



**ARCHAEOLOGICAL
WRITTEN SCHEME OF
INVESTIGATION**

**Land at Exeter Down
Stamford
Lincolnshire**

Application ref: S12/0864

**Planning Authority:
South Kesteven District Council**

**Site centred at:
TL 501 307**

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1.0 INTRODUCTION

1.1 *Planning Background and Scope of Document*

1.1.1 This Written Scheme of Investigation (WSI) presents a programme of archaeological works on at Exeter Down, Stamford, Lincolnshire. The WSI and the programme of works are required to comply with a condition (No. 7) attached to planning permission for the mixed use development of site (Planning application ref S12/0864):

7. No development shall take place within the application site until the applicant has secured the implementation of a programme of archaeological work in accordance with the agreed written scheme of investigation which has been submitted to and approved by the Local Planning Authority.

1.1.2 This Written Scheme of Investigation (WSI) has been prepared on behalf of Taylor Wimpey by Paul Gajos of CgMs Consulting and is subject to approval by the Archaeological Advisor to South Kesteven District Council.

1.2 *Site Location and Description*

1.2.1 The development site occupies approximately 28.7ha, centred on NGR TL501307 (Figure 1). The Site is bounded to the west by the A1, to the north by Empingham Road, to the east by built-up area, and to the south by Tinwell Road. It currently comprises a large arable field which has been subdivided across the centre by a recently-planted tree belt. The northern part of the Site is approximately level while the southern part drops from c. 60m to 55m AOD.

1.3 *Archaeological Background*

1.3.1 The archaeological background is effectively summarised in Chapter 12 of the Environmental Statement (Archaeology and Cultural Heritage) and the information set out below is drawn from that document. An additional geophysical survey of previously unsurveyed portions of the site was undertaken in May 2013.

1.3.2 The evidence obtained from the investigations undertaken to inform the environmental statement has indicated the presence of:

- Early- to Mid-Iron Age iron smelting, likely to be of restricted extent;
- Mid- to Late-Iron Age ditched enclosure with internal features including possible structural remains;
- a second unlocated and undated phase of iron smelting identified from widespread surface finds;

- Iron Age / Roman ditches probably representing land boundaries; and
- some modern features.

1.3.3 In addition the assessment of environmental samples suggested open grassland at the Site in the Early-Middle Iron Age, with woodland at least nearby to supply the smelting process. In the Later Iron Age and Roman periods, samples located in the southern part of the Site contain evidence of both grassland and woodland environments, indicating probably a progression from the former to the latter but possibly a mixed environment.

1.3.4 The geophysical survey undertaken in May 2014 has indicated the presence of further land divisions and possible enclosures and structures in the northern part of the site, near to the previously identified iron smelting activity.

1.4 ***Aims and standards***

1.4.1 The aim of the programme of archaeological works will be to record and advance our understanding of the significance of any archaeological remains within the site before this is lost in the site's development.

1.4.2 The aims will be realized through the achievement of the following specific objectives:

- To establish the spatial extent of the archaeological activity in the proposed investigation areas highlighted on Figure 2.
- To recover information relating to the nature and function of past human activity represented by the surviving archaeological remains,
- To interpret the nature of human activity at the site and to place the site within its local, regional and national context as appropriate
- Assess the site formation processes and the effects that these may have had on the survival and integrity of the archaeological features and deposits
- To produce a site archive for deposition with an appropriate museum and to provide information for the local HER to ensure the long-term survival of the excavated data.

1.4.3 This specification conforms to the requirements of the National Planning Policy Framework. It has been written to accord with current best archaeological practice and the appropriate national and regional standards and guidelines including:

- *Management of Archaeological Projects* (English Heritage, 1991) and MoRPHE (English Heritage 2006);
- *Code of Conduct* (Institute for Archaeology, 2000);

- *Institute for Archaeologists October 2008: Standard and Guidance for Archaeological Excavation;*
- *Lincolnshire County Council 2010: Archaeology Handbook; and*
- *English Heritage 2011 (Campbell, G, Moffett, L and Straker, V): Environmental Archaeology - A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition).*

2.0 Methodology

2.1.1 In order that the investigation supplies information of the required quality, the Codes, Standards and Guidance issued by the Institute of Field Archaeologists (IfA) form a requirement of this specification.

