An Archaeological Geophysical Survey





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for

The Hill Brush Company Ltd

by



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Non-technical summary

Context One Archaeological Services Ltd, in conjunction with GeoFlo Southwest Geophysical and Flotation Services, carried out a geophysical survey on land at Quarryfields, Castle Street, Mere, Wiltshire (centred on NGR ST 89317 70161) on 18 and 19 November 2014. The investigation was commissioned by Tony Brimble of Brimble, Lea & Partners and funded by the Hill Brush Company Ltd.

The survey was carried out in support of a planning application (Wiltshire County Council Planning Application Reference 14/06624/FUL) for an expansion of industrial premises onto agricultural land as part of the relocation of the Hill Brush factory. The survey follows a Desk-based assessment carried out on the Site by COAS in January 2013 (Tabor 2013), which noted flint scatters and possible remnants of a Romano-British field system on the Site.

Two relevant anomalies were identified within the survey data. These relate to a former footpath (crossing the north-western corner of the Site) and a drain or service trench that crosses the Site from north-west to south. No features of significant archaeological interest were identified, although the footpath may have been constructed along the line of an earlier Romano-British field boundary. However, the route of the footpath has probably been reinforced with rubble or hardcore, and it is unlikely that any possible earlier features will remain extant. Other anomalies likely relate to modern magnetic debris.

i



1. Introduction

- 1.1 Context One Archaeological Services Ltd (COAS) in conjunction with GeoFlo Southwest Geophysical and Flotation Services, carried out a geophysical survey on land at Quarryfields, Castle Street, and Mere, Wiltshire (the Site') on 18 and 19 November 2014. The survey was carried out in support of a planning application (Wiltshire County Council Planning Application Reference 14/ 06624/FUL) for an expansion of industrial premises onto agricultural land as part of the relocation of the Hill Brush factory. The survey follows a Desk-based assessment carried out on the Site by COAS in January 2013 (Tabor 2013). The project was commissioned by Tony Brimble of Brimble, Lea & Partners and funded by the Hill Brush Company Ltd.
- 1.2 The programme of works was advised by Ms Clare King (Assistant County Archaeologist, Wiltshire County Archaeology Service (WCAS)) following a consultation request by Tony Brimble (Brimble, Lea & partners) in November 2014.
- 1.3 The programme of archaeological works follows a Desk-based assessment carried out on the Site by COAS in January 2013 (Tabor 2013). The assessment found that:

"The proposed new site has greater archaeological potential. A footpath across it is roughly parallel to a nearby field system which is likely to have Romano-British or earlier origins, although prolonged modern cultivation will have damaged any archaeological features or deposits. A significant amount of flint was noted on the ground, some of which has been worked."

- 1.4 The geophysical survey comprised four elements: the production of a Written Scheme of Investigation (WSI) which set out the project strategy; field evaluation through geophysical (magnetometer) survey; post-survey and report production; and archive deposition. The WSI was approved by Ms King on 18 November 2014 prior to the commencement of any Site works.
- 1.5 The request for the archaeological work follows advice given by Central Government as set out in paragraph 141 of the *National Planning Policy Framework* (DCLG 2012).

2. Site location and topography

- 2.1 The Site (centred on NGR ST 89317 70161) covers approximately 3ha and forms the central part of an arable field enveloped by the A303 dual carriageway to the north and the B3092 west road from Mere to the south, the two converging at the field's west end. The centre of Mere is c. 1.3km to the east. The south corner of Nor Wood forms a wedge-shaped interruption to the north boundary line and the fence of Mere's westernmost house defines the south end of the east boundary. Beyond it rises Long Hill, the east end of which affords Mere Castle its dominant position over the town, c. 930m east of the Site. The ground undulates slightly towards the west side but otherwise falls fairly evenly from c. 126m above (aOD) in the north to c. 120m aOD at its southern boundary over a distance of c. 250m. At the time of the survey the entire field was had been cultivated and drilled.
- 2.2 The field is set on solid geology comprising Melbury Sandstone Member Sandstone. There is no recorded superficial (drift) geology (British Geological Survey 2014. The Site is characterized by soils are freely draining, slightly acidic, loamy soils. (http://www.landis.org.uk/soilscapes).



