavation ceased at 2.25m (*Plates 1, 2 & 3*). No significant archaeological deposits or features were observed.



Plate 2: Topsoil strip of the north end of Trench 1, facing north, showing alluvial clay (102)



Plate 3: South facing section of Trench 1 showing alluvial deposits (102) and (103), and natural sands and gravel (104)

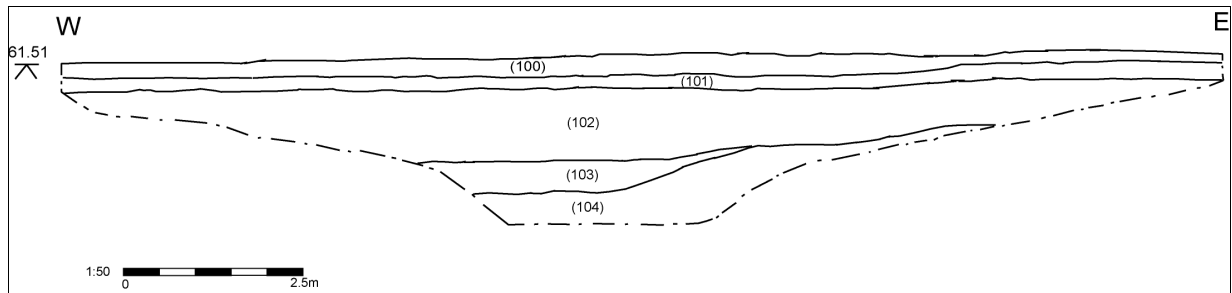


Fig 2: South-facing section of Trench 1

7. Discussion of Results

The excavation of the reed-bed at Farmoor Reservoir, Oxfordshire, revealed topsoil overlying natural alluvial flood deposits over natural gravel and sands and yielded little in the way of archaeological finds and no archaeological features. Residual pottery and CBM were collected from the subsoil (101), all of which appear to be of an early post-medieval date.

The Iron Age and Roman features revealed during construction work in the 1960s and 1970s all lie southeast of the current phase of groundworks (Lambrick & Robinson 1979, 4; Appendix 1), suggesting that this early settlement activity did not extend sufficiently far to the northwest to be affected by the current phase of engineering work. However, it is possible that there may be archaeological survival further south, between the reed-bed trench and the settlements previously recorded.

8. Copyright

Border Archaeology shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it hereby provides a licence to the client and the Council for the use of the report by the client and the Council in all matters directly relating to the project as described in the Project Specification to use the documentation for their statutory functions and to provide copies of it to third parties as an incidental to such functions.

9. References

Benson, D. & Miles, D., 1974, *The Upper Thames Valley, an archaeological survey of the river gravels*, Oxford Archaeology Unit Survey No. 2

Border Archaeology, 2008, *Field Recording Manual*



Brown, D.H., 2007, *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation*

DCLG, 2010, *Planning Policy Statement 5: Planning for the Historic Environment*

English Heritage, 2006, *Management of Research Projects in the Historic Environment (MORPHE) Project Management Methodology*

IfA, 2008, *Standard and guidance for the collection, documentation, conservation and research of archaeological materials*

IfA, 2008, *Standard and guidance for an archaeological watching brief*

IfA, 2008, *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*

IfA, 2008, *Draft Standard and Guidance for the creation, preparation, transfer and deposition of archaeological archives*

IfA, 2010, *Code of Conduct*

Lambrick, G.H. & Robinson, M., 1979, *Iron Age and Roman Riverside Settlements at Farmoor, Oxfordshire*, CBA Research Report No. **32**

Oxfordshire Historic Environment Record - Farmoor

Robinson, M.A., 1978, 'A comparison between the effects of man on the environment of the first gravel terrace and floodplain of the Upper Thames Valley during the Iron Age and Roman periods', in S. Limbrey & J.G. Evans (Eds.) *The Effect of Man on the Landscape: the lowland zone*, CBA Research Report No. **21**

SSEW, 1983, *Soil Map of England and Wales Scale 1:250,000*, Silsoe

Walker, K., 1990, *Guidelines for the preparation of excavation archives for long-term storage*, UKIC

