Aylesbury Berryfields MDA: West of Paradise Orchard SMS Area and Further Trenching 2016

Written Scheme of Investigation for a Strip, Map and Sample Excavation and Trial Trenching

oxfordarchaeology
southsouthsouth

July 2016

Client: Berryfields Consortium

Issue No: 1
OA Job No: 3442
NGR: Centred on SP 787 160

Written Scheme of Investigation

Aylesbury Berryfields MDA: West of Paradise Orchard SMS Area and Further Trenching 2016

Written Scheme of Investigation for a Strip, Map and Sample Excavation

and Trial Trenching

Centred on NGR: SP 787 160

Table of Contents

List of Figures

1 INTRODUCTION

1.1 Project details

1.1.1 Oxford Archaeology (OA), has been commissioned by the Berryfields Consortium to undertake archaeological investigation, ahead of development, on the site of the Aylesbury Berryfield Major Development Area (MDA). The work is being undertaken as a condition of Planning Permission. In response to a Brief produced by the BCC County Archaeological Officer (2005), a generic Archaeological Mitigation Strategy (AMS) has been produced by Waterman CPM (2008), detailing the Local Authority's requirements for work necessary to discharge the planning condition. This document outlines how OA will implement those requirements in respect of an SMS excavation area and further trenching.

1.1.2 The scope includes an SMS excavation area, West of Paradise Orchard (Site code AYLBER16), and a series of additional evaluation trenches in the north-western part of the MDA area (Site code: AYBF16).

1.1.3 Oxford Archaeology are a Registered Organisation with the Chartered Institute for Archaeologists and are committed to upholding the Institutes Code of Conduct and wider guidance. In addition works at Aylesbury Berryfield will be undertaken with reference to standard industry guidance (see appendices), and relevant local and national planning guidance (e.g. National Planning Policy Framework).

1.1.4 All work at Aylesbury Berryfield will be undertaken with reference to regional archaeological research frameworks and agendas (Historic England 2010). The relevant regional Framework covering Buckinghamshire is the Solent-Thames Research Framework for the Historic Environment (Hey and Hind 2014).

1.2 Location, geology and topography

1.2.1 The development area is located to the north of the A41, c 3 km to the NW of Aylesbury Town Centre (Fig. 1). The site comprises a number of arable/pasture fields and new housing developments between Berryfields Farm to the west and Quarrendon House Farm to the east, and lies at a general level of 80 m OD.

1.2.2 The proposed investigations represent a small part of the wider Aylesbury Berryfield MDA, which covers 2.88 km² in total, and lie in the eastern part of the development. The underlying geology is the Jurassic and Cretaceous clay of the Denchworth Soil Association (SSEW, 1983), sealed beneath clay soils and fine loam. Alluvium is present in two stream valleys at the east and west sides of the site. The river Thames runs from east to west marking the south end of the development area. Gravel deposits are recorded closer to the river Thames.

1.2.3 The SMS area is located in agricultural land to the west of the recently constructed Paradise Orchard and further trenching locations are distributed over the northern half of the MDA area.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND AND POTENTIAL

2.1 Archaeological and historical background

2.1.1 The Aylesbury Vale Academy, Western Link Road and District Centre sites are the most recent of a long running series of strip, map and sample (SMS) excavations within the Aylesbury Berryfields Major Development Area (MDA, 2007-15), which lies to the north-west of Aylesbury (NGR: 479350, 215900).

2.1.2 Previous investigations at Aylesbury Berryfield and Fleet Marston have identified limited evidence for prehistoric settlement and extensive evidence for a Roman roadside settlement. The latter seems to have developed along the line of Akeman Street, the main arterial route from Cirencester (*Corinium Dobunnorum*) to St.Albans (*Verulamium*). The settlement lay at the junction of four Roman Roads, which converged to the west of a crossing of the River Thame. The available evidence suggests that this was an extensive settlement with its nucleus at a road junction near Putlowes Cottages, Fleet Marston. This site has produced high-status finds, burials and evidence for possible masonry buildings (perhaps including a temple). Its hinterland, especially the area to the north and east of Fleet Marston, appears to be characterised by a fairly high density of small Roman settlements, so far apparently lacking Iron Age precursors. Taken together the evidence indicates that the settlement is a “small town”, one of only three or four settlements of this type in the historic county of Buckinghamshire. The full extent and density of the Roman settlement is uncertain on present evidence. It may have had more than one focus, including a western settlement around the Fleet Marston road junction, and an eastern settlement near the river crossing at Aylesbury Berryfields.

2.2 Aylesbury Berryfield MDA main excavation (AYLBER10)

2.2.1 Prehistoric remains were uncovered in 2007/8 to the north of the A41 in the western part of the MDA. A prehistoric settlement defined by enclosures, pits, hearths, a trackway, and at least three roundhouses was recorded. The pottery collected from the settlement features indicated that it was occupied in the Iron Age (*c* 700 BC-AD 43), although smaller quantities of Bronze Age pottery, dated to *c* 2400-700 BC, pointed to some earlier activity. The ring-gully of one of the roundhouses had cut into the infilled ring-gully of an earlier, abandoned, roundhouse, suggesting that the roundhouses were built at different periods and represent a long period of prehistoric settlement at the site. All three roundhouses had their entrances facing east (which is typical for Iron Age roundhouses and would have maximised natural light and heat entering the structures). The prehistoric settlement is notably separate from the Roman roadside settlement, with no indication of chronological or spatial overlap.

2.2.2 A dense area of Roman settlement identified in the southern part of the development on either side of Akeman Street (Site A) has been excluded from the development (Fig.2). Another (possibly linked) area of dense Roman settlement (Site C) has been preserved in situ under the playing fields of Aylesbury Vale Academy. In contrast to Fleet Marston, little evidence for high status activity has been identified in the Aylesbury Berryfields excavations. This may be partly explained by the fact that the areas of densest settlement have been preserved *in situ*. The excavated areas are thus somewhat peripheral to the settlement and may not reflect all of its aspects.

2.2.3 The development has provided an opportunity to investigate a section of Akeman Street, located next to the River Thame (Plots HT02 and HT03, east of Site A). This revealed traces of a thin metalled road surface and a series of flanking ditches (typically two on each side of the road). Timber piles found close to the crossing of the River Thame are thought to be the remains of a bridge (they were preserved *in situ* and not investigated in detail). The same area included domestic structures, comprising roundhouses of later Roman date. Further significant remains included a large waterhole, associated with a small square, stone-flagged platform This feature is interpreted as a possible wayside shrine, as it was found just 30m south of Akeman Street and 100m west of the river crossing. The waterlogged fills contained an intriguing collection of finds, including a woven basket, a group of 3 complete eggs,

animal bone, a large assemblage of Roman coins and a placed deposit with a near complete pottery vessel.

2.2.4 Geophysical survey, confirmed by limited excavation, suggests that Site C consisted of a 'ladder settlement', a series of rectilinear enclosures lined along either side of a north-east aligned branch road from Akeman Street. The exact form and location of the junction of the branch road with Akeman Street is not certain, as the area in question has been preserved *in situ* and will not be developed (Area A). The extrapolated line of the branch road suggests that it joined Akeman Street near the south-eastern corner of the Aylesbury Vale Parkway excavation. The probable line of the branch road has been traced north-eastwards for a distance of c.1.2km from the presumed junction with Akeman Street, as far as the Hardwick Brook, in the course of three SMS excavations (Aylesbury Vale Academy in 2012, Western Link Road in 2013 and the District Centre in 2014), as summarised below.

2.3 Aylesbury Vale Parkway (ABPR07)

2.3.1 The only SMS area that has been analysed in detail to date is the Aylesbury Vale Parkway SMS (excavated 2007-8), which contained little evidence for domestic activity but did contain three human burials, a possible roadside ditch associated with Akeman Street, a concentration of Roman coins and evidence for iron-smithing. The artefact assemblage and radiocarbon dates from that site showed little or no evidence for prehistoric activity within the site itself, other than a scatter of residual worked flints. The pottery assemblage included a certain amount of early Roman material, probably dating from the late 1st century AD, but activity appeared to be at a very low level during the 2nd and early 3rd centuries. The majority of the finds from Aylesbury Vale Parkway date from the late 3rd and 4th centuries AD, including the majority of the pottery and coins. 116 Roman coins were found within the site. Two metal detector rallies, carried out in 2007 in the area immediately east of the site (Area A), produced a further 220 Roman coins with a similar late Roman emphasis.

2.4 Aylesbury Vale Academy (WSI Site C, 2012, QAVC12)

2.4.1 Excavations and geophysical surveys on the Aylesbury Vale Academy site (part of the overall Aylesbury Berryfield MDA development but undertaken for BAM construction, on behalf of Buckinghamshire County Council) revealed evidence for the 'ladder settlement' (Site C), lined along a branch road off Akeman Street. Most of the settlement was preserved *in situ* beneath the Academy playing fields, but a small part at the north-east end was required for construction of the Academy and had to be excavated. The excavation was carried out in two phases due to severe flooding in the lowest lying north-eastern part of the site. The investigation revealed an area of dense archaeological features within the settlement enclosures and proved the existence of the branch road. Within the ladder settlement the road seems to have had two ditches on each side. Outside the settlement enclosures it was indicated by a single pair of less substantial ditches. The road through the settlement was c.10m wide and there was no surviving sign of metalling within the excavated area. A gravel strip (a path?) and a pair of short gullies, were positioned across the track on an almost perpendicular alignment, which suggests that access to/from the settlement was controlled in some manner, perhaps with gates. The density of Roman features and artefacts within the ladder settlement appeared very high, but dropped off very sharply outside the enclosures.