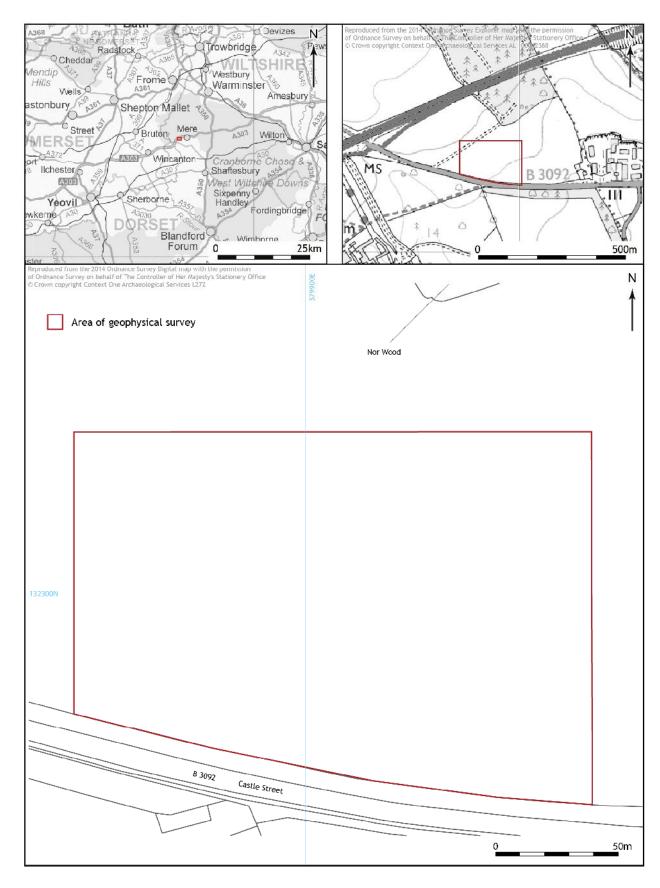
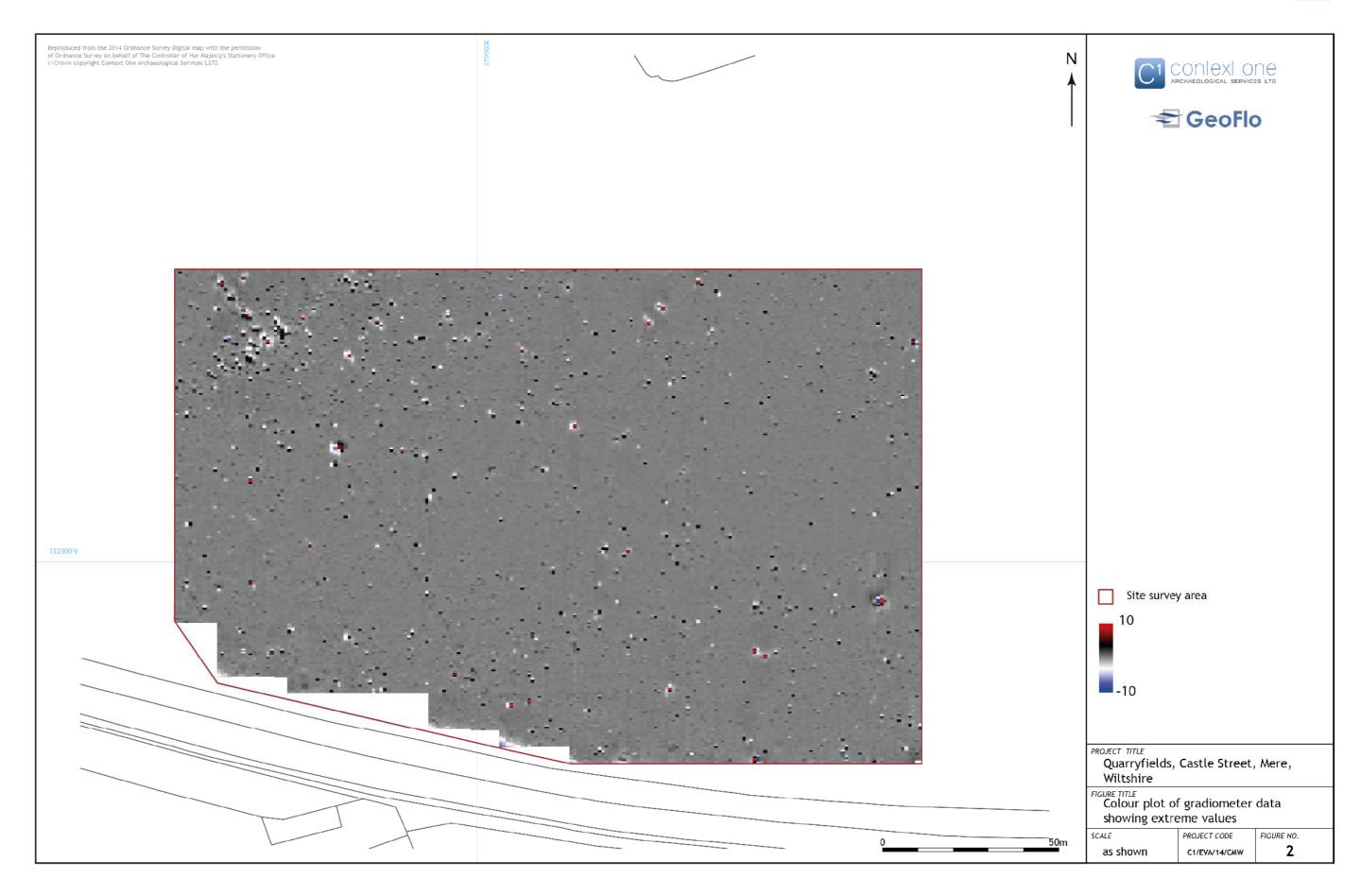
