



**OAKFORD
ARCHAEOLOGY**

**Archaeological monitoring and recording during the
construction of a new heating distribution network.
Phase I: Eon Energy Centre to Tillhouse Road,
Cranbrook, Devon**



*on behalf of
the client*

Report No. 22-11

Project No. 1783

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OAKFORD ARCHAEOLOGY

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Summary

A programme of archaeological monitoring and recording was carried out by Oakford Archaeology between May and October 2021 during the construction of a new heating distribution network from the Eon Energy Centre to Tillhouse Road, Cranbrook, Devon (SX 9971 9437 to SY 0086 9524). Archaeological monitoring of the works established that there was an absence of archaeological features or deposits within the exposed working corridor of the new heating distribution network.

1. INTRODUCTION

A programme of intermittent archaeological monitoring and recording was carried out by Oakford Archaeology (OA) between May and October 2021 during the construction of a new heating distribution network from the Eon Energy Centre to Tillhouse Road, Cranbrook, Devon (Fig. 1, SX 9971 9437 to SY 0086 9524). The work was required by East Devon District Council, as advised by the Devon County Historic Environment Team (DCHET).

1.1 The route

The trenching (Fig. 2) measures approximately 1.5km and forms part of a larger heating distribution network across the area that will connect Cranbrook and the new housing developments on its eastern edge. From the Eon Energy Centre (SX 9971 9437) the trenching follows the B3174 London Road in a north-easterly direction, past its junctions with Tresbeare and Parsons Lane, and up to a point just short of a small brook (SY 0067 9537) crossing the line of the road. The ground rises gently along the stretch up to Tresbeare Lane from 17m AOD up to 32m AOD, dropping very slightly before rising along the stretch by Parsons Lane. The last stretch between Parsons Lane and the brook drops gently to approximately 22m AOD.

1.2 Geology

The geology of the area varies along the pipeline and consists of Dawlish Sandstone Formation, sedimentary bedrock formed approximately 252 to 299 million years ago in the Permian Period, at the western end, crossing through to Aylesbeare Mudstone Group, sedimentary bedrock formed approximately 247 to 252 million years ago in the Triassic Period, between Tresbeare and Parsons Lane. At both ends these deposits give rise to alluvial clay, silt, sand and gravel, superficial deposits formed up to 2 million years ago in the Quaternary Period.¹

1.2 Archaeological and historical background

The proposed work lies in an area of high archaeological potential, where extensive evidence for prehistoric, Romano-British and later activity has been previously identified. London Road represents the route of the Roman road that extended between Exeter and Honiton, while investigations in the Mosshayne Farm, Hayes Farm and Cranbrook areas have identified features, deposits and finds relating to prehistoric and later settlement, agricultural and funerary activity. Features recorded include a burnt mound, ring ditches, post-rings, enclosures, trackways and linear ditches associated with early field systems in the area. Surface artefact collection in the fields has recorded a high concentration of prehistoric worked flint, which date from the Mesolithic through to the late Bronze Age period.

2. AIMS

The principal aim of the project is to investigate and record any buried archaeological deposits exposed during groundworks associated with the development, and to report on the results of the project, as appropriate.

¹ www.bgs.ac.uk.

3. METHODOLOGY

The work was undertaken in accordance with a brief received from the DCHET and confirmed in an e-mail dated 07-05-2021, and in accordance with a Written Scheme of Investigation prepared by OA (2021), submitted to and approved by the DCHET. This document is included as Appendix 1.

In those areas subject to continuous monitoring machine excavation was undertaken under archaeological control using a 360° mechanical excavator fitted with toothless grading bucket. Topsoil and underlying deposits were removed to the level of either natural subsoil, or the top of archaeological deposits (whichever was higher). Areas of archaeological survival were then cleaned by hand, investigated and recorded.

The standard OA recording system was employed; stratigraphic information was recorded on *pro-forma* context record sheets and individual trench recording forms, plans and sections for each trench were drawn at a scale of 1:10, 1:20 or 1:50 as appropriate and a detailed black and white print and colour (digital) photographic record was made. Registers were maintained for photographs, drawings and context sheets on *pro forma* sheets.