2.4.2 Detailed analysis has yet to be undertaken, but spot-dating of the pottery indicates that the settlement is predominantly of later Roman date, with slight indications of early

Roman activity in the vicinity. This appears broadly consistent with previous findings from Fleet Marston and Aylesbury Berryfield.

2.5 Western Link Road (2013, AYLBER13)

2.5.1 A further section of what appears to be the same branch road was recorded in the Western Link Road excavation in 2013. The road was indicated by multiple parallel ditches on a north-east to south-west alignment. Two or three of the gullies appear to delimit the branch road, while a series of closely spaced features close to Hardwick Brook may be wheel ruts. Three undated cremation burials were also found close to the brook - Roman burials are commonly found in association with roads and boundaries. The roadside ditches appeared to stop slightly before the brook, but in fact were probably masked by alluvium infilling the stream valley. The line of the Roman road diverged from the Western Link Road route at that point, so it is not possible to say whether it continued on the north-eastern side of the brook. If it did, it well may have led to a Roman settlement known from excavations along the Steppingley to Aylesbury Natural Gas Pipeline (located c.1.4km north-east of Site C).

2.6 The District Centre (2014, AYLBER14)

2.6.1 The District Centre site lay in between the Aylesbury Vale Academy and Western Link Road excavations.

2.6.2 No evidence for settlement of any period was found in this area. The only prehistoric finds recovered were two residual struck flints. The south-western corner of the site was obscured by flooding during the investigation, although the few features in this area were mapped before the flooding occurred. Most of the archaeological features were difficult to see in plan and were heavily truncated and partly obscured by medieval/post-medieval plough furrows.

2.6.3 The excavation exposed a series of north-east to south-west aligned ditches, which are on approximately the same alignment as the flanking ditches of the Roman branch road previously recorded in the Aylesbury Vale Academy and Western Link Road excavations. The roadside ditches were not continuous however, and petered out near the south-western edge of the District Centre site. A major field boundary that cuts across the south-western side of the site on a slightly curving south-east / north-west line, is clearly part of the medieval/ post-medieval landscape, as shown on historic maps. It runs parallel to the adjacent ridge and furrow and was an extant landscape feature prior to the excavation. The formation of this boundary may have truncated or obscured the line of the Roman branch road in this area. No certain sign of the roadside ditches was seen during soil stripping for the construction of the adjacent Collington Road, although a single ditch was mapped on almost the expected line.

2.6.4 The quantity of finds recovered from the probable roadside ditches and other features was very small. Most of the excavated sections produced no finds at all. However, the upper fill of one of the ditches contained large fragments from a Roman pottery vessel, which might originally have been placed in the ground whole, as part of a special deposit. There was no sign of any cremated human bone or other evidence to suggest that it was a cremation vessel.

2.6.5 The majority of archaeological features were located along the south-east side of the excavation area, in the vicinity of the Roman road. The density of features in the north-western part of the excavation was very low. A handful of undated pits and postholes were identified at the north-east end of the excavation area. A considerable number of other possible discreet features were investigated, which did not produce artefacts, and were interpreted as three throws or other features of natural origin.

3 Project Aims

3.1 General aims and objectives

3.1.1 To establish the presence/absence of archaeological remains within part of the proposed development, particularly any late prehistoric and Romano-British features and deposits within the SMS area.

3.1.2 To determine the extent, condition, nature, character, quality and date of any archaeological remains present. To establish the ecofactual and environmental potential of archaeological deposits and features.

3.1.3 To make available the results of the investigation.

3.2 Specific aims and objectives

West of Paradise Orchard SMS excavation area (AYLBER16)

3.2.1 The scope includes an SMS excavation area, West of Paradise Orchard. This has high potential for archaeological features of Roman date to be present. The site lies immediately to the south-east of previous excavations at Aylesbury Vale Academy (Part of the MDA development, Site code: QAVC12), which uncovered the north-eastern extent of the Roman ladder settlement. It is expected to reveal the south-eastern extent of enclosures associated with the ladder settlement.

3.2.2 The aims of the excavation are to establish whether the Roman enclosures found in the Aylesbury Vale Academy site continue to the south-east, and create an SMS record of any significant remains that may be present.

3.3 Further evaluation trenches *(AYBF16)*

3.3.1 The proposed trenches lie in the eastern part of the Aylesbury Berryfield MDA, which covers 2.88 km² in total. A series of additional evaluation trenches will be excavated to infill gaps in coverage in the original 2002 evaluation trenching (AYBF02) and subsequent adjacent SMS excavations (See Section 2 above, ALBER10, AYLBER13, AYLBER14, QAVC12). The evaluation trenches are designed to investigate various remaining undeveloped areas that are currently designated for SMS excavation but are thought to have low potential for significant discoveries. The trenching will determine whether further SMS excavation is necessary in those areas. The further trenches have been numbered in continuation of the original Aylesbury Berryfield MDA evaluation trench sequence, carried out in 2002.

4 Project Specific Excavation and Recording Methodology

4.1 Scope of works

4.1.1 The schemewide AMS describes how the development impact will be mitigated across the site (section 4, pp10-11).

4.1.2 The SMS area is 0.6 hectares in extent.

4.1.3 The further trenching (AYBF16) comprises twelve 50m evaluation trenches dispersed across the northern part of the scheme, which infill gaps in the original evaluation trenching coverage (AYBF02). The evaluation trenches are designed to investigate various remaining undeveloped areas that are currently designated for SMS excavation but are thought to have low potential for significant discoveries. The trenching will

determine whether further SMS excavation is necessary in those areas. A contingency is allowed for additional trenching if required to clarify the extent of significant features.

4.1.4 The SMS and further trenching will be undertaken consecutively, as part of the same deployment, but under separate site codes:

- The further trenches have been numbered in continuation of the original Aylesbury Berryfield MDA evaluation trench sequence, carried out in 2002 (AYBF02). The context numbers will be derived from the Trench numbers.
- The SMS excavation area (AYLBER16) has been assigned a new unique context number block 8000-8999, within the main context numbering sequence for Aylesbury Berryfield MDA.

4.2 Programme and resources

4.2.1 It is anticipated that the SMS area will take c.4 - 5 weeks to complete, by a team consisting of a Project Supervisor, directing 6 - 8 Archaeologists

4.2.2 The trenching will follow the SMS area and will take 3-4 days to complete, by a team consisting of a Project Supervisor, directing 1 Archaeologist. The trenching is likely to be completed in more than one phase due to site constraints.

4.2.3 All fieldwork will be under the management of Stuart Foreman (BA, CMIfA), Senior Project Manager and the overall direction of the Director of Operations, Dan Poore, CMIfA.

4.3 Site specific methodology

4.3.1 A summary of OA's general approach to excavation and recording can be found in Appendix A. Standard methodologies for Geomatics and Survey, Environmental evidence, Artefactual evidence and Burials can also be found below (Appendices B, C, D and E respectively).

Further evaluation trenches (AYBF16)

4.3.2 The trenches are located in a number of different fields and the MDA Manager will ensure that landowners consulted and access is agreed prior to the trenching works in each location.

4.3.3 Spoil stored in the north-east trenching area will need to be removed before trenching work commences.

4.3.4 Specific methodologies for the trenching will be as follows:

(i) Existing service plans will be consulted and the area of trenching will be scanned using a CAT and Genny, as applicable. The trench locations will be set out by GPS survey.

(ii) Each trench will be excavated using an appropriate mechanical excavator fitted with a toothless bucket under the direct supervision of an archaeologist. Spoil will be stored adjacent to, but at a safe distance from trench edges.

(iii) Machining will continue in spits down to the top of the undisturbed natural geology or the first archaeological horizon depending upon which is encountered first. Once archaeological deposits have been exposed, further excavation will proceed by hand and the appropriate use of machine.

(iv) The exposed surface will be sufficiently cleaned to establish the presence/absence of archaeological remains. A sample of each feature or deposit type, for example pits, postholes, and ditches, will be excavated and recorded. In the event of the identification of an exceptional number and complexity of archaeological deposits, sample excavation will be more circumspect and will aim to be minimally intrusive. Excavation will however be sufficient to resolve the principal aims of the evaluation in characterising and dating the archaeology present on the site.

West of Paradise Orchard SMS excavation area (AYLBER16)

4.3.5 Specific methodologies for the SMS will be as follows:

(i) Existing service plans will be consulted and the area of trenching will be scanned using a CAT and Genny, as applicable. The trench locations will be set out by GPS survey.

(ii) Each trench will be excavated using an appropriate mechanical excavator fitted with a toothless bucket under the direct supervision of an archaeologist. Spoil will spoil will be stored adjacent to the stripped area, maintaining a safe height and distance from the area and neighbouring fences and other objects.