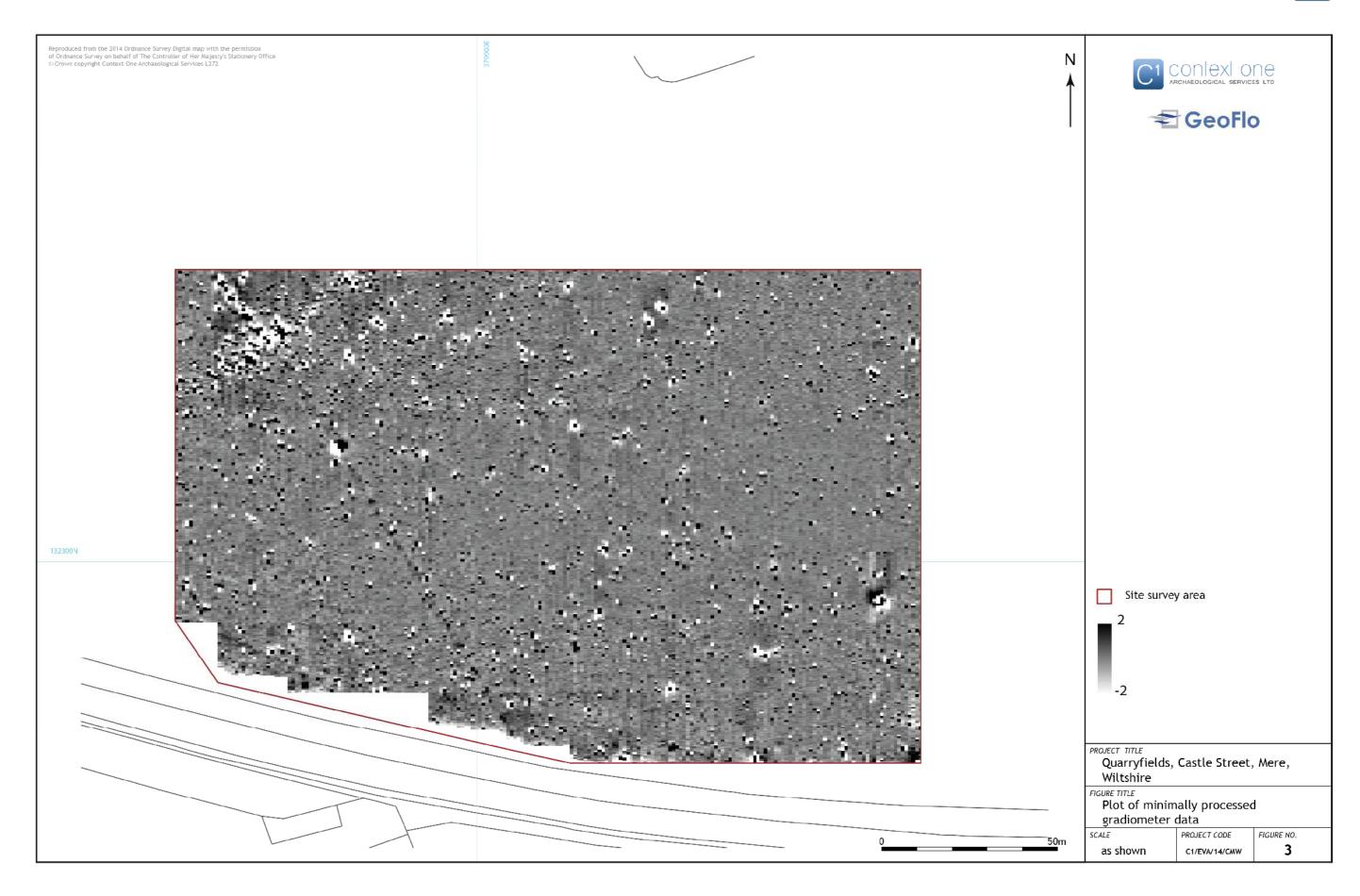