4. RESULTS (Fig. 2, Pls. 1-14)

The trench route is approximately 1.5km long and a number of monitoring visits were made during or immediately after the excavation of the trench corridor and included the checking of all spoil heaps for recovery of artefacts. The trench was *c.*1.2m wide and excavated to a maximum depth of 1.5-1.8m depending on the local topography. The work exposed a varied deposit sequence along the length of the pipe and these have been broadly summarised in five locations.

At the western end of the route between the Eon Energy Centre and Station Road (Pls. 1-2) the sequence identified a mid red clayey sand at a depth of 0.65m below current ground level. This was overlain by a 0.15m thick deposit of light yellow silty sand and gravel, which was in turn overlain by a 0.1m thick deposit of grey limestone aggregate. Both deposits are interpreted as a hardcore sub-base. These were in turn sealed underneath a 0.4m thick layer of tarmac.

Beyond Station Road and immediately in front of Charnwood House and Holly Lodge (Pls. 3-4) the mid red clayey sand natural subsoil was exposed at a depth of 0.85m and overlain by a 0.15m thick deposit of light yellow silty sand and gravel. This was in turn sealed underneath 0.1m thick deposit of grey limestone aggregate which was overlain by a 0.2m thick layer of tarmac. Interpreted as an earlier road surface this located was in turn underneath a 0.15m thick layer of brown green aggregate. This has been interpreted as a hardcore sub-base and was in turn sealed underneath a 0.25m thick layer of tarmac.

Beyond Holly Lodge and up to Treasbeare Cottages (Pls. 5-7) the sequence exposed by the trenching remained consistent with the mid red clayey sand natural subsoil was exposed at a depth of 0.65m. This was in turn overlain by a 0.35m thick layer of reddish pink aggregate sealed underneath a 0.3m thick layer of tarmac.

Between Treasbeare Cottages and Parsons Lane Roundabout (Pls. 8-9) the mid red clayey sand natural subsoil was exposed at a depth of 1.1m and overlain by a 0.1m thick deposit of light yellow silty sand and gravel. This was in turn sealed underneath 0.15m thick deposit of grey limestone aggregate which was overlain by a 0.15m thick layer of tarmac. Interpreted as an earlier road surface this located was in turn underneath a 0.5m thick layer of pink red aggregate. This has been interpreted as a hardcore sub-base and was in turn sealed underneath a 0.2m thick layer of tarmac.

Finally, at the eastern end of the route (Pls. 10-14) the mid red clayey sand natural subsoil was exposed at a depth of 0.95m. This was overlain by a 0.35m thick layer of sub-rounded waterworn pebbles and gravel. Due to its consistent depth and presence over a distance of approximately 305m, the absence of an underlying soil horizon along its length and homogeneous nature of the deposit, it has been interpreted as a modern hardcore sub-base associated with the modern road. This deposit was in turn overlain by a 0.2m thick layer of grey yellow aggregate, which was in turn sealed underneath a 0.4m thick layer of tarmac.

Inspection of the excavations showed no evidence for any archaeological features cutting through the natural subsoil, and no evidence was found relating to the Roman road. The exposed trench showed that the route of the modern B3174 had along its entire route significantly impacted on the underlying natural subsoil, that is the modern works are likely to have entirely truncated any archaeological deposits within the road corridor.

5. CONCLUSIONS

Monitoring of groundworks undertaken as part of the construction of a new heating distribution network from the Eon Energy Centre to Tillhouse Road has shown there to be an absence of any archaeological features or deposits within the working corridor of the heating network route. No evidence of the former Roman Road was uncovered during the works although its absence, perhaps unsurprisingly, may be due to the heavy truncation related to successive modern road surfaces identified by the works and cut below the surrounding landscape.

6. PROJECT ARCHIVE

Due to the limited nature of the findings a project archive will not be produced. A summary of the investigations has been submitted to the on-line archaeological database OASIS (Online Access to the Index of archaeological InterventionS - oakforda1-420802).

ACKNOWLEDGMENTS

This project was commissioned on behalf of Eon Energy and administered by Gavin Green (E.ON Community Energy) and John O'Boyle (CPC Civils Ltd). Special thanks to Steve Reed (DCHET) who provided advice and support throughout the project. The fieldwork was carried out by Marc Steinmetzer and Michael Wootton; the illustrations for the report were prepared by Marc Steinmetzer.