(iii) Machining will continue in spits down to the top of the undisturbed natural geology or the first archaeological horizon depending upon which is encountered first. Once archaeological deposits have been exposed, further excavation will proceed by hand and the appropriate use of machine.

(iv) The exposed surface will be sufficiently cleaned to establish the presence/absence of archaeological remains. A sample of each feature or deposit type, for example pits, postholes, and ditches, will be excavated and recorded. In the event of the identification of an exceptional number and complexity of archaeological deposits, sample excavation will be more circumspect and will aim to be minimally intrusive. Excavation will however be sufficient to resolve the principal aims of the evaluation in characterising and dating the archaeology present on the site.

(v) Where practicable, all archaeological features will be sampled by hand. In practice, no deep excavations will be entered by OA staff if they are at a depth assessed as constituting a health and safety hazard without further safety provisions. General site procedures are as defined in OA's Standard Appendices which are supplied with this document.

(vi) All features and deposits will be issued with unique context numbers, and context recording will be in accordance with established best practice and the OA Field Manual. Small finds and samples will be allocated unique numbers. Bulk finds will be collected by context.

(vii) Digital photos and black-and-white negative photographs will be taken of any archaeological features and deposits and of the trenches and evaluation work in general.

(viii) Plans will be drawn at an appropriate scale (normally 1:50 or 1:100) with larger scale plans of features as necessary. Section drawings of features will be drawn at a scale of 1:20 and 1 m wide sample sections of stratigraphy will be drawn at a scale of 1:10. All section drawings will be located on the appropriate plan/s. The absolute height (m. OD) of all principal strata and features, and the section datum lines shall be calculated and indicated on the drawings.

4.3.6 Where archaeological features arise these will be mapped and recorded. Sample excavation to characterise features and retrieve dating evidence will be undertaken as

appropriate. Works will be undertaken appropriately and programmed to avoid, wherever possible, alteration to engineering contractors' methodologies or impacts on programme.

4.3.7 Where archaeological remains of significance are identified, such that there may be an impact on engineering contractors' methods of work or programme, or such that extra archaeological resources are required, the OA project manager must inform the MDA project manager before any works take place.

4.3.8 The archaeological consultant to the MDA should be informed of the start of all works, developments during works (e.g. where significant remains are identified), and completion of work. The archaeological consultant will liaise with the Buckinghamshire County Archaeologist in respect of monitoring by the LPA.

4.3.9 The following site-specific methods specified in the Project Brief supercede standard OA methodologies unless otherwise agreed with the Buckinghamshire County Archaeological Service.

4.3.10 Significant features (excluding ridge and furrow) should be excavated by hand in accordance with the criteria defined below:

(ix) Enclosure ditches: 20% including any terminals, significant stratigraphic relationships and concentrations of anthropogenic material.

(x) Ring gullies: 25% including terminals and sections at each side and to the rear of the gully, any significant stratigraphic relationships and concentrations of anthropogenic material.

(xi) Linear ditches: 10% including terminals, significant stratigraphic relationships and concentrations of anthropogenic material.

(xii) Postholes: half-sectioned. 100% excavation if required for bulk soil samples.

(xiii) Pits: half-sectioned. 100% excavation if required for bulk soil samples or if rich in finds or bone.

(xiv) Stone structures: Sufficient excavation to establish the nature and sequence of construction and any significant stratigraphic relationships.

(xv) Floor/occupation layers: Full excavation and environmental sampling.

(xvi) Kilns/furnaces etc: Full excavation (and bulk sampling) to determine function and structure if encountered.

(xvii) Animal and human burials: Full excavation.

(xviii) Other structured deposits: Full excavation and bulk sampling. Articulated bone, placed deposits and artefacts must be excavated, recorded and retained as individual items ("small finds").

(xix) Waterlogged deposits: Appropriate sampling of most contexts for environmental analysis in consultation with the Archaeological Science adviser and/or environmental specialist

4.3.11 Any areas of significant archaeological interest will be cleaned by hand sufficiently to allow the identification and planning of archaeological features and scanned with a metal-detector. The excavation areas will be planned digitally using GPS equipment, allowing plans to be generated at an appropriate scale (normally 1:20 where complex deposits are present or 1:50 or 1:100 in areas of lesser complexity). Spot levels will be taken as appropriate.

4.3.12 Systematic metal detecting of all stripped surfaces will be undertaken as soon as practical after stripping with provision for immediate investigation of significant responses in response to risk of looting.

5 Project Specific Reporting and Archive Methodology

5.1 Report programme

5.1.1 By agreement with Buckinghamshire Archaeological Services, on behalf of the Local Planning Authority, the results of the SMS excavation and further trenching will be included within an overall post-excavation analysis and reporting programme for the Berryfields MDA area as a whole, on completion of substantive field investigations. The scope and timing of the post-excavation project has yet to be confirmed. A post-excavation assessment will be prepared which details the tasks to be included, the programme of work and the content and format of proposed reports.

5.1.2 The SMS and evaluation records and finds will be retained by Oxford Archaeology pending completion of the overall Berryfields MDA post-excavation programme.

5.1.3 The final report, and any interim reports, will be deposited with the Buckinghamshire Historic Environment Record (HER) on completion.

5.2 Specialist input

5.2.1 OA has a large pool of internal specialists, as well as a network of external specialists with whom OA have well established working relationships. A general list of these specialists is presented in Appendix G; in the event that additional input should be required, an updated list of specialists can be supplied.

5.3 Archive

5.3.1 The site archive will be deposited with Buckinghamshire County Museum following completion of the project.

5.3.2 A summary of OA's general approach to documentary archiving can be found in Appendix H.

6 Health and Safety

6.1 Roles and responsibilities

6.1.1 The Senior Project Manager, Stuart Foreman, has responsibility for ensuring that safe systems of work are adhered to on site. He delegates elements of this responsibility to the Project Supervisor who implements these on a day to day basis.

6.1.2 The Director with responsibility for Health and Safety at OA is Dan Poore (Chief Business Officer); he is advised by the OA South Health and Safety Advisor, Ken Welsh.

6.2 Method statement and risk assessment

6.2.1 A summary of OA's general approach to health and safety can be found in Appendix I. A risk assessment has also been undertaken and approved and will be kept on site, along with OA's standard health and safety file, which will contain all relevant health and safety documentation.

6.2.2 The H and S file will be available to view at any time.

7 MONITORING OF WORKS

7.1.1 At least 3 days notice of the commencement of the works will be given to representatives of Buckinghamshire County Archaeological Service (BCAS).

7.1.2 CAS will have free access to the site (subject to H and S considerations) and all records to ensure the works are being carried out in accordance with this WSI and all other relevant standards.

OA Standard Fieldwork Methodology Appendices

The following methods and terms will apply, where appropriate, to all OA fieldwork unless varied by the accompanying detailed Written Scheme of Investigation.

Copies of all OA internal standards and guidelines referred to below are available on request.

Appendix A. General Excavation and Recording Methodology

A.1 Standard methodology – summary

Mechanical excavation

A.1.1 An appropriate mechanical excavator will be used for machine excavation. This will normally be a JCB or 360° tracked excavator with a 1.5 m to 2 m wide toothless ditching bucket. For work with restricted access or working room a mini excavator will be used.

A.1.2 All mechanical excavation will be undertaken under direct archaeological supervision.

A.1.3 All undifferentiated topsoil or overburden of recent origin will be removed down to the first significant archaeological horizon, in successive, level spits.

A.1.4 Following mechanical excavation, all areas that require examination or recording will be cleaned using appropriate hand tools.

A.1.5 Spoil heaps will be monitored in order to recover artefacts to assist in the analysis of the spatial distribution of artefacts. Modern artefacts will be noted but not retained.

A.1.6 After recording, evaluation trenches and test pits will usually be backfilled with excavated material in reverse order of excavation, and compacted as far as is practicable with the mechanical excavator. Area excavations will not normally be backfilled.

Hand excavation

A.1.7 All investigation of archaeological levels will usually be by hand, with cleaning, examination and recording both in plan and section.

A.1.8 Within significant archaeological levels the minimum number and proportion of features required to meet the aims of the excavation will be hand excavated. Pits and postholes will usually be subject to a 50% sample by volume. Linear features will be sectioned as appropriate. More complex features such as those associated with funerary activity will usually be subject to 100% hand excavation.

A.1.9 In the case of evaluations, it is not necessarily the intention that all trial trenches will be fully excavated to natural stratigraphy, but the depth of archaeological deposits across the site will be assessed. The stratigraphy of a representative sample of the evaluation trenches will be recorded even where no archaeological deposits have been identified. Any excavation, both by machine and by hand, will be undertaken with a view to avoiding damage to any archaeological features or deposits, which appear to be worthy of preservation in situ.

Recording

A.1.10 Written descriptions will be recorded on proforma sheets comprising factual data and interpretative elements.

A.1.11 Where stratified deposits are encountered a Harris matrix will be compiled during the course of the excavation.

A.1.12 Plans will normally drawn at 1:100, but on urban or deeply stratified sites a scale of 1:50 or 1:20 will be used. Detailed plans will be at an appropriate scale. Burials will be drawn at scale 1:10 or recorded using geo-referenced digital photography.

A.1.13 The site grid will be accurately tied into the National Grid and located on the 1:2500 or 1:1250 map of the area.

A.1.14 A register of plans will be kept.

A.1.15 Long sections of showing layers will be drawn at 1:50. Sections of features or short lengths of trenches will be drawn at 1:20.

A.1.16 A register of sections will be kept.

A.1.17 Generally all sections will be tied in to Ordnance Datum.

A.1.18 A full black and white photographic record, illustrating in both detail and general context the principal features and finds discovered will be maintained. The photographic record will also include colour (digital) working shots to illustrate more generally the nature of the archaeological work.

A.1.19 Photographs will be recorded on OA Photographic Record Sheets.

A.2 Relevant industry standards and guidelines

A.2.1 The Institute for Archaeologists' Standard and Guidance notes relevant to fieldwork are:

- Standard and Guidance for Field Evaluation
- Standard and Guidance for Excavation
- Standard and Guidance for an Archaeological Watching Brief.

A.2.2 These will be adhered to at all times.

A.3 Relevant OA manual and other supporting documentation

A.3.1 All fieldwork will be undertaken in accordance with the requirements of the OA Field Manual (ed. D Wilkinson 1992), and the revised OA fieldwork manual (publication forthcoming).

A.3.2 Further guidance is provided to all excavators in the form of the OA 'Fieldwork Crib Sheets - a companion guide to the Fieldwork Manual'. These have been issued ahead of formal publication of the revised Fieldwork Manual.

APPENDIX B. GEOMATICS AND SURVEY

B.1 Standard methodology – summary

B.1.1 The aim of OA methodology is to provide comprehensive survey cover of all investigation areas. Additionally, it is designed to provide coverage for any areas, beyond the original scope of the project, which arise as a result of further work. It provides digital plans of all required elements of the project and locates them within an overall grid.

B.1.2 It also maintains all necessary survey data and ensures that the relevant information is copied into the primary record, in order to ensure the integrity of the project archive. Furthermore, it ensures that all core data is securely stored and backed up. It

establishes accurate project reference systems utilising a series of control stations and permanent base lines.

B.1.3 The survey will be conducted using a combination of Total Station Theodolite (TST) survey utilising Reflectorless Electronic Distance Measurement (REDM) where appropriate, hand-measured elements and GPS (Global Positioning System).

B.1.4 Before the main work commences, a network of control stations will be laid out encompassing the area. Control stations will be tied in to known points or existing features using rigorous metric observation. The control network will be set in using a TST to complete a traverse or using techniques as appropriate to ensure sufficient accuracy. A GPS, or other appropriate method, will be used to orientate the control network to National Grid or other recognised coordinate system.

B.1.5 All control stations will be checked by closed traverse and/or GPS, as appropriate. The accuracy of these control stations will be accessed on a regular basis and re-established accordingly. All stations will be recorded on Survey Control Station sheets.

B.1.6 Each control station will be marked with a PGM (Permanent Ground Marker). Witness diagrams will include the full 3-D co-ordinates generated, a sketch diagram and measurements to at least three fixed details, written description of the mark and a photograph of the control point in its environs.

B.1.7 Prior to entry into the field all equipment will be checked, and all pre-survey information will be logged onto the field computer and uploaded onto survey equipment as appropriate. The software in the field computer will be verified and all cabling between the GPS and/or TST and computer will be checked. Prior to conducting the survey the site will be reconnoitred for locations for a viable control network and check the line of sight and any possible hindrance to survey. Daily record sheets will be kept to record daily tasks and conditions.

B.1.8 All spatial data will be periodically downloaded onto a field computer, and backed up onto CD, or DVD. It will be cleaned, validated and inspected.

B.1.9 All survey data will be documented on daily survey record sheets. Information entered on these sheets includes key set up information (Instrument height etc.) as well as daily variables and errors/comments. All survey data will be digitally recorded in a raw format and translated during the download process this shall allow for any errors to be cross referenced with the daily survey record and corrected accordingly.

B.1.10 A weekly summary of survey work will be produced to access development and highlight problems. This information also will be recorded on the weekly survey journal. Technical support for the survey equipment and download software shall be available at all times. In those instances where sites are remotely operated, all digital data will be backed up regularly and a copy returned to Oxford on a weekly basis.

B.1.11 A site plan will initially be created by a rapid survey of relevant archaeological features by mapping their extent using a combination of TST and GPS. This will form the basis for deciding excavation strategy and will be updated as the excavation clarifies the extent of, and relationships between, archaeological features.

B.1.12 Excavated archaeological interventions and areas of complex stratigraphy will be hand drawn. At least two Drawing Points (DPs) will be set in as a baseline and measurements taken off this by tape and offset. The hand drawn plans will be referenced to the digitally captured pre-site plan by measuring in the DPs with a TST or GPS. These hand drawn elements will then be scanned in, geo-referenced using the

DPs as reference points and digitised following OA's digitising protocols. For further details on hand planning procedure please refer to the fieldwork guidelines.

B.1.13 Where appropriate rectified photography may be used to record standing structures or burials. This will be carried out in line with Standard OA procedures for rectified photography.

B.1.14 Survey data recorded in the field will be downloaded using appropriate downloading software, and saved as an AutoCAD Map DWG file, or an ESRI Shapefile. These files will be regularly updated and backed up with originals being stored on an OA server in Oxford.

B.1.15 All drawings will be composed of closed polygons, polylines or points in accordance with the requirements of GIS construction and OA Geomatics protocols. Once created, additional GIS/CAD work will normally be carried out at the local OA central office or at on-site remote locations when appropriate. Support for all GIS/CAD work will be available from OA's Oxford Office during normal office hours. The aim of the GIS/CAD work is to produce workable draft plans, which can be produced as stand-alone products, or can be readily converted to GIS format. Any hand-drawn plans will be scanned and digitised on site in the first instance. Subsequent plans will be added to the main drawing as it develops.

B.1.16 All plan scans will be numbered according to their plan site number. Digital plans will be given a standard new plan number taken out from the site plan index.

B.1.17 All digital data will be backed up incrementally on CD or DVD. On each Friday the entire data directory will be backed up and returned to Oxford where it will be copied onto the OA projects server. Each CAD drawing will contain an information layout which will include all the relevant details appertaining to that drawing. Information (metadata) on all other digital files will be created and stored as appropriate. At the end of the survey all raw measurements will be made available as hard copy for archiving purposes.

B.2 Relevant industry standards and guidelines

B.2.1 English Heritage (2009), Metric Survey Specifications for Cultural Heritage

B.2.2 English Heritage (2006), Understanding Historic Buildings A Guide to Good Practise

B.2.3 English Heritage, (2007) Understanding the Archaeology of Landscapes A Guide to Good Recording practise

B.3 Relevant OA manual and other supporting documentation

B.3.1 OA South Metric Survey, Data Capture and Download Procedures

B.3.2 OA South Digitising Protocols

B.3.3 OA South GIS Protocols

B.3.4 These will be superseded by the OA South Geomatics Manual (in progress).

APPENDIX C. ENVIRONMENTAL EVIDENCE

C.1 Summary of Standard methodology

C.1.1 Different environmental and geoarchaeological sampling strategies may be employed according to established research targets and the perceived importance of the strata under investigation. Where possible an environmental specialist(s) will visit the site to advise on sampling strategies. Sampling methods will follow guidelines produced by English Heritage and Oxford Archaeology. A register of samples will be kept. Specialists

will be consulted where non-standard sampling is required (eg. TL, OSL or archaeomagnetic dating) and if appropriate will be invited to visit the site and take the samples.

C.1.2 Geoarchaeological sampling methods are site specific, and methodologies will be designed in consultation with the geoarchaeological manager on a site by site basis.

C.1.3 Bulk soil samples, where possible of 40 litres or 100% of a deposit if less is available, will be taken from potentially datable features and layers for flotation for charred plant remains and for the recovery of small bones and artefacts. Larger soil samples (up to 100L) may be taken for the complete recovery of animal bones, marine shell and small artefacts from appropriate contexts. Smaller bulk samples (general biological samples) of 10-20 litres will be taken from any waterlogged deposits present for the recovery of macroscopic plant remains and insects. Series of incremental 2L samples may be taken through buried soils and deep feature fills for the recovery of snails and/or waterlogged plant remains, depending on the nature of the stratigraphy and of the soils and sediments. Columns will be taken from buried soils, peats and waterlogged feature fills for pollen and/or phytoliths, diatoms, ostracods and foraminifera if appropriate. Soil samples will be taken for soil investigations (particle size, organic matter, bulk chemistry, soil micromorphology etc.) and possibly for metallurgical analysis in consultation with the appropriate specialists.

C.1.4 Bulk samples from dry deposits will be processed by standard water flotation using a modified Siraf-style machine and meshes of 0.25mm (flot) and 0.5 or 1mm depending (residue). Heavy residues will be wet sieved, air dried and sorted. Samples taken exclusively for the recovery of bones, marine shell or artefacts will be wet sieved to 2mm. Waterlogged samples (1L sub-sample) and snail samples (2L) will be processed by hand flotation with flots and residues collected to 0.25mm (waterlogged plants) and 0.5mm (snails) respectively; these flots and residues will be sorted by the specialist. Samples specifically taken for insects, pollen, other microflora and microfauna, metallurgy and soil analysis will be submitted as whole earth to the appropriate specialists or processed following their instructions.

C.2 Relevant Industry Standards and Guidelines

C.2.1 English Heritage 2010. Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood.

C.2.2 English Heritage 2001. Archaeometallurgy. Centre for Archaeology Guidelines 2001.01.

C.2.3 English Heritage 2011. Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post excavation, (2nd ed)

C.2.4 English Heritage 2004. Dendrochronology: Guidelines on Producing and Interpreting Dendrochronological Dates.

C.2.5 English Heritage 2006. Archaeomagnetic Dating. Guidelines for Producing and Interpreting Archaeomagnetic Dates.

C.2.6 English Heritage 2007. Geoarchaeology. Using Earth Sciences to Understand the Archaeological Record.

C.2.7 English Heritage 2008. Luminescence Dating. Guidelines on Using Luminescence Dating in Archaeology.

C.2.8 English Heritage 2008. Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains.

C.3 Relevant OA manual and other supporting documentation

C.3.1 Oxford Archaeology 2005. Environmental Sampling Guidelines, 2nd ed.

APPENDIX D. ARTEFACTUAL EVIDENCE

D.1 Summary of Standard methodology

D.1.1 Before a site begins arrangements concerning the finds will be discussed with the Head of Finds. Information will be provided by the project manager about the nature of the site, the expected size and make-up of the finds assemblage and any site specific finds retrieval strategies. On-site requirements will be discussed and a conservator appointed who can be called on to make site visits if required. Special requirements regarding particular categories of material will be raised at this early stage for instance the likelihood of recovering assemblages of waterlogged material, large timbers, quantities of structural stone or ceramic building material. Specialists may be required to visit sites to discuss retrieval strategies.

D.1.2 The project manager will supply the Head of Finds with contact details of the landowner of the site so that consent to deposit any finds resulting from the investigation can be sought.

D.1.3 The on-site retrieval, lifting and short term packaging of bulk and small finds will follow the detailed guidelines set out in the OA Finds Manual (sections 2 and 3), First Aid for Finds and the UKIC conservation guidelines No.2.

D.1.4 All finds recovered from site will be transported to an OA regional office for processing; local sites will return finds at the end of each day, away based sites at the end of each week. Special arrangements can be discussed for certain sites with the department manager before the start of a project. Larger long running sites may in some instances set up on-site processing units to deal with the material from a particular site.

D.1.5 All finds qualifying as Treasure will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act (1996), and the Treasure (Designation) Order 2002. Where removal can not be effected on the same working day as the discovery, suitable security measures will be taken to protect the finds from theft.

D.1.6 Each box of finds will be accompanied by a finds context checklist itemising the finds within each box. The number of bags of finds from each context and individual small find from each context will be recorded. A member of the processing team will check the list when it arrives in the department. There are separate forms for finds recovered from fieldwalking.

D.1.7 The processing programme is reviewed on a weekly basis and priorities are worked out after discussions with the Head of Fieldwork and the Head of Post-excavation. Project managers will keep the Head of Finds informed of any pressing deadlines that they are aware of. All finds from evaluations are dealt with as a matter of priority.

D.1.8 All bulk finds are washed (where appropriate), marked, bagged and boxed by the processing team according to the guidelines set out in section 4 and 5 of the OA Finds Manual, First-aid for finds and the UKIC guidelines No.2. They must also take into account the requirements of the receiving museum. Primary data recording count and weight of fragments by material from each context is recorded on the site database.

D.1.9 Unstable and sensitive objects are recorded onto the database and then packaged and stored in controlled environments according to their individual requirements. The advice

of a conservator will be sought for sensitive objects in need of urgent conservation. All metalwork will be x-rayed prior to assessment (and to meet the requirements of most receiving museums).

D.1.10 Finds recovered from the environmental sample processing will be incorporated into the main assemblage and added to the database.

D.1.11 On completion of the processing and data entry a finds file for each archaeological investigation will be produced, a summary of which is available for the project manager. The assemblage is allocated an OA number for storage purposes. Bulk finds are stored on a roller racking system, metals in a secure controlled storage and organic finds are refrigerated where possible.

D.1.12 The movement of finds in and out of the department storage areas is strictly monitored and recorded. Carbon copy transit forms exist to record this information. Finds will not be removed from storage without the prior knowledge of the Head of Finds.

D.1.13 Finds information summarised in the finds compendium is used to assess the finds requirements for the post excavation stages of the project. The Finds department holds a list of all specialists used by OA (see below) both internal and external.

D.1.14 On completion of the post excavation stage of the project the department prepares the finds assemblage for deposition with the receiving museum. Discussions will be held with the museum, the excavator and the head of finds to finalise any selection, retention or discard policy. Most museums issue strict guidelines for the preparation of archives for deposition with their individual labelling, packaging and recording requirements.

D.2 Relevant industry standards and guidelines

D.2.1 UKIC, 1983, Packaging and Storage of Freshly-Excavated Artefacts from Archaeological Sites. Conservation Guidelines No.2. Archaeology Section, United Kingdom Institute for Conservation.

D.2.2 UKIC, 1988, Excavated Artefacts and Conservation: UK sites Revised Edition. Conservation Guidelines No.1. Archaeology Section, United Kingdom Institute for Conservation.

D.2.3 Society of Museum Archaeologists, 1993, Selection, retention and dispersal of Archaeological Collections. Download available via http://www.socmusarch.org.uk/publica.htm)

D.2.4 Watkinson, D E & Neal, V, 1998, First Aid for Finds (3rd edition). RESCUE & UKIC

D.3 Relevant OA manual and other supporting documentation

D.3.1 Allen, L, and Cropper, C (internal publication only) Oxford Archaeology Finds Manual.

APPENDIX E. BURIALS

E.1 Summary of Standard methodology

E.1.1 Human remains will not be excavated without a relevant licence/faculty and, where applicable (for example, a post medieval cemetery), a risk assessment from the local environmental officer.

E.1.2 All human remains will be treated with due care and regard to the sensitivities involved, and will be screened from the public throughout the course of the works.

E.1.3 Excavation will be undertaken in accordance with IFA (Roberts and McKinley 1993) and English Heritage and The Church of England guidelines (Mays 2005). For crypts and

post-medieval burials the recommendations set out by the IFA (Cox 2001) in Crypt Archaeology: an approach, are also relevant.

E.1.4 In accordance with recommendations set out in the English Heritage and Church of England (2005) document Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England, skeletons will not be excavated beyond the limits of the trench, unless they are deemed osteologically or archaeologically important.

E.1.5 Where any soft tissue survives and/or materials (for example, inner coffins, mattresses and other paddings) soaked in body liquor, no excavation or handling of the remains will take place until an appropriate risk assessment has been undertaken. Relevant protocols (i.e. Cox 2001) for their excavation, recording and removal will be adhered to.

E.1.6 OA does not excavate or remove modern burials (post-1907) and does not remove or open sealed lead coffins. Appropriate PPE (e.g. chemical suit, latex gloves) will be worn by all staff when working with lead coffins.

E.1.7 Graves and their contents will be hand excavated in plan. Each component (for example, skeleton, grave cut, coffin (or remains of), grave fill) will be assigned a unique context number from a running sequence. A group number will also be assigned to all of these, and small finds numbers to features such as coffin nails, hobnails and other grave goods (as appropriate).

E.1.8 Soil samples will be taken during the excavation of inhumations, usually from the region of the skull, chest, right hand, left hand, abdomen and pelvis, right foot and left foot. Infants (circa. less than 5 years) will normally be recovered as bulk samples. Soil samples will also be taken from graves that appear to contain no human bone.

E.1.9 Burials (including the skeleton, cremation, coffin fittings, coffin, urn, grave goods / other) will be recorded by photographic and written record using specialised pro forma context sheets, although these records may only include schematic representations of the location and position of the skeletons, depending on the nature and circumstances of the burial.

E.1.10 Where necessary, hand drawn plans (usually at 1:10, sometimes 1:5) will be made, especially of contexts where required details cannot be adequately seen using digital rectified photography (for example, urned cremations; undisturbed hob nails).

E.1.11 Levels will be taken. For inhumations this will be on the skull, pelvis and feet as a minimum.

E.1.12 Human remains that are exhumed will be bagged and labelled according to skeletal region and carefully packed into suitable containers (for example, acid free cardboard boxes) and transported to a suitable storage location. Any associated coffins and coffin fittings will be contained with the human remains wherever possible.

E.1.13 Unurned cremations will not usually be half sectioned or excavated in spits, but recovered as a bulk sample.

E.1.14 Wherever possible, urned cremations will be carefully bandaged, recovered whole and will be excavated in spits in the laboratory, as per the recommendations of McKinley (2004).

E.1.15 Unless deemed osteologically or archaeologically important disarticuled bone / charnel will be collected and reserved for re-burial if immediate re-internment as close to its original position is not practicable. In some instances, a rapid scan of this material may be undertaken by a qualified osteologist, if deemed relevant.