Figure 1. Site setting and location of area of geophysical survey

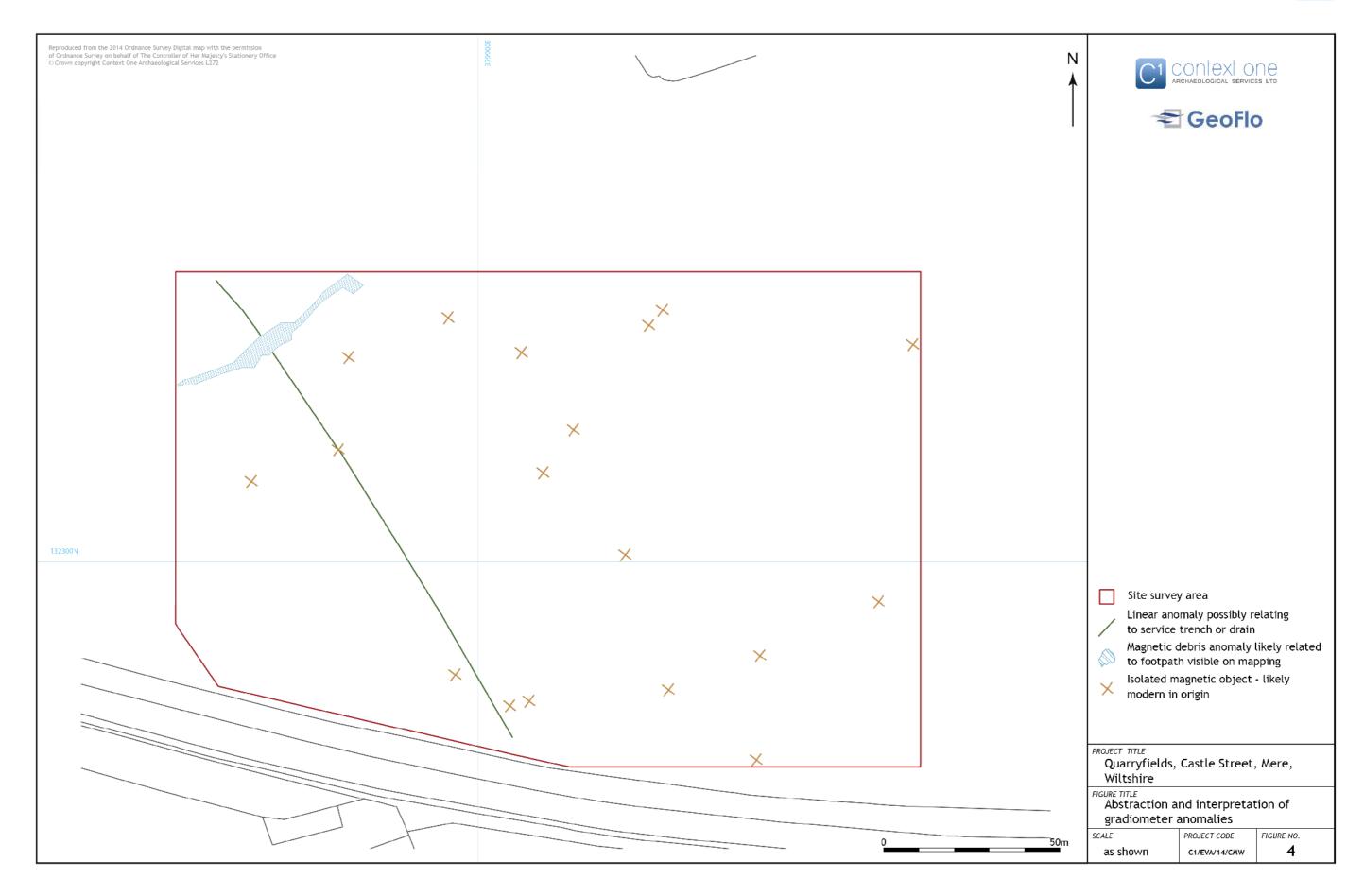














3. Methodology

3.1 The programme of archaeological work was carried out in accordance with the codes, standards and guidelines set out by the Institute for Archaeologists (IfA 1985, rev. 2012; 1990, rev. 2008; 1994, rev. 2008) and Wiltshire County Council (WCC 1995) at all times during the course of the investigation, and as recommended by English Heritage (2008) Geophysical Survey in Archaeological Field Evaluation. COAS will adhere to the Code of Conduct of the IfA and the Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology (IfA). Current Health and Safety legislation and guidelines were followed on site. The fieldwork methodology is summarised below.

