Land at Boulton Moor, Chellaston, Derby (Phase 4):

Written Scheme of Investigation for further archaeological mitigation

Written Scheme of Investigation

oxfordarchaeology
southsouthsouth

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Client: CGMS Consulting on behalf of Persimmon Homes Ltd

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Written Scheme of Investigation

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Land at Boulton Moor, Chellaston, Derby (Phase 4)

Written Scheme of Investigation for Further Archaeological Mitigation

Centred on NGR: SK 3965 3131

Table of Contents

List of Figures

1 Introduction

1.1 Project details

1.1.1 Oxford Archaeology (OA) was commissioned by CGMS on behalf of Persimmon Homes Ltd to undertake an archaeological evaluation of the site of a proposed residential development.

1.1.2 The work was undertaken as a condition of Planning Permission (planning ref: 9/2015/1104 South Derbyshire District Council). Following the NPPF the planning authority require that evaluation by trial trenching be undertaken in order to ascertain whether any archaeological remains are present and, if so, to ascertain their character and extent. This was the first stage of a conditioned scheme to assess the presence and as appropriate significance of any surviving heritage assets.

1.1.3 Although the Local Planning Authority had not set a brief for the work, discussions with CGMS established the scope of work required, and OA provided a Written Scheme of Investigations (WSI) outlining how OA would implement those requirements (OA 2017).

1.1.4 Immediately following the excavation and recording of the evaluation trenches, and while these were still open, one trench was extended to examine the context of a pit of prehistoric date, and revealed a pit alignment of later Bronze Age or Iron Age date. The full evaluation report is still in preparation, but a summary of the results has been provided to Stephen Baker Planning Archaeologist of Derbyshire County Council.

1.1.5 Because of the survival of significant heritage assets, further mitigation excavation and recording has been requested by the planning authority, and is dealt with by this further WSI. In the light of the timescale for development, Stephen Baker has agreed that further mitigation can be undertaken in advance of completion of the evaluation report.

1.1.6 All work will be undertaken in accordance with the National Planning Policy Framework Section 12 (DCMS 2015), with the MoRPHE Project Manager's guide (EH 2006), and in accordance with the Code of Conduct of the Chartered Institute for Archaeologists, of which OA is a Registered Organisation. The archaeological works will be carried out in accordance with the Standards and guidance for archaeological excavation and archiving (CIfA 2014a; CifA 2014b).

1.2 Location, geology and topography

1.2.1 The site lies south of Alvaston and north-east of Chellaston, Derby (Figure I). The site (Phase 4) consists of one field, oriented east to west with a total area of c. 3.6 hectares (Figure I).

1.2.2 The site is bordered by housing to the north, Snelsmoor Lane to the east and south and agricultural land to the west. (Figure 1). The land falls from south to the north from around 55m aOD to 42m aOD.

1.2.3 The British Geological Survey indicates that the underlying geology of the area is Branscombe Mudstone Formation, overlain by sand and gravel in the northern part of the site (Allenton Terrace Deposit), by Head (a combination of sand and gravel, silt and clay) towards the centre and south of the site and by Oadby Member Diamicton in the very south of the site

2 Archaeological and Historical Background and Potential

2.1 Archaeological and historical background

2.1.1 An archaeological desk-based assessment has been prepared by University of Leicester Archaeological Services-(ULAS) for the area to the west (Hunt 2013). Geophysical survey has been undertaken for an earlier scheme but with inconclusive results (GSB Prospection 2003). Trial trenching of Phases I -2 to the north have located archaeological remains of Iron Age date including a pit alignment dated to the Middle Iron Age (Hunt 2014a; 2014b). Some undated archaeological features were located in Phase 2 immediately to the north of Phase 4.

2.1.2 The Derbyshire HER indicates that the area around the southern part of Derby is rich in prehistoric archaeology, with two scheduled sites close to the assessment area, including the Swarkestone Lows barrow cemetery, which lies around 2.5km south-west of Boulton Moor.

2.1.3 All work will be considered in light of the National research context (English Heritage 1991 and 1997), the East Midlands Research Framework (Cooper ed. 2006) and strategy (Knight *et al.* 2012), along with targeting national research aims. Potential research objectives that this scheme might contribute towards include:

Neolithic and Early - Middle Bronze Age

2.1.4 The development of ceremonial monuments and their environs — the area contains several prehistoric ceremonial landscapes and the scheme may uncover archaeological assets associated with these. Palaeo-environmental evidence may provide information on agricultural practices and land use.

Middle - Late Iron Age

2.1.5 There are Iron Age settlements and a pit alignment in the vicinity of the scheme. Information on the sequence and chronology of settlements and pattern of land-division may be recovered, and palaeo-environmental evidence could provide information on agricultural practices and land use. Artefacts can provide evidence for evidence for craft industry and exchange across broad landscape areas.