E.1.16 If undisturbed, pyre sites will normally be excavated in quadrants, at the very least in 0.5 m blocks of 0.5 m spits.

E.1.17 Pyre debris dumps will be half sectioned or quadranted and will be subject to 100% sampling.

E.1.18 Wooden and lead coffins and any associated fittings, including fixing nails will be recorded on a pro forma coffin recording sheet. All surviving coffin fittings will be recorded by reference to Reeve and Adams (1993) and the unpublished master catalogue that is being compiled by OA. Where individual types cannot be paralleled, they will be drawn and/ or photographed and assigned a style number. Biographical details obtained from legible departum plate inscriptions will be recorded and further documentary research will be made.

E.1.19 Funerary structures, such as brick shaft graves and/or vaults will be hand-drawn at a scale of 1:10 or 1:20, as appropriate. Location, dimensions and method of construction will be noted, and the structure added to the overall trench plan.

E.1.20 Memorials, including headstones, revealed within the areas of development will be recorded irrespective of whether they are believed to be in situ.

E.1.21 Where required, memorials will be accorded an individual context number and will also be included as part of the grave group, if the association with a burial is clear.

E.1.22 Memorials will be recorded on pro-forma context sheets, based on and following the guidelines set out by Mytum (2002), and will include details of:

- Shape
- Dimensions
- Type of stone used
- Iconography (an illustration may best describe these features)
- Inscription (verbatum record of inscription; font of the lettering)
- Stylistic type

E.2 Relevant industry standards and guidelines

E.2.1 Cox, M, 2001 Crypt archaeology. An approach. IFA Paper No. 3

E.2.2 Mays, S, 2005 Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England. Church or England and English Heritage.

E.2.3 McKinley, J, and Roberts, C, 1993 Excavation and post-excavation treatment of cremated and inhumed human remains, IFA Technical Paper No. 13

E.2.4 McKinley, J, 2004 Compiling a skeletal inventory: cremated human bone. In Brickley, M, and McKinley, J (eds) Guidelines to the Standards for Recording Human Remains, IFA Technical Paper No. 7. 9-13.

E.2.5 Mytum, H, 2000 Recording and Analysing Graveyards. CBA Handbook No. 15.

E.2.6 Reeve, J, and Adams, M, 1993 The Spitalfields Project. Volume I – The Archaeology Across the Styx. CBA Research Report No. 85

E.2.7 The Human Tissue Act 2004

E.3 Relevant OA manual and other supporting documentation

E.3.1 Loe, L, 2008 The Treatment of Human Remains in the Care of Oxford Archaeology. Oxford Archaeology internal policy document.

E.3.2 Excavating and recording human remains. Oxford Archaeology internal guidelines document.

APPENDIX F. REPORTING

F.1 Summary of Standard methodology

F.1.1 For Watching Briefs and Evaluations, the style and format of the report will be determined by OA, but will include as a minimum the following:

- A location plan of trenches and/or other fieldwork in relation to the proposed development.
- Plans and sections of features located at an appropriate scale.
- A section drawing showing depth of deposits including present ground level with Ordnance Datum, vertical and horizontal scale.
- A summary statement of the results.
- A table summarising the features, classes and numbers of artefacts contained within, spot dating of significant finds and an interpretation.
- A reconsideration of the methodology used, and a confidence rating for the results.
- An interpretation of the archaeological findings both within the site and within their wider landscape/townscape setting.

F.1.2 For Excavations, a Post-Excavation Assessment and Project Design will generally be prepared, as prescribed by English Heritage Management of Research Projects in the Historic Environment (MoRPHE) 2006, Section 2.3. This will include a Project Description containing:

- A summary description and background of the project.
- A summary of the quantities and assessment of potential for analysis of the information recovered for each category of site, finds, dating and environmental data. Detailed assessment reports will be contained within appendices.
- An explicit statement of the scope of the project design and how the project relates to any other projects or work preceding, concurrent with or following on from it.
- A statement of the research aims of the fieldwork and an illustrated summary of results to date indicating to what extent the aims were fulfilled.
- A list of the project aims as revised in the light of the results of fieldwork and the current post-excavation assessment process.

F.1.3 A section on Resources and Programming will also be produced, containing:

- A list of the personnel involved indicating their qualifications for the tasks undertaken, along with an explanation of how the project team will communicate, both internally and externally.
- A list of the methods which will be used to achieve the revised research aims.

- A list of all the tasks involved in using the stated methods to achieve the aims and produce a report and research archive in the stated format, indicating the personnel and time in days involved in each task. Allowance should be made for general project-related tasks such as monitoring, management and project meetings, editorial and revision time.
- A cascade or Gantt chart indicating tasks in the sequence and relationships required to complete the project. Due allowance will be made for leave and public holidays. Time will also be allowed for the report to be read by a named academic referee as agreed with the County Archaeological Officer, and by the County Archaeological Officer.
- A report synopsis indicating publisher and report format, broken down into chapters, section headings and subheadings, with approximate word lengths and numbers and titles of illustrations per chapter. The structure of the report synopsis should explicitly reflect the research aims of the project.

F.1.4 The Project Design will be submitted to the County Archaeological Officer or equivalent for agreement.

F.1.5 Under certain circumstances (eg with very small mitigations), and as agreed with the County Archaeological Officer or equivalent, a formal Assessment and Project Design may not be required and either the project will continue straight to full analysis, or a simple Project Proposal (MoRPHE 2006 Section 2.1) will be produced prior to full analysis. This proposal may include:

- A summary of the background to the project
- Research aims and objectives
- Methods statement outlining how the aims and objectives will be achieved
- An outline of the stages, products and tasks
- Proposed project team
- Estimated overall timetable and budget if appropriate.

F.1.6 Once the post-excavation Project Design or Project Proposal has been accepted, the County Archaeological Officer or his appointed deputy will monitor the progress of the post-excavation project at agreed points. Any significant variation in the project design will be agreed with the County Archaeological Officer.

F.1.7 The results of the project will be published in an appropriate archaeological journal or monograph. The appropriate level of publication will be dependent on the significance of the fieldwork results and will be agreed with the County Archaeological Officer. An OASIS (Online Access to the Index of Archaeological Investigations) form will be completed for each project as per English Heritage guidelines.

F.2 Relevant industry standards and guidelines

F.2.1 Oxford Archaeology (OA) adheres to the national standards in post-excavation procedure as outlined in English Heritage's Management of Research Projects in the Historic Environment (MoRPHE; EH 2006). Furthermore, all post-excavation projects take into account the appropriate regional research frameworks as well as national research agendas such as the Framework for Historic Environment Activities & Programmes in English Heritage (SHAPE; EH 2008).

APPENDIX G. LIST OF SPECIALISTS REGULARLY USED BY OA

G.1.1 Below are two tables, one containing 'in-house' OA specialists, and the other containing a list of specialists who are regularly used by OA.

Internal archaeological specialists used by OA

Specialist	Specialism	Qualifications
Lisa Brown	Early Prehistoric pottery	BA, PGDip, Mlitt, MIfA
Paul Booth	Iron Age and Roman pottery	BA, FSA, MIfA
John Cotter	Medieval and Post Medieval pottery, Clay Pipe and CBM	BA (Hon.), MIfA
Cynthia Poole	CBM and Fired Clay	BA (Hon.), MSc
Edward Biddulph	Roman Pottery	BA (Hon.), MA, MIfA
Ian Scott	Metalwork and Glass	BA (Hon.)
Dan Stansbie	Roman Pottery	BA (Hon.), MA, AIfA
Leigh Allen	Metalwork and worked bone	BA (Hon.), PGDip
Dr Ruth Shaffrey	Worked stone artefacts	BA, PhD
Julian Munby	Architectural Stone	BA, FSA
Dr Rebecca Nicholson	Fish and Bird Bone	BA (Hon.), MA, D.Phil, MIfA, FSA Scot
Elizabeth Huckerby	Pollen and waterlogged plant remains	BA, MSc, MIfA
Lena Strid	Animal bone	MA
Dr Wendy Smith	Charred and waterlogged plant remains	BA, MSc, PhD, MIfA
Andrew Bates	Animal Bone	BA, MA
Dr Denise Druce Pollen	Charred plant remains and charcoal	BA, PhD, MIfA
Liz Stafford	Geoarchaeology and land snails	BA, Msc
Nicola Scott	Archaeological archive deposition	BA
Mike Donnelly	Flint	Bsc, MIfA

External archaeological specialists regularly used by OA

Specialist	Specialism	Qualifications
Lynne Keys	Slag	BA (Hon.)
Quita Mould	Leather	BA, MA
Penelope Walton Rogers, The Anglo	Identification of Medieval Textiles	FSA, Dip.Acc

