

Wessex Archaeology

A303 Wylve to Stockton Wood Improvement, Wiltshire

Proposal for Geophysical Survey and Fieldwalking

Ref: 50841.02

March 2004

**A303 WYLYE TO STOCKTON WOOD IMPROVEMENT
Proposal for Geophysical Survey and Fieldwalking**

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Figure 1 Areas proposed for geophysical survey

A303 WYLYE TO STOCKTON WOOD IMPROVEMENT

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1 INTRODUCTION

1.1 Scheme background

1.1.1 The A303 Wyllye to Stockton Wood Improvement proposes the construction of a new dual two lane carriageway with a left-in/left-out junction with the C276 Chilmark road. The scheme extends for some 3.7km from NGR ST 9600 3538 to 9910 3654. The emerging preferred route deviates from the existing alignment to the south from west of Hart Coppice, and continues eastwards on an alignment generally parallel to and close by the existing road towards Grim's Ditch. After crossing Grim's Ditch the emerging preferred route crosses to the north side of the existing road for a distance of some 300m before passing once more to the south to the east of Setting Copse. The emerging preferred route then rejoins the existing dual carriageway west of Wyllye.

1.1.2 Landscape planting is proposed to screen the road from views in the AONB to the south and to provide environmental benefits. The combined footprint of the new road and associated mitigation areas is approximately 36.5ha.

1.2 Staged programme of evaluation

1.2.1 The stages of survey and assessment required in order to allow the likely effects of the emerging preferred route on the cultural heritage resource to be assessed and a mitigation strategy to be identified are set out in the Environmental Scoping Report. A staged programme of archaeological evaluation is proposed, comprising:

- Geophysical survey.
- Fieldwalking.
- Trial trenching.

1.2.2 This document sets out the scope of the proposed geophysical and fieldwalking surveys, for comment by English Heritage and the Wiltshire County Archaeological Officer.

2 THE SITE

2.1 The route: geology and topography

2.1.1 The route follows a ridgeline lying at between 164m and 195m above Ordnance Datum. The underlying solid geology is Upper Chalk; this is overlain with Clay-with-flints north of the A303 at Stockton Wood, and south of the A303 in the eastern part of the scheme.

2.2 Archaeological background

2.2.1 A desk-based assessment has been undertaken previously in order to inform route selection (Wessex Archaeology 2002). The A303 is situated on a ridgeline and crosses an extensive later prehistoric and Romano-British landscape, including both earthwork features and extensive cropmark systems. The principal features are (**Figure 1**):

- Grim's Ditch, a later prehistoric boundary earthwork.
- Stockton Earthworks Iron Age/Romano-British settlement to north of route (Scheduled Monument).
- Multi-period cropmark field systems extending over 2km in the eastern half of route.
- Projected line of the Roman road from Old Sarum to the Mendips.
- Possible funerary monuments, notably a cropmark ring ditch west of Grim's Ditch.
- Undated cropmark enclosures at several locations along route corridor.

3 SURVEY PROPOSALS

3.1 Geophysical survey

3.1.1 As part of the staged programme of evaluation, geophysical survey of the complete 36.5ha footprint of the scheme as described above is proposed. Magnetometer (gradiometer) survey is considered to be the most effective technique for large scale survey over the chalk downlands. In considering the optimum application of this technique, the nature of the known archaeological evidence and the application of subsequent stages of field evaluation have been borne in mind.

3.1.2 It is proposed that a strategy combining detailed survey of defined areas with scanning and phased sampling of the remainder of the routes be undertaken as follows:

- Detailed survey of areas of extensive cropmark field systems (approximately 17.8 ha), in order to identify any evidence of settlement/funerary activity within the field systems.
- Rapid scanning and detailed sample survey over other parts of the route (approximately 18.7 ha). The detailed sample survey would be undertaken in 2 or more phases to verify the results (in 'blank' areas as well as possible 'sites'). The first phase of sample survey would be conducted at the same time as the scanning and would examine 20% of the scanned areas. The scope of the second phase of sample survey, of up to a further 20%, would be determined by the results of the first.

3.1.3 The areas proposed for each type of survey are shown on **Figure 1**.

3.2 Fieldwalking

- 3.2.1 All available land within the 36.5ha footprint will be subject to systematic surface artefact collection by fieldwalking. Approximately 20 ha of available land was fieldwalked in December 2003. The results of this work are reported in detail separately (Wessex Archaeology 2003) and shown on **Figure 1**.