The Roman Period

2.1.6 There are several Roman sites within the vicinity including enclosures and a Roman road. The evaluations may contribute to knowledge on Iron Age — Roman transitions in rural settlement, landscape and society. Artefacts may identify trade links and economy.

2.2 Summary of results of the Phase 4 evaluation.

2.2.1 The features uncovered by evaluation are shown in Figure 2, and proved to be very few. These included a large modern pit in Trench 3, dated by post-medieval brick and a glazed whiteware pottery rimsherd, and several post-medieval ditches that were clearly associated with standing field boundaries, for example those in Trenches 10, 7 and 13 (Fig. 2).

2.2.2 Otherwise there was a series of faint linear soilmarks tentatively interpreted as the results of cultivation, and several discrete soilmarks, of which the only clearly man-made example was pit 1503 with a brown fill and flecks of charcoal in Trench 15. A number of other soilmarks, mostly of irregular shape, were tested, but proved to be tree-throw holes.

2.2.3 Pit 1503 (Fig. 3) contained small body sherds from two handmade vessels tempered with quartzite, one thick-walled, the other thin-walled, frequent burnt pebbles and a fragment of soft, grey fine-grained stone possibly used either as a whetstone or a rubbing stone.

2.2.4 The sherds of pottery from the pit prompted the decision to enlarge Trench 15, and an area 10m by 13m was stripped, revealing three further pits and the edge of a fourth forming an east-west line with the one already excavated, plus two possible gullies and one other possible pit not aligned with the rest. A second of the pits in line, numbered 1507, was half-sectioned, and yielded two small sherd of thin-walled quartzite-tempered pottery (Fig. 3). Pits 1503 and 1507 were respectively 0.3m and 0.53m deep.

2.2.5 As the line of pits was clearly continuing beyond the edges of the area, this was enlarged to 20m by up to 23m, increasing the number of pits in line to eight (Fig. 3). The pits in the line were all sub-circular and around 1.4m across, and were generally spaced just under 1m apart (edge to edge); some had a brown fill like 1503, but the top fill of others was a light grey silt similar to that filling natural irregular soilmarks. Two of these pits appear to be cut by a slightly sinuous linear feature on a north-east to south-west alignment, though this relationship is not certain.

2.2.6 South of the pit-alignment at least two further probable pits were exposed, one of similar size to those in the alignment, the other circular but smaller. There are also several other circular soilmarks here that may be archaeological features rather than natural soil patches.

2.2.7 The two possible gullies previously exposed proved to be parts of a single linear feature on a north-east to south-west alignment, with a curving spur on the east side. A section across this was started to test whether it had any depth, and confirmed that it is not simply a thin soilmark, but was not bottomed.

2.2.8 Area excavation also confirmed that the site had been subject to ridge-and-furrow cultivation (Fig. 3). The furrows were wide but very shallow, and a rimsherd of Midlands yellow ware and fragments of ceramic building material (CBM) were recovered from furrow 1511 after machining (see Fig. 3), confirming a post-medieval date for this cultivation.

2.2.9 Following the extension the alignment of the pits was projected, and a faint grey silty soilmark originally thought to be natural was seen in Trench 14 on the projected alignment. This was excavated, and proved to be a pit, larger than those excavated in Trench 15, being 1.8m across and around 0.3m deep, which did not produce any pottery, but did contain a lump of burnt flint. This perhaps indicates that the alignment continues west up to and beyond Trench 14, a distance of at least 88m.

3 Project Aims

3.1 General

3.1.1 The main objectives of the excavation will be:

- To identify the presence/absence of any archaeological deposits.
- To establish the character, extent and date range for any archaeological deposits to be affected by the proposed ground works.
- To produce an archive and report of any results.

3.2 Specific aims and objectives

3.2.1 Due to the relative paucity of archaeological remains from the pits so far examined (one completely excavated and two half-sectioned), and the absence of other features except within the area in Trench 15, it has been suggested that the alignment represents a boundary remote from settlement. The principal specific aims of the further mitigation have therefore been defined as:

- To establish the extent of the prehistoric pit alignment and to clarify its date and relationship with other features.
- To investigate the probable other pits and small pits or postholes south of the pit alignment in the area centred upon Trench 15, and attempt to determine if these are genuine, and if so, to date and characterise them, and to establish their chronological relationship to the adjacent pit-alignment.
- To establish the limits, date and character of one or more sinuous linear features crossing the area centred upon Trench 15, and its relationship to the pit-alignment.
- A further aim will be to establish whether the Iron Age pit-alignment is contemporary with that discovered in the Phase 1 evaluation to the north, or is of earlier date.

4 Project Specific Excavation and Recording Methodology

4.1 Scope of works

4.1.1 The further mitigation will comprise five areas measuring 10m x 10m, and two measuring 20m by 5m, of which one may thereafter be extended. These areas will be laid out as indicated on Figure 4. Four of the 10m squares are intended to establish the limits of the pit-alignment to the east and west, and one of the 20m by 5m areas both to confirm that the pit alignment is continuing westwards from the area centred upon Trench 15, and to expose more of the linear feature. The last 10m square is also targeted upon the linear feature within the Trench 15 area to establish its limits at the north-east end.