Watkinson, D. & Neal, V., 2001, *First Aid for Finds*, London

10. Appendix 1

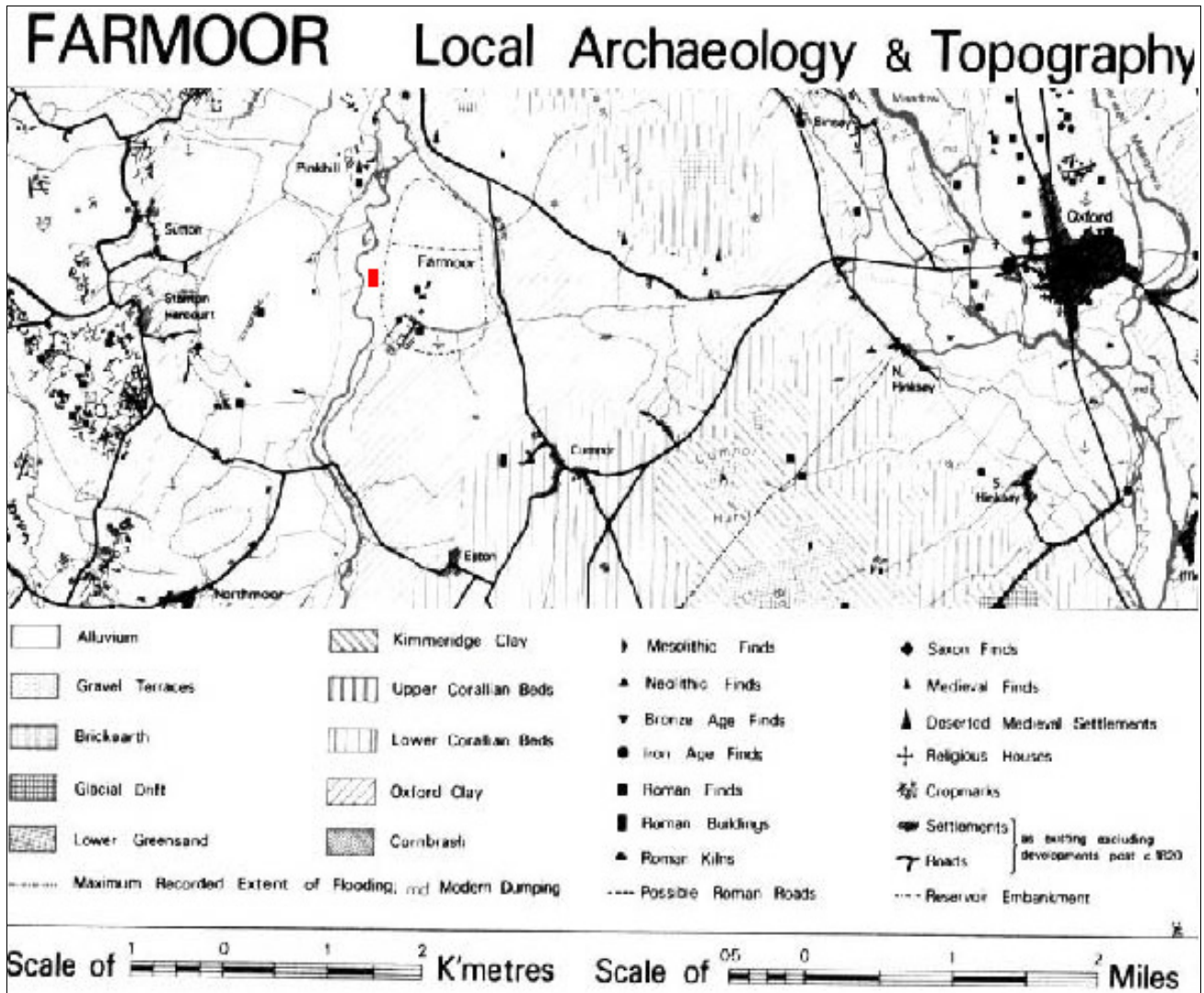
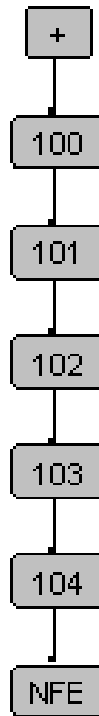


Fig 3: Map showing locations of Archaeological sites in the Farmoor area, the red rectangle represents the reed-bed trench (adapted from Lambrick & Robinson, 1979, p4, Fig 1)



11. Appendix 2: Matrix





12. Appendix 3: OASIS Data collection form

OASIS ID: borderar1-104598

Project details

Project name	Archaeological Observation - Farmoor Reservoir Oxfordshire OX2 9NS
Short description of the project	The programme of archaeological fieldwork undertaken at Farmoor Reservoir Oxfordshire revealed evidence of modern topsoil overlying a subsoil containing post-medieval pottery. This overlay alluvial deposits, probably laid down during seasonal flooding by the Thames River, these deposits overlay natural sands and gravels. Natural was observed in this area at 61.51m OD. No significant archaeological deposits were observed.
Project dates	Start: 20-06-2011 End: 01-07-2011
Previous/future work	No / Not known
Any associated project reference codes	FRO11 – Site code
Type of project	Field evaluation
Site status	None
Current Land use	Grassland Heathland 2 - Undisturbed Grassland
Monument type	NONE None
Significant Finds	POT Post Medieval
Methods & techniques	'Targeted Trenches'
Development type	Environmental - Reed-bed development