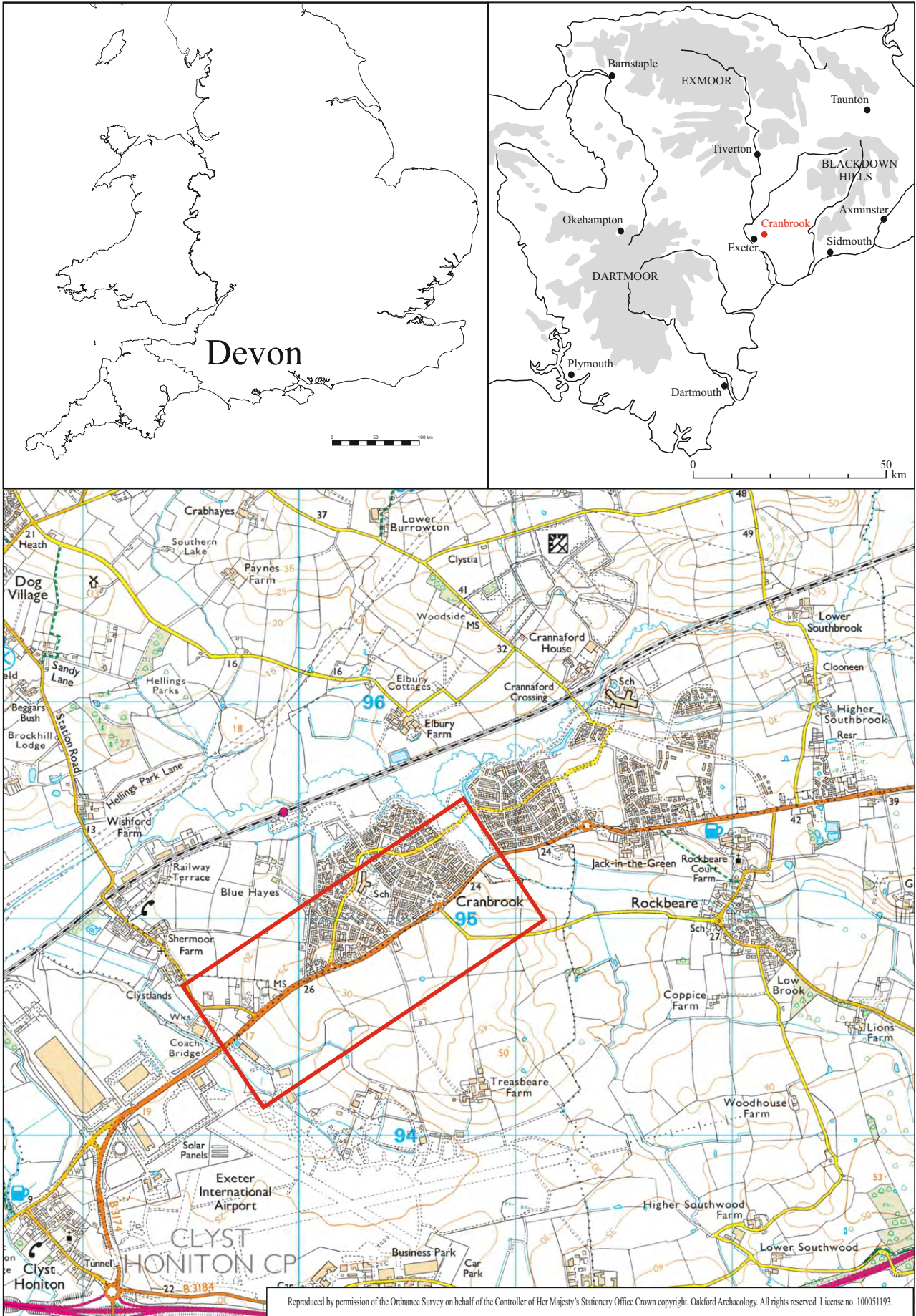