4.1.2 The other 5m x 20m area is to enlarge the area centred upon Trench 15 on the south-east, to clarify the extent and character of the features exposed south of the pit-alignment. This area will be further expanded if necessary to establish the limits of activity here.

4.1.3 Based upon the size and spacing of the pits revealed in Trenches 15 and 14, it is likely that for every 100m over which the pit alignment extends, there may be around 40 pits. It is anticipated that a 10m square will expose four pits in line, and one 5m wide two pits. Stripping of the areas is therefore likely to expose a further 18 pits of the pit-alignment in addition to the 8 already exposed, a total of 26 pits.

4.1.4 A 50% sample of the exposed pits of the pit-alignment will be excavated, comprising a total of up to 10 further pits from the alignment, in addition to the 3 already investigated.

4.1.5 In addition, the two most convincing pits among the soilmarks exposed south of the pit-alignment in the area centred upon Trench 15 will be 100% excavated. Should further pits or postholes be found in the newly-exposed area, a 50% sample of these will be excavated and recorded by hand, unless otherwise agreed at a site meeting.

4.1.6 Two or three interventions will also be excavated into the linear feature crossing the area centred upon Trench 15, including one to test the relationship between it and one of the pits of the pit-alignment (see Fig. 3).

4.1.7 The work will be monitored by Planning Archaeologist Stephen Baker of Derbyshire County Council and Mike Dawson of CGMS.

4.2 Programme

4.2.1 It is anticipated that the fieldwork will take up to 10 days to complete, by a team consisting of Project Officer Mariusz Gorniak (SSSTS) directing 3 Project Archaeologists, under the management of Tim Allen MCIfA, Senior Project Manager.

4.2.2 All fieldwork undertaken by Oxford Archaeology (South) is overseen by the Head of Fieldwork, David Score MCIfA.

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).

4.3.2 Site specific methodologies will be as follows:

(i) Prior to machining general photographs of the site areas will be taken.

(ii) Machining will be carried out working from the known to the unknown, ie the areas immediately adjacent to Trenches 14 and 15 will be excavated first, and then that south of Trench 10. Provided the pit-alignment is continuing westwards, the square adjacent to Trench 17 will be excavated next, and if the pit-alignment is continuing, that south of Trench 11 last.

(iii) Should any of these areas fail to find the pit-alignment, the areas as yet undug will be moved closer to the last area in which the alignment was present, in order to establish its limits.

(iv) Topsoil and overburden will be removed under continuous archaeological supervision using a mechanical excavator fitted with a toothless bucket. The machining will be carried out carefully in level spits. Trenches will be excavated down to the top of archaeological deposits or natural undisturbed ground, whichever is reached first. All excavation by machine and hand will be undertaken with a view to avoid damage to archaeological deposits or features.

(v) Due to this careful approach to machining, it may be necessary to clean stripped areas by hand once machine excavation has finished to ensure that all archaeological features have been fully exposed.

(vi) Any archaeological features or deposits located will be planned at an appropriate scale.

(vii) Archaeological deposits will be sample-excavated by hand as described in sections 4.1.3-5 above, to establish the stratigraphic and chronological sequence, recognising and excavating structural evidence and recovering economic, artefactual and environmental evidence. Should buried palaeosols or waterlogged deposits be encountered, OA's environmental specialist team will be consulted and invited to visit site if appropriate for further advice.

(viii) Measured drawings of all archaeological features will be prepared at a scale of 1:20 and tied into an overall site plan. All plans will be tied into the Ordnance Survey National Grid. Relative spot heights will be taken as appropriate.

(ix) Sections of any excavated archaeological features will be drawn at an appropriate scale. A representative section of at least one face of each area will be recorded should it differ from that already recorded in the adjacent evaluation trenches. All

sections will be levelled and tied to the Ordnance Survey Datum, or a permanent fixed benchmark.

(x) Trench locations will be recorded by GPS and transferred to a CAD plan tied in to the Ordnance Survey National Grid.

(xi) Any human remains encountered will initially be left *in situ.* A site meeting will be convened with the Planning Archaeologist Steve Baker and the CGMS consultant, and human remains will only be removed if necessary for their protection, following the procurement of a Ministry of Justice licence and in compliance with relevant environmental health regulations

(xii) Should structures, features or finds be revealed that appear to merit preservation *in situ,* appropriate measures to protect them from deterioration will be carried out following discussion on site and instruction from the Planning Archaeologist and the CGMS consultant.