Geophysical Survey field methodology

- 3.2 The survey area comprised a sub-rectangular area comprising approximately 3ha. The survey area was divided into 20m x 20m grid squares, using a TopCon GRS-1 GPS system capable of 1-2cm accuracy. Partial squares were added where ground conditions allowed permitting maximum site coverage.
- 3.3 The magnetometer survey was carried out using a Bartington Grad 601-2 Dual Sensor Gradiometer, comprising a double set of two vertically aligned fluxgates. A built-in data logger automatically recorded magnetic fluctuation between the vertical fluxgates in nano-Tesla (nT) at 0.125m intervals over traverses laid out 1m apart. The instrument has a manufacturer's specified depth range exceeding 3m.
- 3.4 Sandstone geology is recorded as offering variable results for magnetometer survey (English Heritage 2008). However, the technique is recommended for identifying features such as ditches and gullies, which may have been present as part of a possible Romano-British field system.

Data processing

- 3.5 Processing was performed using specialist *Geoplot* and *Anomaly* geophysical survey software. This was used to remove background 'noise' within the data and to flatten varying background levels to produce clearer data, in turn aiding interpretation and presentation. Once the basic processing had flattened the background the data was further processed and this included destriping (removing striping effects caused by zero-point discrepancies between different sensors and walking directions) and destaggering (Removes zigzag effects caused by inconsistent walking speeds on sloping, uneven or overgrown terrain). These were applied to the data in a targeted fashion, and aided with the eventual presentation and publication of the data.
- 3.6 The data was then interpreted and presented in colour plot, greyscale and trace formats within various graphical 'clip' parameters. The colour plot is plotted at parameters of 10 and -10 nT to illustrate particularly high magnetic readings within the data.

4. Results

- 4.1 No anomalies deemed to be of significant archaeological interest have been identified on the Site.
- 4.2 Two linear anomalies were identified within the survey data. A linear debris anomaly crossing the north-western corner of the survey area relates to an area of raised ground marked as a footpath on modern mapping.
- 4.3 A second linear anomaly crosses the Site from north-west to south. This anomaly is consistent with a modern drain or service trench. A magnetic spike is also visible along its length, and this may indicate the presence of an inspection chamber or other metallic feature.
- 4.4 A number of isolated magnetic anomalies visible across the Site likely relate to modern metallic debris.



5. Discussion

- 5.1 No features of archaeological interest were identified within the survey area.
- 5.2 Two linear features were identified within the survey data. A linear debris anomaly crossing the north-western corner of the survey area relates to an area of raised ground marked as a footpath on modern mapping. This feature is also visible within the topography of the Site and can be seen on the cover photo. This feature corresponds with field boundaries in neighbouring fields and may therefore have earlier (possible Romano-British) origins. However, the high magnetic strength of the feature, likely the result of the deposition of rubble or hardcore, is indicative of modern agricultural practice and it is unlikely that any possible earlier features will remain extant.
- 5.3 A second linear feature crosses the Site from north-west to south. This likely relates to a modern drain or service trench, and a magnetic spike along its length may indicate the presence of an inspection chamber or other metallic feature.
- 5.4 Other features identified are likely modern in origin and relate to ferrous objects and scattered debris in the topsoil.
- 5.5 Overall, the consistency of the data collected has indicated that the selected technique of magnetometer survey was effective. As a consequence the lack of readings consistent with archaeological features such as pits, ditches or other settlement features should be regarded as significant negative evidence.

6. Archive

- 6.1 The project archive is currently held at the offices of Context One Archaeological Services Ltd and consists of raw digital data files, and processed data composites in .cmp format.
- 6.2 Copies of this report will be deposited with the client/agent and included as part of the Wiltshire Historic Environment Record.

7. COAS acknowledgements

7.1 We would like to thank the following for their contribution to the successful completion of this project:

Mr Tony Brimble, Brimble, Lea & Partners Ms Clare King, Assistant County Archaeologist, Wiltshire Council

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