4 METHODOLOGY

4.1 Geophysical survey

- 4.1.1 The geophysical survey will be undertaken by a specialist contractor with experience of this type of survey and geology. The survey methodology will be undertaken in accordance with current standard practice and will take account of the guidance given in English Heritage's *Geophysical survey in archaeological field evaluation* (1995). The following outline methodology will apply.

Detailed /Recorded Magnetometer Survey

- 4.1.2 The survey area(s) will be divided into 20m x 20m grids, which will be tied in to the OS National Grid. The grids will be traversed at an interval of 1.0m and a sample interval of 0.25m using a fluxgate gradiometer with integral digital data storage, e.g. Geoscan Research FM36/256 or Bartington Grad 601-2 or equivalent.

Scanning

- 4.1.3 The survey area(s) will be traversed at an interval of 10-15m, with the spacing decreasing when potential anomalies are located. Anomalies will be identified by visual assessment of the LCD screen of the magnetometer and initially assessed during the scan. Anomalies believed to be of archaeological potential will be marked and areas around these will be subject to detailed survey using a magnetometer.

Report

- 4.1.4 The geophysical survey report will include as a minimum:
- text describing the survey methods, relevant site conditions and/or survey limitations, and an interpretation of the results in each area/type of survey;
 - processed data plots using x-y trace and/or greyscale presentation;
 - interpretation diagrams based on a CAD system.

4.2 Fieldwalking

- 4.2.1 Fieldwalking will be undertaken by Wessex Archaeology following the company's standard methodology (Wessex Archaeology 1992). Fields will be walked on a 25m grid orientated north-south and tied into the OS National Grid, with 25m collection intervals. This will give a total of 16 collection intervals per hectare (8% coverage assuming a 2m wide observation

corridor). This is compatible with survey practice applied by Wessex Archaeology in the region, including surveys undertaken throughout the last 20 years in and around the Stonehenge World Heritage Site.

4.2.2 In order to ensure effective use of resources, it is proposed to apply a selective collection policy in accordance with standard practice. The following categories of material will not normally be collected:

- Intrinsically undateable material, such as animal bone and slag;
- Material of obviously modern date; and
- Metalwork not of clear archaeological origin.

4.2.3 On completion of the fieldwork, all artefacts will be washed, marked (where appropriate) and quantified by number and weight according to material category within each collection unit. Data will be entered onto a database to allow plotting of spatial distributions. Where appropriate, standard deviations may be calculated to assist in interpretation of the results.

4.2.4 The fieldwalking report will include as a minimum:

- text describing the survey method, relevant site conditions and/or survey limitations, a discussion of the finds, and an interpretation of the results;
- processed distribution plots displaying absolute numbers of finds and, where appropriate, standard deviations.

5 PROGRAMME

5.1 Surveys

5.1.1 Subject to access, the geophysical survey will be undertaken in the autumn of 2004 (confirmation date to be confirmed subject to access, harvest etc.). The balance of areas for fieldwalking at Wylye will be completed in autumn 2004, subject to access.

5.2 Reporting

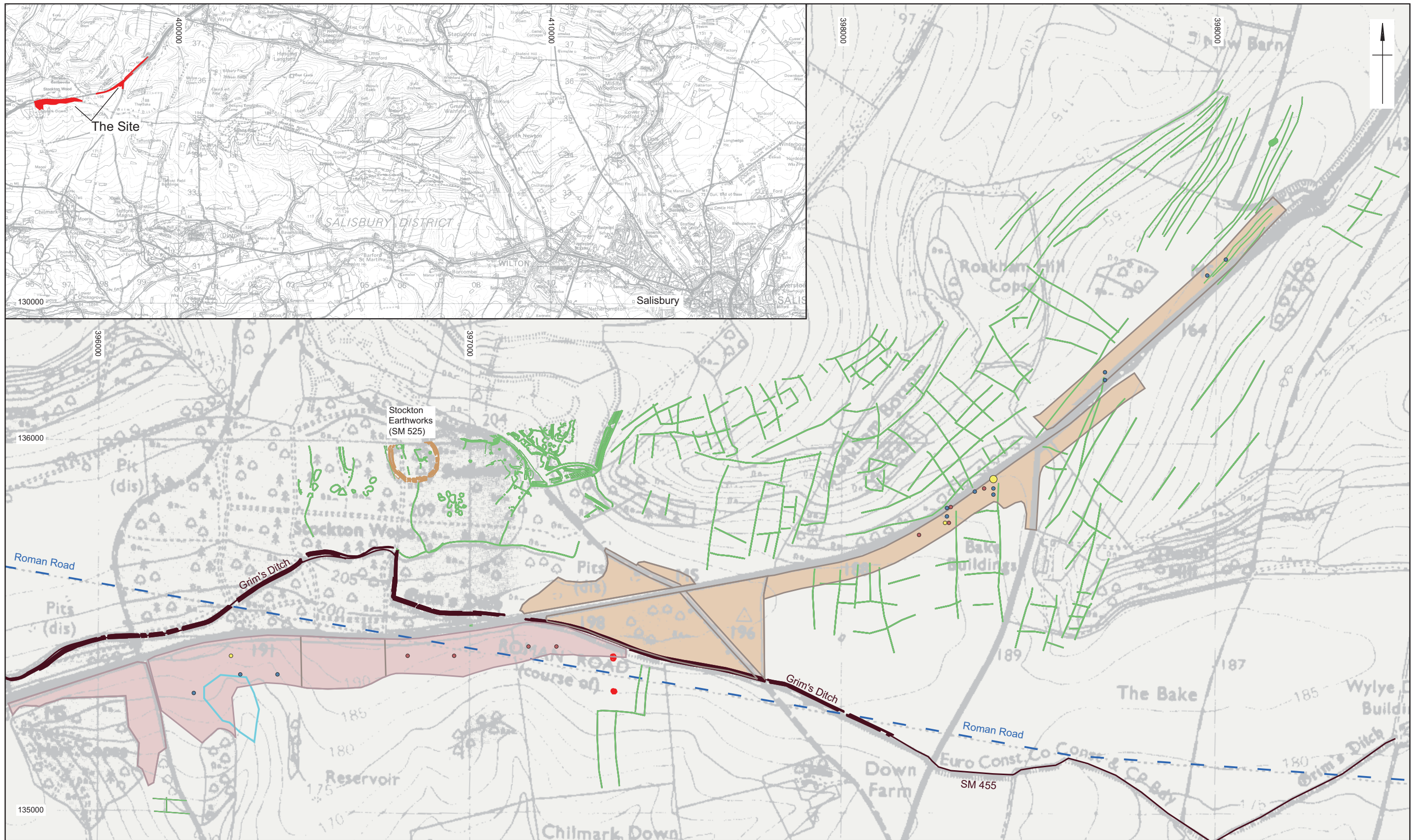
5.2.1 It is anticipated that reports on both the geophysical survey (prepared by the subcontractor) and the fieldwalking will be available for HA approval within 6 weeks of completion of the surveys on site. Subject to HA approval, copies of the reports will be issued to English Heritage and the County Archaeologist, for information/comment.

5.3 Proposals for trial trenching

5.3.1 Following completion of the geophysical and fieldwalking surveys, proposals for further evaluation (trial trenching) will be issued to English Heritage and the County Archaeologist for discussion. It is anticipated that trial trenching will take place early in 2005.

6 REFERENCES

- English Heritage 1995 *Geophysical survey in archaeological field evaluation*. London, English Heritage Research & Professional Services Guideline No 1
- Wessex Archaeology 1992 *Fieldwalking: Surface Artefact Collection Guidelines*. Salisbury, Wessex Archaeology Guideline No. 19
- Wessex Archaeology 2002 *A303 Wylye to Stockton Wood Improvement, Wiltshire: Archaeological Appraisal*. Unpublished client report ref. 50841.01
- Wessex Archaeology 2003 *A303 Wylye to Stockton Wood, Wiltshire: Archaeological Fieldwalking*. Unpublished client report ref. 55157.01



Artefacts by number

- 1 ● Burnt flint
- 2 ● Burnt flint
- 1 ● CBM
- 1 ● Flint

Cropmarks

- Prehistoric
- Bronze Age
- Iron Age
- Roman
- Medieval
- Iron Age - Roman

Proposed detailed magnetometer survey

Proposed scanning

Cropmarks



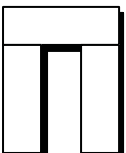
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Proposed geophysical survey

Figure 1



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