Prompt Water Act 1989 and subsequent code of practice

Position in the planning process Not known / Not recorded

Project location

Country England

Site location OXFORDSHIRE VALE OF WHITE HORSE CUMNOR Farmoor Reservoir

Postcode OX2 9NS

Study area 2272.00 Square metres

Site coordinates SP 443763 206590 51.8822860983 -1.355215924390 51 52 56 N 001 21 18 W Point

Site coordinates SP 443741 206447 51.8821576972 -1.355249727490 51 52 55 N 001 21 18 W Point

Height OD / Depth Min: 59.40m Max: 61.11m

Project creators

Name of Organisation Border Archaeology

Project brief originator Thames Water

Project design originator Border Archaeology

Project director/manager Border Archaeology

Project supervisor Sarah Ritchie MA



Type of sponsor/funding body Water Authority/Company

Name of sponsor/funding body Thames Water

Project archives

Physical Archive recipient Oxfordshire Museum Service

Physical Contents 'Ceramics'

Digital Archive recipient Oxfordshire Museum Service

Digital Contents 'Stratigraphic'

Digital Media available 'Images raster / digital photography'

Paper Archive recipient Oxfordshire Museum Service

Paper Contents 'Stratigraphic'

Paper Media available 'Context sheet','Map','Matrices','Photograph','Plan','Report','Section'

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title Archaeological Observation - Farmoor Reservoir, Cumnor Road, Oxfordshire, OX2 9NS

Author(s)/Editor(s) Ritchie, S.



Date 2011

Issuer or publisher Border Archaeology

Place of issue or publication Leominster

Entered by Sarah Ritchie (s.ritchie55@gmail.com)

Entered on 4 July 2011

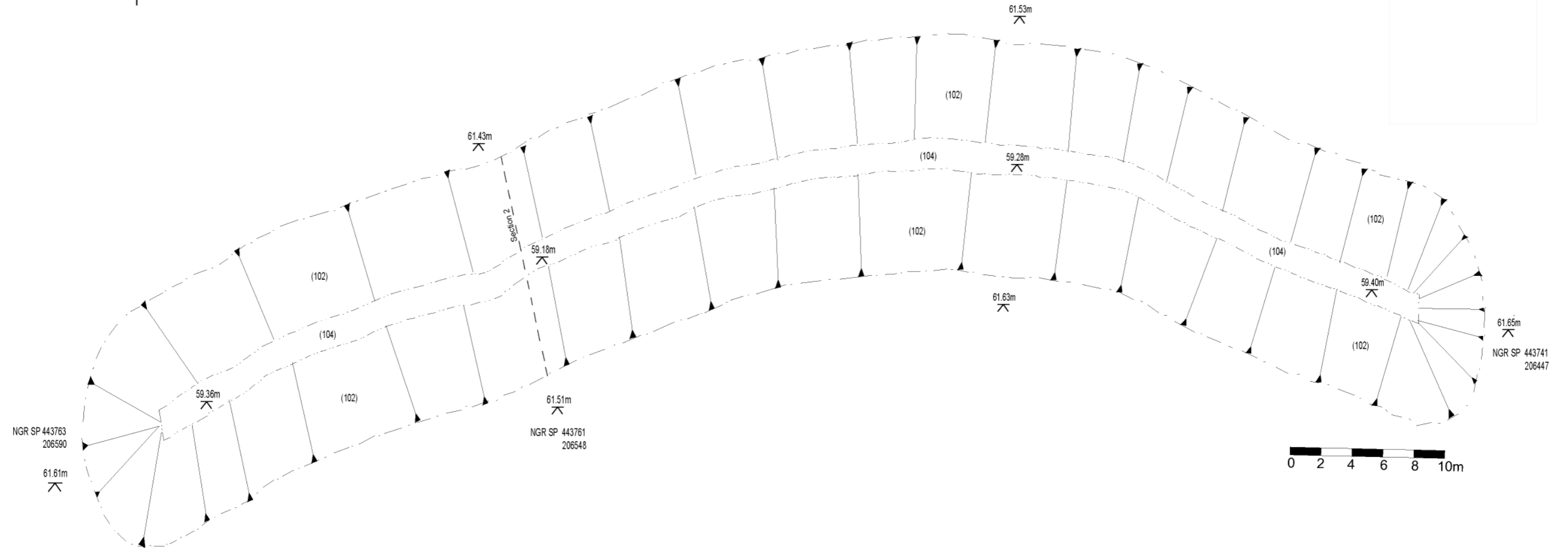
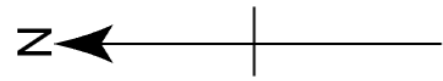


Fig 4: Post-excavation plan of Reed-bed Trench



Document Control

Job title	Archaeological Observation: Farmoor Reservoir Cumnor Road Oxfordshire OX2 9NS	Job No	BA1113FRO
Report written by	<i>Sarah Ritchie MA AIfA</i>		
Report edited by	<i>George Children MA MIfA</i>		
Issue No	Status	Date	Approved for issue
1	Final	July 2011	
<i>Neil Shurety Dip M.GM Inst. M</i>			