(xiii) In the event that unforeseen archaeological discoveries are made during this further archaeological mitigation, such as complex or fragile significant deposits within any of the excavated features, a contingency may be required. The Planning Archaeologist and the CGMS consultant will be informed, and the appropriate methodology for excavation, recording, post-excavation assessment and analysis and (if appropriate) conservation will be discussed and agreed with them on site. If appropriate a supplementary method statement will be prepared, and additional expert resources brought in to assist. A contingency will only be initiated after consultation with the CGMS consultant and Stephen Baker acting for the Planning Authority (see section 7 below).

(xiv) The areas will be handed over to the Principal Contractor for construction at the end of the archaeological mitigation programme.

5 Project Specific Reporting and Archive Methodology

5.1 Programme

5.1.1 The report upon the Further Archaeological Mitigation will be combined with that upon the evaluation at the conclusion of fieldwork, and will be completed within four weeks of the completion of the fieldwork, unless otherwise agreed with the Planning Archaeologist and the CGMS consultant.

5.1.2 Bound copies of the completed report(s) will be provided to the client, Derbyshire County Council and the HER. A copy of the report in Adobe Acrobat (.pdf) format will also be provided.

5.1.3 A summary report will be submitted to a suitable regional archaeological journal following completion of the fieldwork. A full report will be submitted to a national or period journal if the results are deemed by the Planning Archaeologist Stephen Baker and the CGMS consultant to be of sufficient significance.

5.2 Content

5.2.1 The content of this report will be as defined in Appendix F.

5.3 Specialist input

5.3.1 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.

5.4 Archive

5.4.1 Archiving will be carried out in accordance with the CIFA Standards and Guidance for the creation, compilation, transfer and deposition of archaeological archives (CifA 2014b). A summary of OA's general approach to documentary archiving can be found in Appendix H.

5.4.2 The site archive will be deposited with Derby City Museums following completion of the project.

5.4.3 Contact will be made with Derby City Museum using the notification form in the Museums in Derbyshire guidelines (appendix I), copied to the DCC Development Control archaeologist as part of the WSI submission.

5.4.4 If the evaluation is negative there will be no archive deposition and the report will be submitted to the DCC HER.

5.4.5 The results of the evaluation will be uploaded onto OASIS following completion and approval of the report.

5.4.6 If the evaluation generates significant results then a Derby Museum accession number will be drawn and deposited in line with their guidelines.

5.4.7 The DCC Development Control archaeologist will be notified by email on final deposition.

6 Health and Safety

6.1 Roles and responsibilities

6.1.1 The Senior Project Manager, Tim Allen, has responsibility for ensuring that safe systems of work are adhered to on site. He delegates elements of this responsibility to the Project Officer Mariusz Gorniak, who will be responsible for implementing these on a day to day basis.

6.1.2 The Director with responsibility for Health and Safety at OA is Dan Poore Tech IOSH (Chief Business Officer), advised by the Health and Safety Advisor for the OA South office, 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 Health and Safety file will be available to view at any time.

6.3 Monitoring of works

6.3.1 Unlimited access to monitor the project will be available to both the Client and his representatives from CGMS, and to the Planning Archaeologist Stephen Baker of Derbyshire County Council, subject to the health and safety requirements of the site.

6.3.2 All monitoring shall be carried out in accordance with the CIfA Standard and Guidance for Archaeological Excavation (2014a).

6.3.3 Internal monitoring will be carried out by OA's project manager.

7 Contingencies And Unforseen Circumstances

7.1.1 In the event that unforeseen archaeological discoveries are made during the project, OA shall inform the Persimmon site agent/project manager, Mike Dawson of CGMS and the Planning Archaeologist Stephen Baker, and if required prepare a short written statement with plan detailing the archaeological evidence. Following assessment of the archaeological remains by the Planning Archaeologist, OA shall, if required by CGMS, implement an amended scheme of investigation on behalf of the client as appropriate.

8 References

Chartered Institute for Archaeologists, 2014a Standard and guidance for archaeological excavation, Reading, http://www.archaeologists.net/sites/default/files/node-files/IfASG-Excavation.pdf

Chartered Institute for Archaeologists, 2014b, Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives, Chartered Institute for Archaeologists

Cooper, N J, (ed) 2006 *The Archaeology of the East Midlands An Archaeological Resource Assessment and Research Agenda,* Leicester Archaeology Monograph **13**

DCMS, 2015 National Policy Planning Framework, Department of Culture Media and Sport, London

English Heritage, 2006 Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide, Swindon, Centre for Archaeology Guidelines

GSB Prospection, 2003 Geophysical Survey Report, Boulton Moor, Derbyshire GSB Report 2003/97

Hunt, L, 2013 An archaeological desk-based assessment for land at Snelmoor Grange, Boulton Moor, Derby (SK 386 315), ULAS Report 2013-028

Hunt, L, 2014a An archaeological field evaluation at Boulton Moor (Phase I), Snelsmoor Lane, Elvaston, Derbyshire (SK 396 316), ULAS Report 2014-101

