

WRITTEN SCHEME OF INVESTIGATION (WSI) FOR AN ARCHAEOLOGICAL WATCHING BRIEF ON LAND AT THE M20 JUNCTION 9 AND DROVERS ROUNDABOUT, ASHFORD, KENT

1. Introduction

- 1.1 This specification is concerned with an archaeological watching brief to be maintained during the excavation of ground works associated with the highway improvement works at the M20 Junction 9 and Drovers Roundabout in Kent.
- 1.2 KCC planning references for the proposal are 'permitted development'.
- 1.3 The Heritage Conservation Group at KCC has agreed that a watching brief will be undertaken to mitigate the potential impact of the scheme on the unknown buried archaeological remains.
- 1.4 The archaeological watching brief forms part of a scheme of archaeological works for this site. The initial monitoring programme should take account of archaeological findings made during this phase of works and a full report made available in time to guide the mitigation measures for the footbridge scheme (AS/10/20) which is the subject of a different programme of archaeological work which should be set out in another specification agreed with the County Archaeologist.
- 1.5 The watching brief may be intermittent in terms of attendance and the archaeological contractor should submit a quote in the form of a day or half-day rate.
- 1.6 The archaeological contractor will have close liaison with the County Archaeologist with regard to the frequency of visit and appropriate action to be taken.
- 1.7 The Archaeological Contractor should complete and provide to the County Archaeologist a copy of the **Kent Archaeological Fieldwork Notification Form** at the start, and completion of fieldwork and again when providing the report.
- 1.8 The site is located at M20 Junction 9 and Drovers Roundabout. The site centre is at NGR 600200 143900.

2. The Archaeological Potential

- 2.1 The underlying geology at the site according to the British Geological Survey map is Upper Chalk and the drift geology of the site is Head Brickearth and colluvium.
- 2.2 The site lies in an area rich in archaeological remains of all periods. The HER Register kept by KCC lists known archaeology in the area of the proposed development.
- 2.3 Prehistoric occupation in the form of isolated finds of Neolithic flint tools were found in the vicinity of the development site (TQ 94 SE5). Bronze Age and Roman urns were recovered from Potters Corner (TQ 94 SE9). Medieval pottery kilns were also found at Potters Corner and excavated in 1952 (TQ 9926 4467). A recent

archaeological investigation has located more Medieval kilns in the vicinity of the development site.

- 2.4 Further information on the above is provided in the County Sites and Monuments Record held in the Planning Department, Invicta House, County Hall, Maidstone, ME14 1XX (telephone 01622 221543)

3. Aims and Objectives

- 3.1 The objectives of the archaeological watching brief are to contribute to heritage knowledge of the area through the recording of the archaeological remains exposed as a result of excavations in connection with the groundworks. Specific aims of the watching brief are to clarify the nature and extent of Medieval industrial activity, ovens, malting or pottery kilns if revealed. Also to clarify the nature of any exposed medieval activity in this area north of the Medieval town of Ashford- was it farmland or a more industrial hinterland?

4. Proposed Ground works

- 4.1 The works requiring archaeological monitoring will be:

- Areas of topsoil strip
- Earthworks and drainage excavations
- Any other ancillary groundworks associated with the development

- 4.2 No details of groundworks have been submitted and the archaeological contractor should clarify the extent of the works with the developer before work begins. A plan showing the phases of the watching brief is in preparation by the contractor, as is a timetable setting out the type and extent of groundworks and the level of attendance required for the archaeological watching brief. It is important to keep the County Archaeologist fully informed of phases of work and when this phase of work is completed with a agreed timetable for the post- excavation work.

5. Method

- 5.1 An archaeologist should monitor the excavations for the above in 4.1. Where possible excavation should be undertaken using a flat bladed bucket and preferably in a single direction to enable archaeological remains to be recorded prior to disturbance from being driven over. If possible archaeological remains are encountered, machine excavation will cease to allow the remains to be investigated further.
- 5.2 The archaeologist will inspect the surfaces revealed. Any archaeological structures or features revealed will be recorded in plan and section as appropriate according to Section 6 below. The main contractor will allow the archaeological contractor reasonable time and resources to undertake any inspection or recording required.
- 5.3 If significant remains are encountered the archaeological contractor will inform the County Archaeologist and the developer immediately and further mitigation measures will be agreed.