Specialist	Specialism	Qualifications
Saxon Laboratory		
Dana Goodburn Brown	Conservation	BSc (Hon.), BA, MSc
Steve Allen, York Archaeological Trust	Conservation	BA, MA, MAAIS
Dr Richard McPhail	Soils, especially Micromorphology	BA (Hon.), MSc, PhD
Dana Challinor	Charcoal	MA (Hon.), MSc
Dr Nigel Cameron	Diatoms	BSc, MSc, PhD
Dr David Smith	Insects	BA (Hon.), MA, PhD
Professor Adrian Parker	Phytoliths and pollen	Bsc (Hons.), D.Phil
Dr David Starley	Slag	BSc, PhD
Wendy Carruthers	Charred and waterlogged plant remains	
Dr Sylvia Peglar	Pollen	PhD
Dr John Whittaker	Ostracods and Foraminifera	BA (Hons), PhD
Dr John Crowther	Soil Chemistry	MA, PhD
Dr Martin Bates	Geoarchaeology	Bsc, PhD
Professor Mark Robinson	Insects, molluscs, waterlogged plant remains	MA, PhD
Dr Dan Miles	Dendrochronology	D.Phil, FSA
Dr Jean-luc Schwenninger	Optically Stimulated Luminescence Dating	PhD
Dr David Higgins	Clay Pipe	BA, PhD, MIfA
Dr Hugo Lamdin Wymark	Flint	BSc, PhD, FSA Scot, MIfA

APPENDIX H. DOCUMENTARY ARCHIVING

H.1 Standard methodology – summary

H.1.1 The documentary archive constitutes all the written, drawn, photographic and digital records relating to the set up, fieldwork and post-excavation phases of the project. This documentary archive, together with the artefactual and environmental ecofact archive collectively forms the record of the site. The report is part of the documentary archive, and the archive must provide the evidence that supports the conclusions of the report, but the archive may also include data which exceeds the limitations of research parameters set down for the report and which could be of significant value to future researchers.

H.1.2 At the outset of the project OA Archive department will contact the relevant local receiving museum or archive repository to notify them of the imminent start of a new fieldwork project in their collecting area. Relevant local archiving guidelines will be observed and site codes, which integrate with the receiving repository, will be agreed for labelling of archives and finds.

H.1.3 During the course of the project the Archive department will assist the Project Manager in the management of the archive including the cataloguing and development technique suitable for photographic archive requirements.

H.1.4 The site archive will be security copied either by microfilming and the master sent to English Heritage as part of the National Archaeological Record or it will be digitally scanned and stored in a dedicated archive section of the OA computer network. A copy of the work as microfiche diazo or .pdf/a on disk will be sent to the receiving museums with the hard copy. This will act as a safeguard against the accidental loss and the long-term degeneration of paper records and photographs.

H.1.5 Born digital data where suitable will be printed to hard copy for the receiving museum but if the format is such that it needs maintaining in digital form a copy will be sent to the receiving museum by CD. Back-up copies will be stored on the OA digital network and or posted to the ADS in accordance with AAF & ADS guidelines. In most cases a digital copy of the report will be included in the OASIS project library hosted by ADS.

H.1.6 Prior to deposition the Archive department will contact the museum regarding the size and content of the archive and discuss any retention and dispersal policies which may be applicable in line with local and SMA Guidelines ' Selection, Retention & Dispersal of Archaeological Collections' 1993

H.1.7 The site archive will then be deposited with the relevant receiving museum or repository at the earliest opportunity unless further archaeological work on the site is expected. The documentary archive will include correspondence detailing landowner consent to deposit the artefacts and any copyright licences in accordance with the receiving museum guidelines.

H.1.8 Oxford Archaeology will 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 will provide a licence to the client in all matters directly relating to the project as described in the Written Scheme of Investigation.

H.1.9 OA will advise the client of any such materials supplied in the course of projects which are not OA's copyright.

H.1.10 OA undertakes to respect all requirements for confidentiality about the client's proposals provided that these are clearly stated. It is expected that such conditions shall not unreasonably impede the satisfactory performance of the services required. OA further undertake to keep confidential any conclusions about the likely implications of such proposals for the historic environment. It is expected that clients respect OA's general ethical obligations not to suppress significant archaeological data for an unreasonable period.

H.2 Relevant industry standards and guidelines

H.2.1 At the end of the project the site archive will be ordered, catalogued, labelled and conserved and stored according to the following national guidelines:

H.2.2 The 2007 AAF guide Archaeological Archives A Guide to best practice in creation, compilation, transfer and curation. Brown D.

H.2.3 The IFA Standard & Guidance for the creation, compilation, transfer and deposition of archaeological archives

H.2.4 The UKIC's Guidelines for the preparation of excavation archives for long-term storage

H.2.5 The MGC's Standards in the museum care of archaeological collections

H.2.6 Local museum guidelines such as Museum of London Guidelines: (http://www.museumoflondonarchaeology.org.uk/English/ArchiveResearch/DeposResource) will be adopted where appropriate to the archive collecting area.

H.2.7 The site archive will be prepared to at least the minimum acceptable standard defined in Management of Archaeological Projects 2, English Heritage 1991.

H.3 Relevant OA manual and other supporting documentation

H.3.1 The OA Archives Policy.

Appendix I. Health and Safety

I.1 Summary of Standard Methodology

I.1.1 All work will be undertaken in accordance with the OA Health and Safety Policy (Revision 13, August 2009), the OA Site Safety Procedures Manual, a site-specific Risk Assessment and, if required, Safety Plan or Method Statement. Copies of the site-specific documents will be submitted to the client or their representative for approvals prior to mobilisation, and all relevant H and S documentation will be available on site at all times. The Health and Safety documentation will be read in conjunction with the project WSI.

I.1.2 Where a site is covered by the The Construction (Design and Management) Regulations (2007), all work will be carried out in accordance with the Principal Contractor's Construction Phase Plan.

I.1.3 All work will be carried out according to the requirements of all relevant legislation and guidance, including, but not exclusively.

- The Health and Safety at Work Act (1974),
- Management of Health and Safety at Work Regulations (1999),
- Manual Handling Operations Regulations 1992 (as amended in 2002),
- The Construction (Design and Management) Regulations (2007), and
- The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (1995).

Appendix J. Project Brief

J.1 Brief for Archaeological Excavation and Watching Brief

Project: Western Link Road (WLR) , Quarrendon, Aylesbury
Development: New Road
Planning Application: 03/2937
Local Planning Authority: Aylesbury Vale District Council

Brief issued: 9 September 2010
The case officer for this project is: Alexander (Sandy) Kidd

SUMMARY

Planning permission has been granted subject to an archaeological condition for a link road between the A41 and A412, the construction of which is required to enable development at Berryfields and Weedon Hill MDAs. The WLR runs to the north of a large scheduled ancient monument, Quarrendon medieval settlement and Tudor gardens (County No. BU12004). A series of archaeological evaluations for proposed development in the area has demonstrated that the road runs through a landscape characterised by small-scale Iron Age settlement, numerous Roman settlements associated with roads, trackways and field systems, a medieval settlement pattern of dispersed hamlets and a Tudor landscape characterised by clearance for grazing and the creation of a designed landscape around a mansion house. The WLR route has been selected to minimise its impact on this multi-period historic landscape. The brief sets out the measures required to mitigate the residual unavoidable archaeological impacts through monitoring of groundworks, investigation of important archaeological deposits and subsequent programme of analysis and publication.

1. DEFINITION

The definition of archaeological excavation is a programme of controlled, intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features and structures and, as appropriate, retrieves artefacts, ecofacts and other remains within a specified area or site …. The records made and objects gathered during fieldwork are studied and the results of that study published in detail appropriate to the Project Design." (IFA, 1999)[1]

2. SITE LOCATION

The Western Link Road will run for circa. 2.6km through agricultural land to the north of Aylesbury. The route lies within the upper reaches of Thame Valley crossing areas of river gravels, alluvium and Kimmeridge clays.

3. REQUIREMENTS FOR MITIGATION

A series of archaeological evaluations have demonstrated the existence of numerous distinct sites in the vicinity of the WLR (see Fig. 1):

Site A: Roman nucleated settlement along Akeman Street
Site B: Undated settlement enclosures, possibly Roman on morphological grounds
Site C: Roman "ladder settlement" comprising enclosures along trackway
Site D: Iron Age settlement and field boundaries
Site E: Undated settlement enclosures, probably medieval related to the adjacent SM
Site F: Bronze Age field system and Roman settlement comprising enclosures along ridge-line trackway and a specialised malting
Site G: Early Roman settlement
Site H: Roman settlement
Site I: Early Roman enclosed settlement on trackway
Site J: Water channels feeding Tudor garden

1 An excavation project may be supplemented by non-destructive means of investigation such as geophysical, earthwork, fieldwalking, geochemical and building survey and also by a watching brief during development.

Site K: 'Banjo enclosure', apparently of early Roman date
SM: To the south of the MDA lies a large scheduled ancient monument, Quarrendon medieval settlement and Tudor gardens (County No. BU12004). Elements of the landscape crossed by the WLR notably ridge and furrow, field boundaries, meadows and water management features relate to this site.

Planning Policy Statement 5 (Planning for the Historic Environment) Policy HE12 states that where the loss of the whole or a material part of a heritage asset's significance is justified, local planning authorities should require the developer to record and advance understanding of the significance of the heritage asset before it is lost, using planning conditions or obligations as appropriate. The evidence gathered should be published, the report lodged in the Historic Environment Record and the archive deposited with a local museum – all of which should be completed in a timely manner.

In this case, requirements for archaeological mitigation are secured by means of a condition attached to the planning consent. Field evaluation has enabled the WLR to be routed to avoid the significant known sites. The mitigation strategy is therefore for "strip, map and sample" excavation in the more sensitive western part of the route (areas shaded green on fig) and non-intensive watching brief within the less sensitive eastern section (area shaded grey). Measures for the archaeological investigation must be specified in a "written scheme of investigation" which has been agreed in writing by the County Archaeological Service and approved by the local planning authority prior to commencing development. The "written scheme of investigation" should comprise this brief combined with the archaeological contractor's project design (see below). Archaeological planning conditions will not be discharged until all fieldwork and post-excavation work has been completed, the archive has been deposited and publication secured.

4. ARCHAEOLOGICAL BACKGROUND AND RESEARCH OBJECTIVES

The archaeological and historic landscape context of the Western Link Road has been summarised in the *Buckinghamshire County Structure Plan Review. Northwest of Aylesbury. Historic Environment Sustainability Assessment* (Kidd, 2003), the Berryfields MDA Archaeological Brief and site evaluation/excavation reports, from which this summary is drawn (see bibliography).

NB: Research priorities may need to be reviewed and added to or amended in the light of discoveries during the course of the project.

4.1 Earlier Prehistoric

There is only limited evidence for occupation in the Upper Thame Valley prior to 1st millennium BC, mainly focussed along the streams and on the permeable geologies. The evaluations indicate a generally low potential for early prehistoric remains within the WLR, although a sparse flint scatter and single possible Bronze Age feature were recorded in the southern part of the Berryfields MDA (Cox, 1997). The following basic research objective can be identified:

- Test the hypothesis that the study area was sparsely occupied prior to the Iron Age and characterise any evidence recovered paying particular attention to the nature of the environment and land use noting that even isolated pits (as discovered elsewhere around Aylesbury) may contain useful cultural and environmental evidence.

4.2 Iron Age

The Iron Age saw the construction of a hillfort at Aylesbury (one of a group of such sites built

478000
480000
216000
215000
N
Berryfield
Berryfields House
Berryfields Lodge
Ladymede Cottage
Berryfields Farm
Watching Briefs
Western Link Road
93
92
91
90
89
86
88
87
85
84
83
82
District Centre
Fish Ponds
Scheduled Ancient Monument
Site D
Aylesbury Vale Academy
Fleet Marston
Quarrendon House Farm
Site C
Aylesbury Vale Parkway
Ridge & Furrow
Putlowes Cottages
Sports Field
Site A
Meadows
Stone Bridge
Thomas Hickman School
Putlowes
Haydon Hill
ROMAN ROAD
Railway
PW
CG
PO

Project boundary
Further Trenching 2016
Paradise Orchard SMS area
Completed Areas
SMS Areas
ABPR07-8
AYLBER07
AYLBER10
AYLBER14
QAVC12
Watching Brief Areas
AYLBER10
Quarrendon Fields SM
Preservation in situ
Western Link Road
Strip, map and sample
Watching brief
Roman road

0
500 m
1:7,500 @ A3

X:\a\Aylesbury Berryfields 2010-15\010Geomatics\03 GIS\current\001_projects\2016 WSI\Berryfields_MDA_WSI_Fig1_070716.mxd*leo.heatley*12/07/2016

Fig.1 Aylesbury Berryfields MDA: Paradise Orchard SMS and further trenches in relation to previous archaeological mitigation areas

X:\a\Aylesbury Berryfields 2010-15\010Geomatics\02 CAD\001current\AYLBEEX3_Berryfields_Integral_2016-03-17.dwg(A3 portrait)*AYLBER12*AYLBEEX2*Aylesbury Berryfields*gary.jones* 15 Jun 2016

N

Hardwick Brook

2 cremation burials

Ladymead Cottage

Quarrendon House Farm

Billingsfield Cottages

Site C ladder settlement, preserved in situ

2 inhumation burials

Site A preserved in situ

Akeman Street

Waterhole/roadside shrine?

Timbers located here

River Thame

Iron age/Romano British archaeology, interpreted from geophysics
Roman landscape interpretation
Ladder settlement, interpreted from geophysics
Medieval/post medieval archaeology
Water Course
Area not yet developed
Public open space
Development parcel
Limit of excavation
Proposed further trenching
Proposed SMS area
Limit of excavation

CHECKED BY: DRAFT

0 200 m

Scale at A3 1:4000

Figure 2: Plan of Aylesbury Berryfields MDA with additional areas of SMS excavation and further trenching

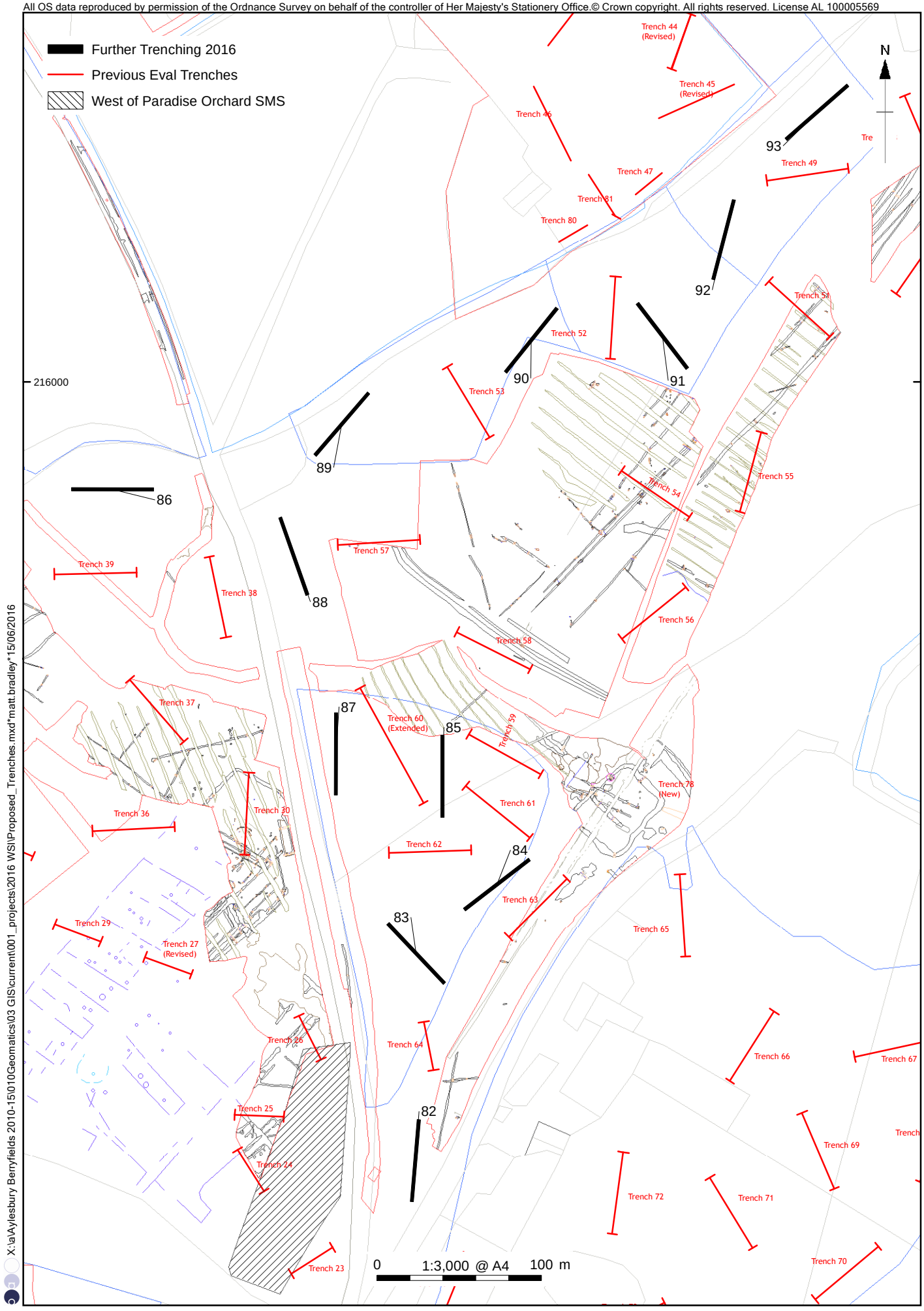

Figure 3: Detailed plan of previous archaeological work with proposed area of Strip, Map and Sample and further trench locations

Head Office/Registered Office/ OA South

Janus House
Osney Mead
Oxford OX2 0ES

t: +44 (0) 1865 263 800
f: +44 (0) 1865 793 496
e: info@oxfordarchaeology.com
w: http://oxfordarchaeology.com

OA North

Mill 3
Moor Lane
Lancaster LA1 1QD

t: +44 (0) 1524 541 000
f: +44 (0) 1524 848 606
e: oanorth@oxfordarchaeology.com
w: http://oxfordarchaeology.com

OA East

15 Trafalgar Way
Bar Hill
Cambridgeshire
CB23 8SQ

t: +44 (0) 1223 850500
e: oaeast@oxfordarchaeology.com
w: http://oxfordarchaeology.com