Hunt, Ia., 2014b An archaeological field evaluation at Boulton Moor (Phase 2), Snelsmoor Lane, Elvaston, Derbyshire (SK 396 316), ULAS Report 2014-198

Knight, D, Vyner, B and Allen, C, 2012, *East Midlands Heritage. An Updated Research Agenda and Strategv for the Historic Environment of the East Midlands,* Nottingham Archaeological Monographs **6**, University of Nottingham and York Archaeological Trust

Oxford Archaeology, 2017 Boulton Moor, Chellaston, Derby, Derbyshire: Written Scheme of Investigations for evaluation by trenching

ULAS, 2015 Written Scheme of Investigation for archaeological work: Land at Boulton Moor, Chellaston, Derby (Phase 4)

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 photographic record, illustrating in both detail and general context the principal features and finds discovered will be maintained. The photographic record will also include 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 Standard methodology - summary

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 Historic England 2015. 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.2.9 English Heritage 2014. Animal Bones and Archaeology. Guidelines for Best Practice.

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 Standard methodology - summary

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 field walking.

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 Standard methodology - summary

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 CIfA (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 CIfA (Cox 2001) and by the Association of Diocesan and Cathedral Archaeologists and APABE (2010) 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, but excavated in spits or 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 Advisory Panel on the Archaeology of Burials in England, 2015 Large Burial Grounds. Guidance on sampling in archaeological fieldwork projects

E.2.2 Association of Diocesan and Cathedral Archaeologists and APABE. 2010 Archaeology and Burial Vaults. A guidance note for churches. Guidance Note 2

E.2.3 British Association of Biological Anthropology and Osteoarchaeology. 2011 Code of Practice.

E.2.4 British Association of Biological Anthropology and Osteoarchaeology. 2011 Code of Ethics.

E.2.5 Cox, M, 2001 Crypt archaeology. An approach. CIfA Paper No. 3

E.2.6 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.2.7 McKinley, J, and Roberts, C, 1993 Excavation and post-excavation treatment of cremated and inhumed human remains, CIfA Technical Paper No. 13

E.2.8 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, CIfA Technical Paper No. 7. 9-13.

E.2.9 Mytum, H, 2000 Recording and Analysing Graveyards. CBA Handbook No. 15.

E.2.10 Reeve, J, and Adams, M, 1993 The Spitalfields Project. Volume I – The Archaeology Across the Styx. CBA Research Report No. 85

E.2.11 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 Standard methodology - summary

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 (e.g. 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 external specialists who are regularly used by OA.

Internal archaeological specialists used by OA

Specialist	Specialism	Qualifications
Lisa Brown	Early Prehistoric pottery	BA, PGDip, MLitt, MCIfA
Paul Booth	Iron Age and Roman pottery	BA, FSA, MCIfA
John Cotter	Medieval and Post Medieval pottery, Clay Pipe and CBM	BA (Hons), MCIfA
Cynthia Poole	CBM and Fired Clay	BA (Hons), MSc
Edward Biddulph	Roman Pottery	BA (Hons), MA, MCIfA
Ian Scott	Metalwork and Glass	BA (Hons)
Leigh Allen	Metalwork and worked bone	BA (Hons), PGDip
Dr Ruth Shaffrey	Worked stone artefacts	BA, PhD
Julian Munby	Architectural Stone	BA, FSA
Dr Rebecca Nicholson	Fish and Bird Bone	BA (Hons), MA, D.Phil, MCIfA, FSA Scot
Mairead Rutherford	Pollen	BSc, MSc

Specialist	Specialism	Qualifications
Lee Broderick	Animal bone	BA (hons), MA, MSc, FZG, SAC Dip (ecology)
Sheila Boardman	Charred plant remains and charcoal	BA (Hons)
Julia Meen	Charred and waterlogged plant remains and charcoal	BSc (Hons), MA
Dr Denise Druce	Charred plant remains, charcoal and pollen	BA (Hons), PhD, MCIfA
Elizabeth Stafford	Geoarchaeology and land snails	BA (Hons), MSc
Carl Champness	Geoarchaeology	BA (Hons), MSc
Dr Ian Smith	Animal Bone	BSc, PhD
Nicola Scott	Archaeological archive deposition	BA
Mike Donnelly	Flint	BSc, MCIfA
Dr Louise Loe	Human Bone	D.Phil, BA, MCIfA
Helen Webb	Human Bone	MSc, BSc
Mark Gibson	Human Bone	MSc, BA
Dr Lauren McIntyre	Human Bone	D.Phil, MSc, BSc

External archaeological specialists regularly used by OA

Specialist	Specialism	Qualifications
Lynne Keys	Slag	BA (Hons)
Quita Mould	Leather	BA, MA
Penelope Walton Rogers, The Anglo Saxon Laboratory	Identification of Medieval Textiles	FSA, Dip.Acc
Dana Goodburn Brown	Conservation	BSc (Hons), BA, MSc
Steve Allen, York Archaeological Trust	Conservation	BA, MA, MAAIS
Dr Richard Macphail	Soils, especially Micromorphology	BA (Hons), MSc, PhD
Dana Challinor	Charcoal	MA, MSc
Dr Nigel Cameron	Diatoms	BSc, MSc, PhD
Dr David Smith	Insects	BA (Hons), MA, PhD
Professor Adrian Parker	Phytoliths and pollen	BSc (Hons), D.Phil
Dr David Starley	Metalworking Slag	BSc (Hons), PhD
Wendy Carruthers	Charred and waterlogged plant remains	BA (Hons)

Specialist	Specialism	Qualifications
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
Dr Dan Miles	Dendrochronology	D.Phil, FSA
Dr Jean-Luc Schwenninger	Optically Stimulated Luminescence Dating	PhD
Dr David Higgins	Clay Pipe	BA, PhD, MCIfA
Dr Hugo Anderson-Wymark	Flint	BSc, PhD, FSA Scot, MCIfA
Dr Damian Goodburn-Brown	Ancient Woodwork	BA, PhD, ACIfA

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 CIfA 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 Standard Methodology - summary

I.1.1 All work will be undertaken in accordance with the OA Health and Safety Policy (Revision 19, July 2016), 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 project falls under the Construction (Design and Management) Regulations (2015), all work will be carried out in accordance with the Principal Contractor's Construction Phase Plan (CPP).

I.2 Relevant industry standards and guidelines

I.2.1 All work will be carried out according to the requirements of all relevant legislation and guidance, including, but not exclusively:

I.2.2 The Health and Safety at Work Act (1974).

I.2.3 Management of Health and Safety at Work Regulations (1999).

I.2.4 Manual Handling Operations Regulations 1992 (as amended).

I.2.5 The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (2013).

I.2.6 The Construction (Design and Management) Regulations (2015).

I.3 Relevant OA manual and other supporting documentation

I.3.1 The OA Health and Safety Policy.

I.3.2 The OA Site Safety Procedures Manual.

I.3.3 The OA Risk Assessment templates.

I.3.4 The OA Method Statement template.