6. Recording

- 6.1 All structures, deposits and finds are to be recorded according to accepted professional standards.
- 6.2 All recording points used should be accurately tied into the National Grid, preferably by GPS, and located on to the 1:1250 map of the area.
- 6.3 Plans indicating the location of all archaeological features encountered are to be drawn at an appropriate scale, located on the site plan and levelled with respect to OD. An overall site plan is to be maintained at a scale of 1:100.
- 6.4 All plans are to be accurately tied in to the site grid. All plans and sections are to be drawn on polyester based drafting film and clearly labelled.
- 6.5 All archaeological contexts are to be recorded individually on context record sheets. A further more general record of the work comprising a description and discussion of the archaeology is to be maintained as appropriate.
- 6.6 A full black and white and colour (35mm transparency) photographic record of the work is to be kept. The photographic record is to be regarded as part of the site archive. The archaeological contractor is to provide the County Archaeologist with a selection of photographic images which reflect the archaeological findings and investigations undertaken on this site.
- 6.7 All artefacts recovered during the excavations on the site are the property of the Landowner. They are to be suitably bagged, boxed and marked in accordance with the United Kingdom Institute for Conservation, Conservation Guidelines nos. 2 and on completion of the archaeological post-excavation programme the landowner will arrange for them to be deposited in a museum or similar repository agreed with Kent County Council and Ashford Borough Council.
- 6.8 The site archive, to include all project records and cultural material produced by the project, is to be prepared in accordance with *Guidelines for the preparation of excavation archives for long-term storage (UKIC 1990)*. On completion of the project the Applicant will arrange for the archive to be deposited in a suitable museum or similar repository to be agreed with Kent County Council and Ashford Borough Council.

7. Reporting

- 7.1 On completion of the archaeological watching brief the archaeological contractor will agree with the County Archaeologist a programme for the reporting of the results of the work. The reporting of the watching brief will be commensurate with the results but as a minimum must stand as a sufficiently detailed report on the archaeological monitoring to serve both future research and inform future planning decisions taken on the site.

- 7.2 Where the watching brief is being undertaken following an earlier evaluation, the results of the evaluation should be fully integrated within the report of the watching brief.

Report circulation

- 7.3 Copies of all reports are to be provided to:

- the Developer
- the County Archaeologist
- the Local Planning Authority
- the project archive.

- 7.4 When submitting the report to the County Archaeologist the archaeological contractor should provide written confirmation that the report has been submitted to the above parties. No communication to third parties including news agencies will take place without prior permission of the client and KCC.

- 7.5 If the archaeological contractor is required, contractually, to only submit reports directly to the developer or their agent, the archaeological contractor must inform the County Archaeologist in writing that they have completed the report and to whom it has been forwarded to. The archaeological contractor must ensure that the developer is made aware of the need to circulate the report as in 7.3 above.

Reporting of watching briefs with limited remains

- 7.6 If the watching brief has resulted in limited archaeological remains being recorded then the archaeological contractor will complete the necessary post excavation works and produce a '**Watching Brief Report**' within 4 weeks of the completion of the watching brief (see sections 7.8 to 7.12 below).

Reporting of watching briefs with significant archaeological remains

- 7.7 If significant archaeological remains are recorded then within 3 months of completion of the watching brief the archaeological contractor will undertake an assessment of the results and produce a MAP2 '**Post-excavation Assessment Report**'. This report will set out a programme of post excavation works through to completion of a '**Full Report**' and '**Publication**' of the findings (see sections 7.13 to 7.17 below).

Contents of a 'Watching Brief Report'

- 7.8 The archaeological contractor may determine the general style and format of the Watching Brief Report but it must be completed in accordance with this specification. The report must provide sufficient information and assessment to enable the County Archaeologist and the Local Planning Authority to stand as a detailed report on the archaeological fieldwork for future research and to inform on any future planning decisions for the site.

7.9 Reports that do not provide sufficient information or that have not been compiled in accordance with the relevant sections of this specification will be returned to the archaeological contractor for revision and resubmission.

7.10 The report is to include as a minimum:

7.10.1 An **Abstract** summarising the scope and results of the archaeological watching brief.

7.10.2 An **Introduction** including:

- the location of the site including National Grid Reference;
- an account of the background and circumstances of the work;
- a description of the development proposals, planning history and planning reference together with the planning condition (where appropriate);
- the scope and date of the fieldwork, the personnel involved and who commissioned it;
- the nature of potential impacts arising from the proposals;

7.10.3 An account of the **Archaeological Background** of the development site including:

- geology, soils and topography;
- any known existing disturbances on the site;
- background archaeological potential of the site. This should include a summary of the known HER entries generally within a 500m radius of the boundaries of the site. The HER entries should be quoted with their full KSMR identifier (e.g TR36NW 12);
- summary of any previous phases of archaeological investigation at the development site;
- any constraints on the archaeological monitoring.

7.10.4 The **Methodology** employed during the watching brief must be detailed in the report. Simply referring to the methodology outlined in the specification is not acceptable. Any aims and objectives specified in the specification should be included as should any further objectives identified during the course of the watching brief. The frequency of monitoring visits, ground works observed and any constraints experienced while carrying out the monitoring should be detailed.