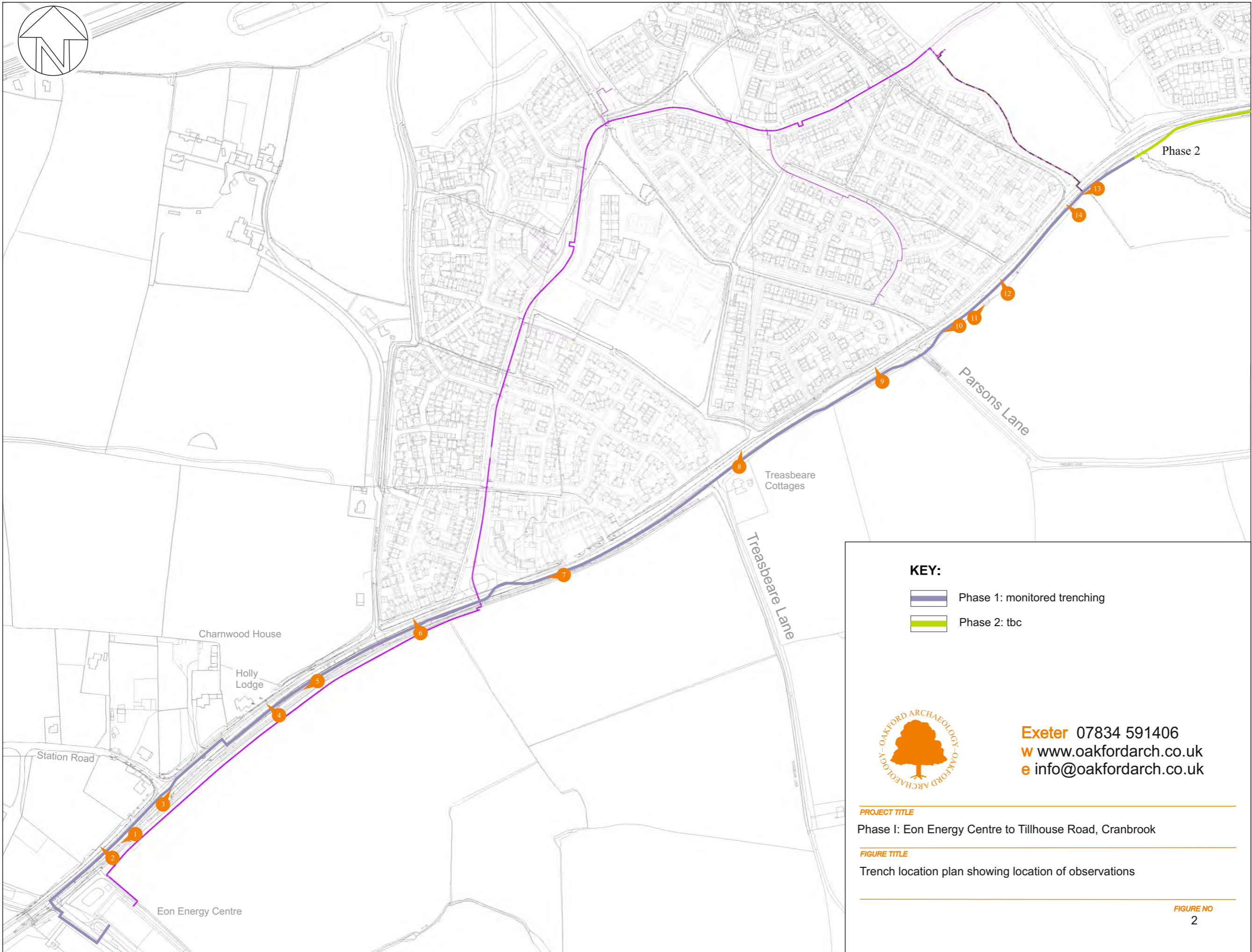




Fig. 1 Location of site



KEY:

-  Phase 1: monitored trenching
-  Phase 2: tbc



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PROJECT TITLE
 Phase I: Eon Energy Centre to Tillhouse Road, Cranbrook

FIGURE TITLE
 Trench location plan showing location of observations

FIGURE NO
 2



Pl. 1 General view of trenching route through B3174 London Road. 2m scale. Looking southwest.



Pl. 2 Close-up showing typical deposit sequence of modern road make-up. 2m scale. Looking northwest.



Pl. 3 General view of trenching route through B3174 London Road. 2m scale. Looking northeast.



Pl. 4 Close-up showing typical deposit sequence of modern road make-up. 2m scale. Looking northwest.



Pl. 5 General view of trenching route through B3174 London Road. 2m scale. Looking southwest.



Pl. 6 Close-up showing typical deposit sequence of modern road make-up. 2m scale. Looking northwest.



Pl. 7 General view of trenching route through B3174 London Road. 2m scale. Looking west.



Pl. 8 Close-up showing typical deposit sequence of modern road make-up. 2m scale. Looking northeast.



Pl. 9 Close-up showing typical deposit sequence of modern road make-up. 2m scale. Looking northwest.



Pl. 10 General view of trenching route through B3174 London Road. 2m scale. Looking northwest.



Pl. 11 General view of trenching route through B3174 London Road. 2m scale. Looking northeast.



Pl. 12 Close-up showing typical deposit sequence of modern road make-up. 1m scale. Looking northwest.



Pl. 13 General view of trenching route through B3174 London Road. 1m scale. Looking west.



Pl. 14 Close-up showing typical deposit sequence of modern road make-up. 1m scale. Looking northwest.

Appendix 1

Method statement

1. BACKGROUND

- 1.1 This document has been produced by Oakford Archaeology (OA) for the client and sets out the methodology to be used during monitoring and recording during phase I works associated with the construction of a new heating distribution network from the Eon Energy Centre to Tillhouse Road, Cranbrook, Devon (SX 9971 9437 to SY 0067 9537). This document represents the 'Written Scheme of Investigation' required by East Devon District Council, as advised by the Devon County Historic Environment Team (DCHET).

Because the exact route and specifications of the subsequent phases of work have not yet been finalised it is not possible to anticipate the full impact and necessary archaeological mitigation of the entire project at this stage. Further updated task specific WSIs or WSI amendments will be produced each time more work is commissioned.

- 1.2 The proposed work lies in an area of high archaeological potential, in an area where extensive evidence for prehistoric, Romano-British and later activity has been previously identified. London Road represents the route of the Roman road that extended between Exeter and Honiton, while investigations in the Mosshayne Farm, Hayes Farm and Cranbrook areas have identified features, deposits and finds relating to prehistoric and later settlement, agricultural and funerary activity. Features recorded include a burnt mound, ring ditches, post-rings, enclosures, trackways and linear ditches associated with early field systems in the area. Surface artefact collection in the fields has recorded a high concentration of prehistoric worked flint, which date from the Mesolithic through to the late Bronze Age period.

Groundworks associated with the development therefore have the potential to expose and destroy archaeological and artefactual deposits associated with prehistoric, Romano-British and later medieval activity in the area.

2. AIMS

- 2.1 The aim of the project is to investigate and record any buried archaeological deposits exposed during groundworks associated with the development, and to report on the results of the project, as appropriate.

3. METHOD

The DCHET has confirmed in an e-mail dated 07-05-2021 that an intermittent watching brief be undertaken during the trenching along London Road in order to identify any surviving Roman road fabric, and continuous monitor of any trenching coming off the current road alignment in order to identify potential roadside ditches that may be present.

- 3.1 Liaison will be established with the client and their contractor prior to the works commencing, in order to obtain details of the works programme and to advise on OA requirements. If a good working relationship is established at the outset any delays caused by archaeological recording can be kept to a minimum. However, localised

delays to site operations may be caused and time should be allowed within the main contractor's programme for the adequate investigation and recording of archaeological material.

- 3.2 The attached plan (Fig. 1) shows the areas subject to intermittent monitoring and recording visits (purple) and those areas subject to continuous monitoring and recording (red). For the former intermittent site visits will be undertaken at regular intervals in order to record the deposit sequence underneath the modern road and its make-up and any potential archaeological deposits and/or features after the removal of the shoring and the partial backfilling of the trench. A detailed methodology and timetable for these visits will be agreed with the client and the contractors at a site meeting prior to works commencing.
- 3.3 In those areas subject to continuous monitoring all machining will be carried out under direct archaeological control, using a mechanical excavator equipped with a toothless grading bucket. Machining will proceed in spits and will cease if archaeological deposits are exposed in order to allow those deposits to be investigated, excavated and recorded. This may cause localised delays to the groundworks programme, although every effort will be made to keep any such delays to a minimum. If no such deposits are present then, once natural subsoil has been confirmed, or formation/invert level reached, across the whole of the development area, archaeological monitoring will be terminated. Similarly, if it can be demonstrated that there has been significant modern truncation, then archaeological monitoring will be terminated in these areas.
- 3.4 If archaeological features are present, then hand-excavation will normally comprise:
- The full excavation of all features, whether small discrete features or larger discrete features within the line of the trenching;
 - Spoil will also be examined for the recovery of artefacts.

Additional excavation may be required for the taking of palaeo-environmental samples and the recovery of artefacts.