I.3.5 The OA Construction Phase Plan template

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Figure 1: Site location

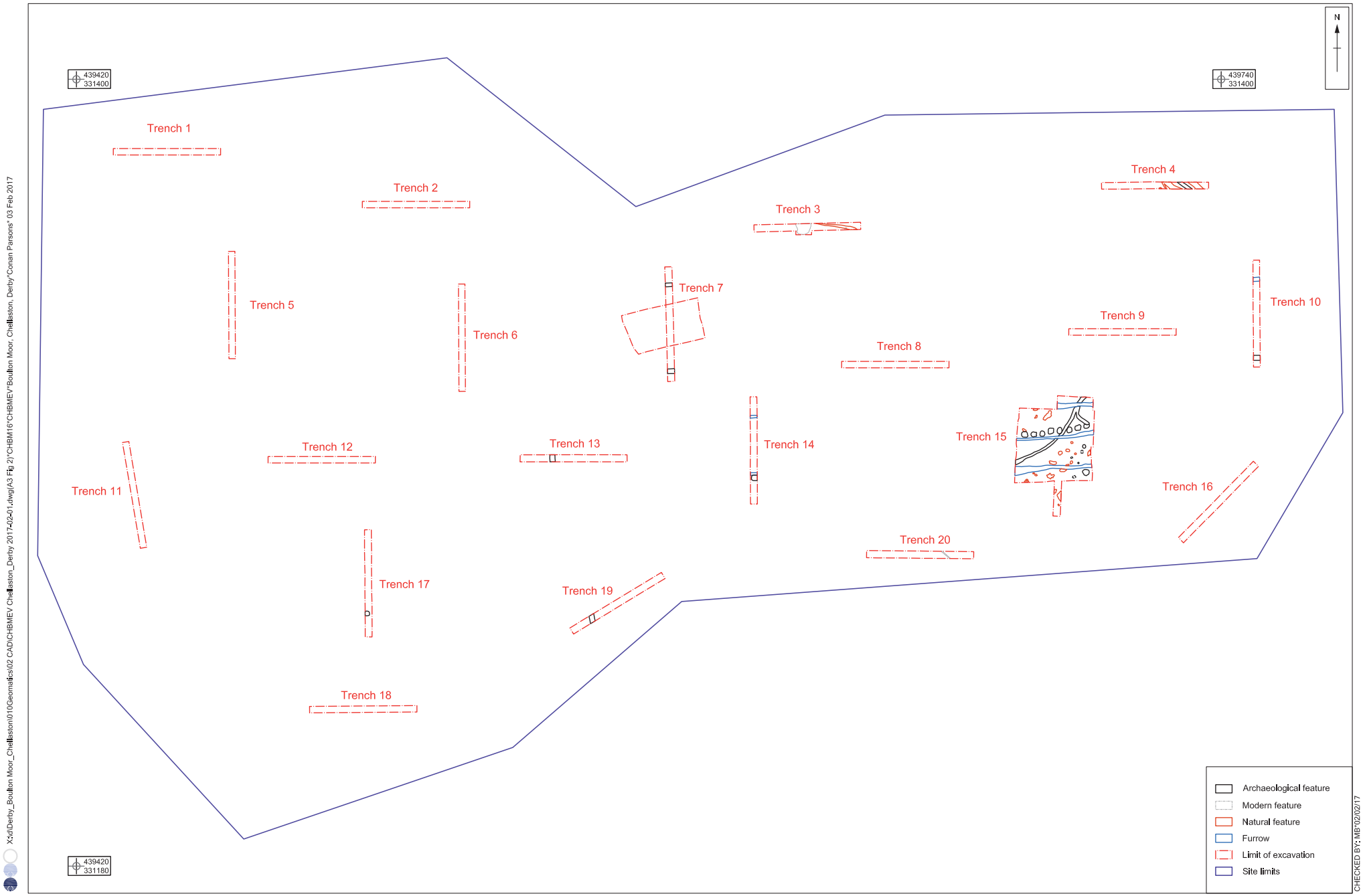
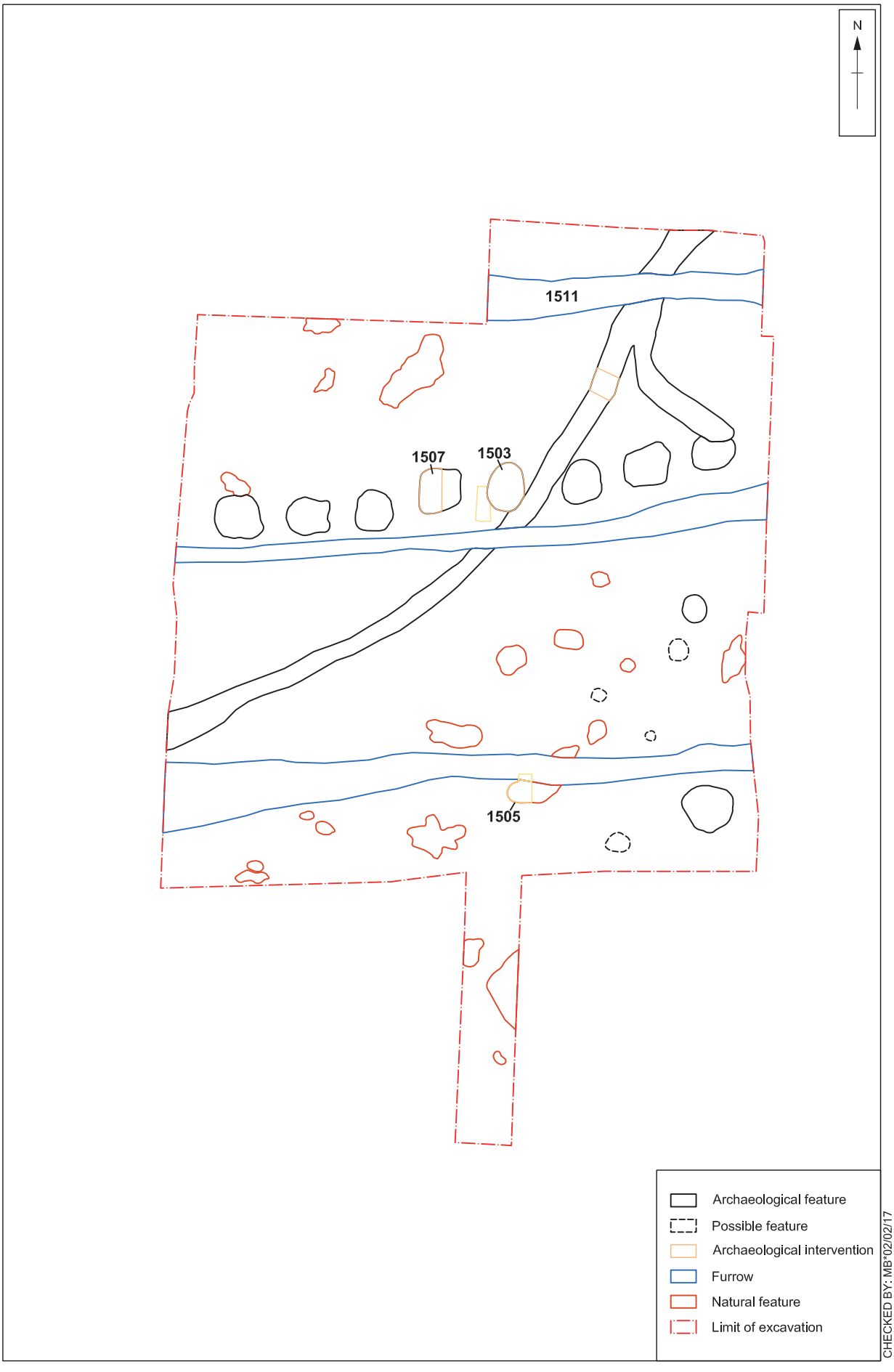