2.1.2 The mitigation strategy has been prepared following consultation with the Senior Historic Environment Officer for Heritage Trust of Lincolnshire, who acts as archaeological advisor to South Kesteven District Council, and a review of baseline surveys. It is proposed to strip two areas measuring approximately 1.5ha and 0.81ha targeted on the identified areas of archaeological activity (Fig 2).

2.2 Pre-commencement

2.2.1 CgMs will inform the Archaeological Advisor to South Kesteven District Council at least two weeks in advance of the commencement of fieldwork.

2.2.2 The Contractor shall contact the relevant local receiving museum prior to the start of fieldwork and obtain the necessary Accession Numbers/complete the required archive deposition forms.

2.2.3 The location of any environmental constraints, such as root protection zones along hedgerows and around retained trees, will be provided to the archaeological contractor to ensure that archaeological works do not adversely affect the ecological resource.

2.3 Strategy

2.3.1 The excavation will commence prior to development and take the form of a soil strip under intensive archaeological supervision.

2.3.2 The site stripping will be conducted using a 360 degree machine fitted with a toothless ditching bucket supervised by a suitably qualified and experienced archaeologist. Stripping will need to be controlled to ensure that the archaeological horizon is exposed

and is sufficiently clean to identify any archaeological features present. The spoil generated during the excavation will be mounded away from the edges of the stripped area or removed from the site. Top soil and subsoil will be stored separately. Mechanical excavation will cease at either undisturbed natural deposits or when archaeological features are identified. The nature of these deposits will be assessed by hand excavation.

- 2.3.3 The excavation area and spoil heaps will be scanned with a metal detector to ensure maximum finds retrieval.
- 2.3.4 The base and sides of the stripped areas will be cleaned as required to show the soil profile and to define adequately any archaeological features present.
- 2.3.5 Following the initial soil strip, priority will be given to the cleaning of features as required to produce a pre-excavation plan. In association with the production of this plan initial sample excavation will commence to characterise the nature of the archaeological resource present. Early in this process an initial site review meeting will convened between the archaeological consultant, the Senior Historic Environment Officer and the appointed archaeological contractor to agree the application of the sample excavation strategy.
- 2.3.6 The following sampling levels will form the standard to be applied to features and deposits identified as contributing to the project objectives and any additional specific objectives identified.

<i>Feature Class</i>	<i>Proportion to be excavated</i>
Pre-modern linear features not associated with structural remains	10% of fill
Pits associated with agricultural & other activities	50% of fill
Layers/ deposits/horizontal stratigraphy relating to domestic/industrial activity [e.g. hearths, floor surfaces, floor make-up deposits...]	100% of deposit
Post-built structures of pre-modern date	100% of each post-hole fill
Ring ditches or roundhouse gullies	50% of fill
Linear features (ditches/gullies...) associated with structural remains	20% of fill
Human burials, cremations & other deposits relating to funerary activity	100% of fill/deposit
Prehistoric discrete pits	100% of fill/deposit

- 2.3.7 Application of this standard to exposed archaeological remains will be agreed between

the curator, contractor and consultant in project review meetings.

2.4 **Recording Methods & Standards**

- 2.4.1 If required a site grid will be established relative to Ordnance Survey National Grid. Data capture for site plans will be by electronic distance measurement, measured survey or a combination of techniques. Data-capture for site plans will as standard be capable of reproduction at a scale of 1:100; more complex features or areas of complex archaeological remains will be recorded at greater resolution (for reproduction at 1:10, 1:20, 1:50 as necessary). The sections of excavated archaeological features will be recorded by measured drawing at an appropriate scale (normally 1:10 or 1:20). Spot heights and those of individual features will be recorded relative to Ordnance Datum.
- 2.4.2 All archaeological features or deposits encountered will be described fully on pro-forma individual context recording sheets, using standard methods of the archaeological contractor appointed. A stratigraphic matrix will be compiled to record the relationships of any archaeological features or deposits encountered and to indicate those features or deposits requiring further stratigraphic clarification by excavation
- 2.4.3 A photographic record will be maintained during the course of the fieldwork. This will be primarily 35mm format black-and-white and colour slide film, supplemented by digital photographs for input into the report and will include:
- the site prior to commencement of fieldwork;
 - the site during work, showing specific stages of fieldwork;
 - the layout of archaeological features;
 - individual features and, where appropriate, their sections;
 - groups of features where their relationship is important.
- 2.4.4 The environmental sampling strategy will include the routine sampling of undisturbed, securely dated deposits for the retrieval and assessment of the preservation conditions and potential for analysis of all biological remains, and sampling of deposits & features identified as having a high palaeo-environmental potential. The sampling strategy is anticipated to include programmes of sampling and assessment for charred plant macrofossils, molluscs, animal and human bone, and industrial residues. A detailed strategy will be developed in consultation with an environmental specialist and the Assistant County Archaeologist & English Heritage's Regional Science Advisor (if appropriate) after the initial phase of site planning and characterisation has been completed. The resulting site-specific environmental sampling strategy will be documented and reviewed periodically. The environmental specialist will conduct or commission, as appropriate, programmes of scientific investigation in conjunction with

the fieldwork, the results of which will be presented in the final publication or report. They will also ensure that the strategy evolves on site by seeking to ensure that bulk samples taken in the initial stages of the project are processed quickly and the results fed back to inform the excavation strategy. All environmental work will be undertaken in accordance with current English Heritage guidelines (*Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation*, Centre for Archaeology Guidelines 2002/01).

- 2.4.5 Where there is evidence for industrial activity, macroscopic technological residues (or a sample of them) should be collected by hand. Separate samples (c. 10ml) should be collected for micro-slugs (hammer-scale and spherical droplets). Excavation and sampling of such deposits will be in accordance with the Centre for Archaeology Guideline on Archaeometallurgy (English Heritage 2001).
- 2.4.6 Samples will be taken for scientific dating (principally radiocarbon dating but also archeomagnetic dating for furnaces or hearths), where dating by artefacts is insecure. This is particularly likely to apply to the possible pond feature identified in the evaluation. Where in situ timbers are found to survive in good condition, samples will be taken for dendrochronological determination following procedures presented in the English Heritage document *Dendrochronology: guidelines on producing and interpreting dendrochronological dates*.
- 2.4.7 All artefacts will be treated in accordance with UKIC guidelines, *First Aid for Finds* (1998). All finds will be bagged and labelled according to the individual deposit from which they were recovered, ready for later cleaning and analysis.
- 2.4.8 All registered finds will be processed and packaged according to standards of good practice. In accordance with the procedures outlined in MoRPHE and current English Heritage guidelines, all iron objects, a selection of non-ferrous artefacts (including all coins) and a sample of any industrial debris relating to metallurgy will be submitted for X-radiography and stabilisation where appropriate.
- 2.4.9 If human remains are encountered, they will be cleaned with minimal disturbance, prior to recording and removal, following receipt of the required Ministry of Justice licence. Investigation and excavation of human remains will be undertaken by, or under supervision of, suitably experienced specialist staff and in accordance with IFA Guidelines (*"Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains"* Roberts, C & McKinley, J 1993 – IFA Technical Paper 13; *"Guidelines to the standards for recording human remains"* ed Brickley, M & McKinley, J 2004 – IFA Paper 7). Assessment of excavated human remains will be undertaken in line with

current English Heritage Guidelines ("Human Bones from archaeological sites: Guidelines for the production of assessment documents and analytical reports" Centre for Archaeology Guidelines 2004). The archaeological contractor will comply with all reasonable requests of interested parties as to the method of removal, re-interment or disposal of the remains or associated items. Every effort will be made, at all times, not to cause offence to any interested parties.

2.5 ***Post-Excavation Assessment, Analysis & Reporting***

2.5.1 Until the fieldwork is complete the precise details of post-excavation analysis and reporting requirements will be uncertain. A formal process of post-excavation 'Assessment of Potential for Analysis', in line with English Heritage "MoRPHE" procedures will be undertaken if required to ensure that analytical and reporting work is most effectively targeted and that the potential of the excavated data is fully met in the post-fieldwork analytical programme. If the results of the fieldwork are as anticipated i.e. revealing a small number of discrete prehistoric features then it is hoped to agree with the Senior Historic Environment Officer to proceed directly to analysis and a full client report.

2.5.2 Post excavation work will comprise the following:

- checking of drawn and written records during and on completion of fieldwork;
- production of a stratigraphic matrix of the archaeological deposits and features present on the site, if appropriate;
- cataloguing of photographic material and labelling of slides that will be mounted on appropriate hangers;
- cleaning, marking, bagging and labelling of finds according to the individual deposits from which they were recovered. Any finds requiring specialist treatment and conservation will be sent for appropriate treatment. Finds will be identified and dated by appropriate specialists;

2.5.3 Unless otherwise agreed with the Senior Historic Environment Officer, a report detailing the findings of the archaeological works will be prepared within four months of the completion of site works (dependant on receiving specialist reports) and will consist of:

- a title page detailing site address, site code and accession number, NGR, author/originating body, client's name and address;
- full contents listing;
- a non-technical summary of the findings of the fieldwork;

- a description of the topography and geology of the excavation areas;
- a description of the methodologies used during the fieldwork;
- a description of the findings of the fieldwork;
- site and excavation area location plans and plans of each of the excavation areas showing the archaeological features exposed;
- sections of the excavated archaeological features;
- interpretation of the archaeological features exposed and their context within the surrounding landscape;
- specialist reports on the artefactual / ecofactual remains from the site;
- appropriate photographs of specific archaeological features;
- the OASIS reference and summary form

2.5.4 The format and contents of the report will conform to the requirements of the Senior Historic Environment Officer and to published regional Standards.

2.5.5 The project archive will be prepared according to the recommendations in *Guidelines for the Preparation of Excavation Archives for long-term storage* (UKIC 1990); *Standards in the Museum Care of Archaeological Collections* (Museums and Galleries Commission 1992); and the Archaeological Archives Forum's *Guide to best practice in creation, compilation, transfer and curation for archaeological archives* (AAF 2007).

2.5.6 The project archive will be deposited with an appropriate store in accordance with the terms and conditions which are to be agreed with the store in advance of deposition. The appointed contractor will provide evidence that they have liaised with the appropriate (named) depository and are aware of its requirements.

2.5.7 If finds are made of gold, silver or other items of possible treasure these will if possible be archaeologically excavated and removed to a safe place. Such finds will also be reported immediately to the local Coroner (within 14 days, in accordance with the 1997 Treasure Act) and to the Lincolnshire Finds Liaison Officer. Should it not be possible to remove the finds that day suitable security will be arranged.

2.5.8 Notes or articles describing the results of the archaeological work will be submitted for publication to an appropriate local journal and/or national journals, dependant on the nature of the results. A bound copy and a digital copy of all reports arising from the work will be deposited with Lincolnshire Historic Environment Record. On acceptance of the final report the OASIS record will be updated.

3.0 Monitoring

- 3.1 The aims of monitoring are to ensure that the archaeological works are undertaken within the limits set by the project design and to the satisfaction of the Local Planning Authority.
- 3.2 The archaeological aspects of the project will be managed on behalf of the developers by Paul Gajos MIFA of CgMs Consulting with assistance from other CgMs staff as required.
- 3.3 The Senior Historic Environment Officer, will be given at least 2 week's notice of the date of commencement of the archaeological programme, and will be free to visit at any reasonable time to monitor the implementation of the works on behalf of the local planning authority.

4.0 Timetable and Personnel

- 4.1 The field work is anticipated to take approximately six weeks to complete.
- 4.2 The fieldwork, post excavation and reporting will be undertaken by a suitable archaeological contractor, acceptable to the local planning authority and their archaeological advisors. Project management and daily site supervision will be undertaken by suitably qualified archaeologists with experience of local soil & geological conditions. After appointment, details of the archaeological contractor and the CV's of all key personnel involved in the project will be forwarded to the Senior Historic Environment Officer for approval prior to the commencement of on-site works.

5.0 Insurance

- 5.1 The archaeological contractor will produce evidence of Public Liability Insurance to the minimum value of £5m and Professional Indemnity Insurance to the minimum of £2m.

6.0 Health and Safety

- 6.1 All works will be in compliance with the Health and Safety at Work Act (1974) and all applicable regulations and Codes of Practice.
- 6.2 All archaeological staff will undertake their operations in accordance with safe working practices.
- 6.3 A site-specific risk assessment will be undertaken and recorded prior to the commencement of work on site.

- 6.4 A continuous process of dynamic risk assessment will be undertaken and if significant hazards are identified a specific risk assessment will be undertaken and recorded. Control measures will be implemented as required in response to specific hazards.
- 6.5 Safe working will take priority over the desire to record archaeological features or remains, and where it is considered that recording is dangerous, any such features or remains will be recorded by photography, at a safe distance.




<p>Key</p> <p>Site Boundary —</p> <p>■ Site</p>	 <p>London Cheltenham Kettering Newark Birmingham www.cgms.co.uk</p>	
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Figure 1: Site Location



<p>Key</p> <p>Site Boundary ———</p> <p>Excavation area ———</p>		London Cheltenham Kettering Newark Birmingham www.cgms.co.uk
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Figure 2: Excavation areas