General project methods

- 3.5 Environmental deposits will be assessed on site by a suitably qualified archaeologist, with advice as necessary from Allen Environmental Archaeology or the Historic England Regional Science Advisor, to determine the possible yield (if any) of environmental or microfaunal evidence, and its potential for radiocarbon dating. If deposits potential survives, these would be processed by Allen Environmental Archaeology (AEA) using the HE Guidelines for Environmental Archaeology (HE CfA Guidelines 2002/1) and Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (Historic England, second edition, August 2011), and outside specialists (AEA) organised to undertake further assessment and analysis as appropriate.
- 3.6 Initial cleaning, conservation, packaging and any stabilisation or longer-term conservation measures will be undertaken in accordance with relevant professional guidance (specifically 'First Aid for Finds' Watkinson, D and Neal V, (London: Rescue/UKICAS 2001) and CfA 2014 'Standard and guidance for the collection,

documentation, conservation and research of archaeological materials’) and on advice provided by A Hopper-Bishop, Specialist Services Officer, RAM Museum, Exeter.

- 3.7 Should artefacts be exposed that fall within the scope of the Treasure Act 1996, then these will be removed to a safe place and reported to the local coroner according to the procedures relating to the Act. Where removal cannot be effected on the same working day as the discovery suitable security measures will be taken to protect the finds from theft.
- 3.8 Should any articulated human remains be exposed; these will initially be left *in situ*. If removal at either this or a later stage in the archaeological works is deemed necessary, these will then be fully excavated and removed from the site subject to the compliance with the relevant Ministry of Justice Licence, which will be obtained by OA on behalf of the client. Any remains will be excavated in accordance with the CIfA ‘Guidelines to the Standards for Recording Human Remains’ (Megan Brickley and Jacqueline I McKinley, 2004) and the CIfA Standards for Recording Human Remains (Piers D Mitchell and Megan Brickley, CIfA 2017). Where appropriate bulk samples will be collected.
- 3.9 The project will be organised so that specialist consultants who might be required to conserve artefacts or report on other aspects of the investigations can be called upon (see below). The client will be fully briefed and consulted if there is a requirement to submit material for specialist research.
- 3.10 Health and Safety requirements will be observed at all times by archaeological staff working on site, particularly when machinery is operating nearby. Personal protective equipment (safety boots, helmets and high visibility vests) will be worn by staff when plant is operating on site. A risk assessment will be prepared prior to work commencing.
- 3.11 The DCHET require two weeks’ notice from the archaeological consultant, unless a shorter period is agreed. The DCHET will be informed of the start of the project and will monitor progress throughout on behalf of the planning authority. A date of completion of all archaeological site work will be confirmed with the DCHET, and the timescale of the completion of items under section 5 will run from that date.

4. ARCHAEOLOGICAL RECORDING

4.1 The standard OA recording system will be employed, consisting of:

- standardised single context record sheets; survey drawings, plans and sections at scales 1:10, 1:20, 1:50 as appropriate;
- colour digital photography;
- survey and location of finds, deposits or archaeological features, using EDM surveying equipment and software where appropriate;
- labelling and bagging of finds on site from all excavated levels, post-1800 unstratified pottery may be discarded on site with a small sample retained for dating evidence as required.

5. REPORTING AND ARCHIVING

5.1 The reporting requirements will be confirmed with the DCHET on completion of the site work. If little or no significant archaeology is exposed then reporting will consist of a completed DCC HER entry, including a plan showing location of groundworks and of any significant features found. The text entry and plan will be produced in an appropriate electronic format suitable for easy incorporation into the HER and sent to the DCHET within 3 months of the date of completion of all archaeological fieldwork.

5.2 Should significant deposits be exposed the results of all phases of archaeological work will be presented within one summary report within six months of the date of completion of all archaeological fieldwork. Any summary report will contain the following elements as appropriate:

- location plan and overall site plans showing the positions of the excavations and the distribution of archaeological features;
- a written description of the exposed features and deposits and a discussion and interpretation of their character and significance in the context of the known history of the site;
- plans and sections at appropriate scales showing the exact location and character of significant archaeological deposits and features;
- a selection of photographs illustrating the principal features and deposits found;
- specialist assessments and reports as appropriate.

5.3 A .pdf version of the report will be produced and distributed to the Client and DCHET on completion of sitework. A copy of the .pdf version will also be deposited with the Archaeology Data Service (ADS).

5.4 An ordered and integrated site archive will be prepared with reference to *The Management of Archaeological Projects* (English Heritage, 1991 2nd edition) upon completion of the project.

The archive will consist of two elements, the artefactual and digital - the latter comprising all born-digital (data images, survey data, digital correspondence, site data collected digitally etc.) and digital copies of the primary site records and images, compiled in accordance with the ADS Guidelines for Depositors (2020).

The digital archive will be deposited with the Archaeology Data Service (ADS) within 6 months of the completion of site work, while the artefactual element will be deposited with the Royal Albert Memorial Museum (*ref. number pending*). The hardcopy of the archive will be offered to the Royal Albert Memorial Museum and if not required will be disposed of by OA.

OA will notify DCHET upon the deposition of the digital archive with the ADS, and the deposition of the material (finds) archive with the Royal Albert Memorial Museum.

5.5 A .pdf copy of the updated summary report will be submitted, together with the site details, to the national OASIS (Online AccesS to the Index of Archaeological

investigationS) database within three months of the completion of site work (oakforda1-420802).

5.6 A short report summarising the results of the project will be prepared for inclusion within the “round up” section of an appropriate national journal, if merited, within 12 months of the completion of site work.

5.7 Should particularly significant remains, finds and/or deposits be encountered, then these, owing to their importance, are likely to merit wider publication in line with government planning guidance. If such remains are encountered, the publication requirements – including any further analysis that may be necessary – will be confirmed with DCHET, in consultation with the Client. OA, on behalf of the Client, will then implement publication in accordance with a timescale agreed with the Client and DCHET. This will be within 12 months of the completion of all phases of archaeological site work unless otherwise agreed in writing.

6. CONFLICT WITH OTHER CONDITIONS AND STATUTORILY PROTECTED SPECIES

6.1 If topsoil stripping or groundworks are being undertaken under the direct control and supervision of the archaeological contractor then it is the archaeological contractor's responsibility - in consultation with the applicant or agent - to ensure that the required archaeological works do not conflict with any other conditions that have been imposed upon the consent granted and should also consider any biodiversity issues as covered by the NERC Act 2006. In particular, such conflicts may arise where archaeological investigations/excavations have the potential to have an impact upon protected species and/or natural habitats e.g. SSSIs, National Nature Reserves, Special Protection Areas, Special Areas of Conservation, Ramsar sites, County Wildlife Sites etc.

7. COPYRIGHT

7.1 OA shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved, excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in this document.

8. PROJECT ORGANISATION

8.1 The project will be undertaken by suitably qualified and experienced archaeologists, in accordance with the Code of Conduct and relevant standards and guidance of the Chartered Institute for Archaeologists (*Standards and Guidance for an Archaeological Watching Brief*, 2014, revised 2020, the *Standards and Guidance for Archaeological Excavation*, 2014). The project will be managed by Marc Steinmetzer. Oakford Archaeology is managed by a Member of the Chartered Institute for Archaeologists.

Health & Safety

- 8.2 All monitoring works within this scheme will be carried out in accordance with current *Safe Working Practices (The Health and Safety at Work Act 1974)*.

ADDITIONAL INFORMATION

Specialists contributors and advisors

The expertise of the following specialists can be called upon if required:

Bone artefact analysis: Ian Riddler;

Bird remains: Matilda Holmes;

Dating techniques: Scottish Universities Environmental Research Centre;

Charcoal identification: Dana Challinor;

Diatom analysis: Nigel Cameron (UCL);

Environmental data: AEA;

Faunal remains: Lorraine Higbee (Wessex);

Finds conservation: Alison Hopper-Bishop (Exeter Museums);

Fish remains: Hannah Russ, Sheila Hamilton-Dyer;

Human remains: Charlotte Coles, Mandy Kingdom;

Lithic analysis: Linda Hurcombe (Exeter University);

Medieval and post-medieval finds: John Allan;

Metallurgy: Gill Juleff (Exeter University);

Numismatics: Norman Shiel (Exeter);

Petrology/geology: Roger Taylor (RAM Museum), Imogen Morris;

Plant remains: Lisa Gray;

Prehistoric pottery: Henrietta Quinnell (Exeter);

Roman finds: Paul Bidwell & associates (Arbeia Roman Fort, South Shields);

Others: Wessex Archaeology Specialist Services Team

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