Figure 2: Plan of trenches showing plotted archaeological features



X:\d\Derby_Boulton Moor_Chellaston\010Geomatics\02 CAD\CHBMEV Chellaston_Derby 2017-02-01.dwg(A4 Fig 3)*CHBM16*CHBMEV*Boulton Moor, Chellaston, Derby*conan.parsons* 03 Feb 2017

Figure 3: Detailed plan of area centered on Trench 15

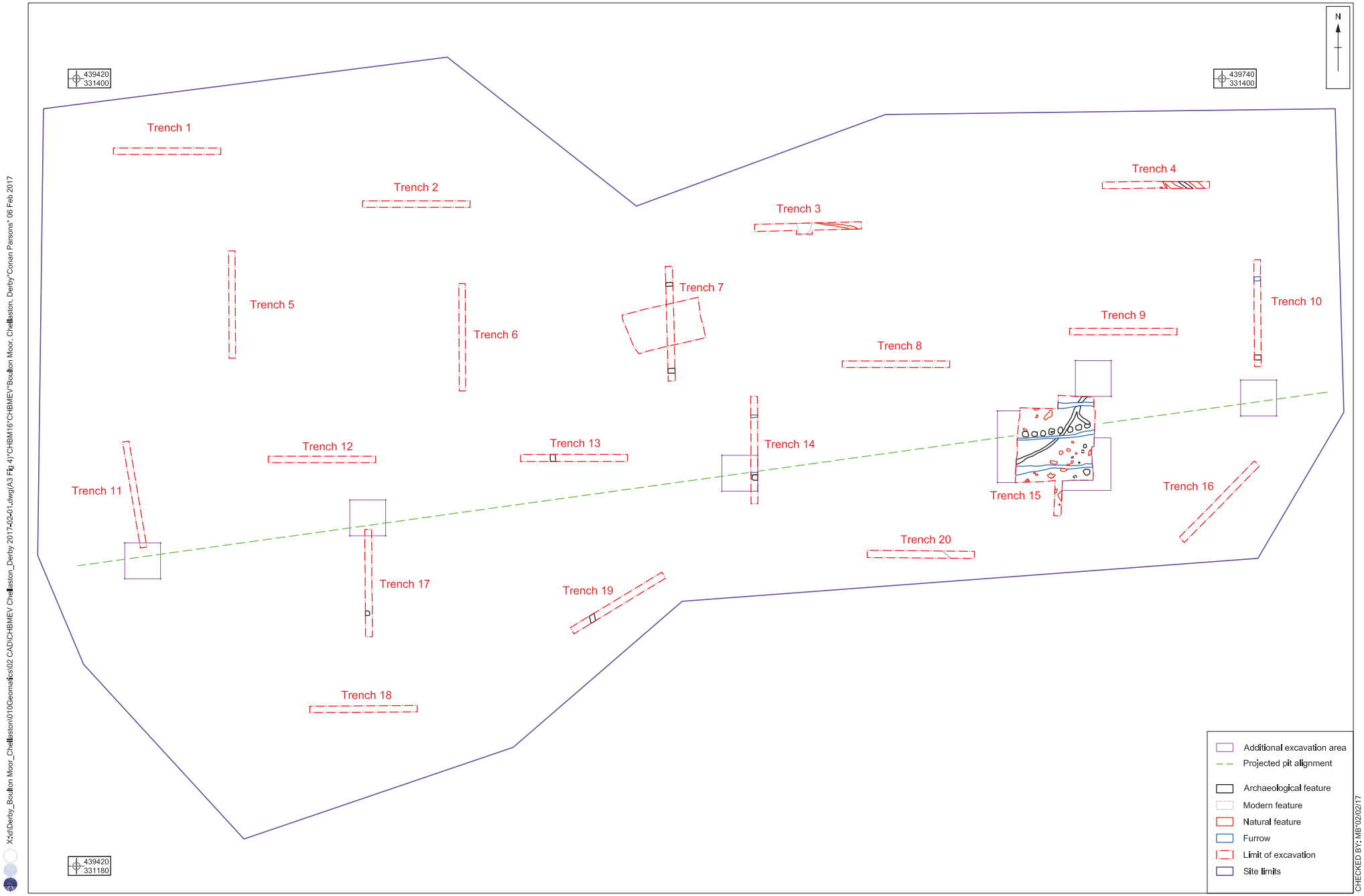


Figure 4 : Evaluation trenches and archaeological features, showing proposed additional areas.

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