7.10.5 The report should include a quantification of the archive contents, their state and future location.

7.10.6 A description of the **Results** of the archaeological monitoring. This description must include for each area observed:

- the dimensions of the area observed;
- the nature and depth of overburden soils encountered;
- description of all archaeological features and finds encountered in each area observed, their dimensions, states of preservation and interpretation;
- a description of the geological subsoil encountered across the site;
- heights related to Ordnance Datum should be provided for each feature and deposit.
- for complex remains a Harris Matrix diagram should be provided.

- 7.10.7 The **Finds** recovered during the course of the watching brief should be described, quantified and assessed by artefact type within the report. The report should also provide an indication of the potential of each category of artefact for further analysis and research. For each category of artefact the report should describe the method of processing, any sub-sampling, conservation and assessment undertaken. Where appropriate local reference collections will be referred to for descriptive and analytical consistency. Any implications for future archive, conservation or discard of the artefacts should also be detailed.
- 7.10.8 The report should include a table showing the contexts, classes and quantity of artefacts recovered, together with their date and interpretation.
- 7.10.9 The report must include an assessment of the **Environmental** potential of the site. Details should be provided of any environmental sampling undertaken in connection with the fieldwork and the results of any processing and assessment of the samples. The report should describe the method of processing, any sub-sampling and assessment. Any potential for future analysis of the samples or environmental remains recovered from the evaluation should be described. Implications for future archive, conservation or discard of environmental samples or remains should be detailed.
- 7.10.10 The report should include, as appropriate, tables summarising environmental samples taken, together with the results of processing and assessment.
- 7.10.11 Any results from the watching brief involving the application of archaeological scientific techniques e.g. specialist dating should be included in the watching brief report.
- 7.10.12 An **Interpretation** of the archaeology of the site, including its location, extent, date, condition, significance and importance. This should include, even if no archaeology is identified as present on the site, description of areas of disturbance, non-archaeological deposits and changes in geological subsoil where appropriate.
- 7.10.13 A **Conclusion** with a summary of the archaeological results and how any archaeology observed relates to the development site. The effects of the development works on the archaeological remains should also be described. The report should highlight any areas of significant archaeological deposits that remain preserved within the development site. Particular note should be made of any variations in the depth of overburden covering any archaeological deposits revealed.
- 7.10.14 The report should include comments on the effectiveness of the methodology employed and the confidence of the results and interpretation.
- 7.10.15 Figures / illustrations – The report should include sufficient illustrations to support descriptions and interpretations within the report text. Figures are to be fully cross-referenced within the document text. As a minimum the report should include the following figures:

- a site location plan tied into the Ordnance Survey at 1:1250 or in the case of larger sites at 1:2500. The plan should also include at least two National Grid points and show the site boundary;
- a plan at 1:100 or 1:200 showing the layout of the development groundworks clearly indicating the areas observed. The plan should show significant archaeological features, coloured by phases or period as related to the development site. Where possible, projection of archaeological features outside of the areas observed should be included on the plan. This plan should also include two National grid points;
- plans of the features revealed in each of the excavation areas at a larger scale e.g. 1:20 or 1:50; such plans are to also illustrate areas of disturbance, change in subsoil and location of sections; The location of significant finds and samples taken should also be indicated;
- relevant section drawings and soil trench profiles as appropriate;
- illustrations and/or photographs of significant finds should be included where appropriate.

7.10.16 All report illustrations must be fully captioned and scale drawings must include a bar scale. Standard archaeological drawing conventions must be used. Plan and section illustrations must include the numbers of all contexts illustrated. North must be included on all plans and should be consistent. Sections must indicate the orientation of the section and the Ordnance Datum height of the section datum.

7.10.17 Black & White or Colour photographs should be included where appropriate to illustrate the archaeology of the site, the development operations or the range of soil profiles encountered. All photographs should be appropriately captioned.

7.11 The report will be submitted to the County Archaeologist in a bound hard-copy and in digital format. The digital copy will be supplied for preference in .pdf format or alternatively in .rtf format accompanied by digital copies of images, plans and maps in .bmp, .tif or .jpg format. The medium should be either on a PC-formatted floppy disk, on a PC CD-ROM (CD-R format only). Whichever software is used the digital files must be supplied in a PC readable format.

7.12 Kent County Council is able to provide the archaeological contractor with digital Ordnance Survey tiles of the area of the site in .dxf format. This can be supplied on the understanding that the tile will be used solely for the purposes of the project and to improve the quality of the submission of site data to the Sites and Monuments Record. In return the archaeological contractor must provide the Kent Sites and Monument Record with fully geo-referenced (to Ordnance Survey National Grid) digital mapping of the locations of the investigation site, trench layout and significant archaeological features. The mapping should be supplied to the KSMR in a CAD readable format.

Contents of a 'Watching Brief Assessment Report'

7.13 The 'Archaeological Watching Brief Assessment Report' will follow the format and requirements detailed in 7.8 to 7.12 above.

- 7.14 In addition the report will include an assessment of the results of the archaeological monitoring and their potential to address both the original research aims and objectives of the project and any further research objectives identified during the course of the on-site and post excavation works.
- 7.15 The report will detail any further analysis necessary on the project records, artefact and environmental assemblages to achieve the research potential identified in the assessment. A justification should be included for each analysis proposed.
- 7.16 The report will set out a timetable for completion of analysis and reporting, detailing all individual tasks to be completed, resources required and the key personnel involved. The proposal should set out arrangements for monitoring of the post excavation process.
- 7.17 The report should include a synopsis of the proposed '**Full report**' and '**Publication**' and identify the likely destination of the publication.

8. General

8.1 The archaeological contractor is to allow the site records to be inspected and examined at any reasonable time, during or after the watching brief, by the developer, the County Archaeologist or any designated representative of Swale Borough Council.

8.2 In undertaking the work the archaeological contractor is to abide by :

- all statutory provisions and by-laws relating to the work in question, especially the Health and Safety at Work *etc.* Act 1974;
- the Institute of Field Archaeologist's *Code of Conduct*;
- the Institute of Field Archaeologist's *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*.

All work shall be planned and managed in accordance with the requirements and standards set out in the following:

- Management of Archaeological Projects (2nd edition) (MAP2) English Heritage 1991.
- The Institute of Field Archaeologists (2001) Standard and Guidance for an Archaeological Watching Brief.
- The Centre for Archaeological Guidelines for Environmental Archaeology (English Heritage 2002).

8.3 On completion of the watching brief the archaeological contractor will prepare a consideration of the methodology used, including a confidence rating.

8.4 The archaeological contractor is to include with their report a completed copy of the Kent County Sites and Monuments Report Form (see appendix 1)

8.5 The archaeological contractor is to provide the County Archaeologist with a representative selection of transparencies or digital images illustrating the archaeology of

the site and the operations of the investigation. These will be deposited with the County HER and will be used for presentations on aspects of the archaeology of Kent.

Dr Paul Wilkinson MIFA
SWAT Archaeology May 2010

APPENDIX 1

Kent County Council SMR summary form

Site Name:		
Site Address:		
Summary:		
District/Unitary:	Parish:	
Period(s):		
NGR (centre of site : 8 figures): (NB if large or linear site give multiple NGRs)		
Type of archaeological work (delete)		
Evaluation:	Watching Brief	Field Walking
Documentary study	Building recording	Earthwork survey
Excavation:	Geophysical Survey	Field Survey
Geoarchaeological investigation		
Date of Recording:		
Unit undertaking recording:		
Geology:		
Title and author of accompanying report:		
Summary of fieldwork results (begin with earliest period first, add NGRs where appropriate)		
(cont. on attached sheet)		
Location of archive/finds:		
Contact at Unit:	Date:	



Kent Archaeology Fieldwork Notification Form

KCC logo

(Section **A** and **B** to be filled in and sent either digitally or by fax to KCC Heritage Conservation Group (01622 221636) in advance of start of fieldwork. Section **C** to be completed and sent at end of fieldwork. Section **D** to be filled in and sent with completed report.)

SECTION A - PROJECT DETAILS

Site/Project Name:

NGR:

Site Address:

Archaeological Contractor (inc name and address of project contact):

Commisioning Body/Client:

Development Proposals/Reason for Fieldwork:

Planning Reference:

SECTION B - COMMENCEMENT OF FIELDWORK

Type of Archaeological Fieldwork:

Site Supervisor:

Site Contact Details:

Specification for Works?:

Local Museum Notified:

Date:

Local Arch Soc Notified:

Date:

Site Code:

START DATE:

ANTICIPATED DURATION:

weeks

I (archaeological contractor) confirm that all necessary provision has been made for the resources to complete the archaeological fieldwork, post-excavation analysis and reporting in accordance with the agreed specification.

Name:

On behalf of:

Signed:

Date:

SECTION C - COMPLETION OF FIELDWORK

Date Fieldwork Completed:	Was fieldwork monitored by KCC/EH/Other? Who?
Further Fieldwork Anticipated:	

Brief summary of archaeological finds:	(Continue on separate sheet if necessary)
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Agreed Reporting Stages and Program:
<p>Name: On behalf of:</p> <p>Signed: Date:</p>

SECTION D - COMPLETION OF POST-EXCAVATION ANALYSIS & REPORTING

Reports Submitted (Titles)	Copies to: (Number)						Digital Copies
	KCC	LPA	Arch Soc	Client	EH	Other	

SMR Data

SMR Summary Form?	Y	N	Notes:
Digital images?	Y	N	
Digital Mapping Data?	Y	N	

Location and Destination of Archive:

Name:

On behalf of:

Signed:

Date: