Land Adjoining Gipsy Castle Lane, Hay-on-Wye

Geophysical Survey & Archaeological Field Evaluation Report

Prepared For

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- BLACK MOUNTAINS ARCHAEOLOGY -
- ARCHAEOLEG MYNYDD DU -

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Front cover: View to the west east of Trench 1.

Summary

Comisiynwyd Archaeoleg Mynydd Du Cyf gan Mr MT Davies, Mr JL Davies, P&B Brown and Mrs S Hooper i gynnal gwerthusiad maes archaeolegol i ddarparu gwybodaeth am natur a hyd a lled unrhyw olion archaeolegol yn Tir ger Gipsy Castle Lane, Y Gelli Gandryll.

Cafodd cyfanswm o un deg saith ffos eu cloddio â pheiriant, ac wedyn cawsant eu glanhau â llaw a'u cofnodi. Ni nododd y gwerthusiad maes archeolegol unrhyw nodweddion neu ddyddodion o darddiad archeolegol yn unrhyw un o'r 17 ffos.

Gwnaed y gwerthusiad maes i safonau proffesiynol Sefydliad Siartredig yr Archeolegwyr, fel y'u pennir yn y ddogfen, 'Standard and guidance for an archaeological field evaluation'. Cyhoeddwyd 2014*.*

Black Mountains Archaeology Ltd were commissioned by Mr MT Davies, Mr JL Davies, P&B Brown and Mrs S Hooper to carry out an archaeological field evaluation to inform on the nature and extent of any archaeological remains at Land Adjoining Gipsy Castle Lane, Hay-on-Wye.

A total of seventeen trenches were machine excavated followed by hand cleaning and recording. The archaeological field evaluation did not identify any features or deposits of archaeological origin in any of the seventeen trenches.

The field evaluation was undertaken to the professional standards of the Chartered Institute for Archaeologists Standard and guidance for an archaeological field evaluation*. Published 2014.*

1 Introduction

1.1 Project Background

1.1.1 Black Mountains Archaeology Ltd/Archaeoleg Mynydd Du Cyf were commissioned by Mr MT Davies, Mr JL Davies, P&B Brown and Mrs S Hooper to carry out a geophysical survey and archaeological field evaluation at Land Adjoining Gipsy Castle Lane, Hay-on-Wye (NGR: SO 321858,241800) to inform on the nature and extent of any archaeological remains on the site.

1.1.2 A geophysical survey was undertaken on the 10th and 15th December 2018 (Young 2018; Appendix III) and the results of the survey incorporated into the trenching strategy. Both magnetic gradiometer and resistivity survey methods were employed. The magnetic survey showed the widespread distribution of minor magnetic anomalies across the site. The distribution of these anomalies corresponds closely with the layout of the campsite as visible on aerial photography. The results of the ground resistivity survey were complexly and diffusely featured. The anomalies include a broad NNW-SSE linear positive resistivity anomaly adjacent to the line of a mapped former field boundary, probably representing a degraded field bank (see Appendix III). Trench 2 was positioned to test this feature, which proved to be the natural geology. Trenches 3, 4, 7, 12, 13 and 14 were positioned over magnetic anomalies.

1.1.3 The trenching involved the excavation of seventeen 20m x 2m trenches totalling 680 square metres. Three trenches had to be abandoned due to the presence of a high-pressure gas main running along the northern boundary of the field and some trenches were realigned to avoid metalled trackways and modern terracing belonging to the campsite.

1.1.4 The present report sets out the results of the archaeological field evaluation in accordance with the advice provided by Mark Walters (CPAT), archaeological advisor to the Local Planning Authority (LPA).

1.2 Objectives

1.2.1 The definition of an archaeological Field Evaluation as set out by the *Chartered Institute for Archaeologists* (ClfA) is a programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. If such archaeological remains are present the field evaluation defines their character, extent, quality and preservation, and enables an assessment of their significance in a local, regional, national or international context as appropriate.

1.2.2 The purpose of field evaluation is to gain information about the archaeological resource within a given area or site (including its presence or absence, character, extent, date, integrity, state of preservation and quality), in order to make an assessment of its merit in the appropriate context, leading to one or more of the following:

- The formulation of a strategy to ensure the recording, preservation or management of the resource.

- The formulation of a strategy to mitigate a threat to the archaeological resource.
- The formulation of a proposal for further archaeological investigation within a programme of research.

(*Chartered Institute for Archaeologists Standard and guidance for geophysical survey*. Published 2016 and *Chartered Institute for Archaeologists Standard and guidance for an archaeological field evaluation*. Published 2014)

1.3 Legislative Framework

1.3.1 Planning Policy Wales (PPW 10th Edition) sets out the land use planning policies of the Welsh Government. Chapter 6 sets out the Welsh Government's policy towards the historic environment. It states "The historic environment of Wales is made up of individual historic features, archaeological sites, historic buildings and historic parks, gardens, townscapes and landscapes, collectively known as historic assets. The most important of these historic assets have statutory protection through scheduling, listing or designation as a conservation area. Other assets are included in formal registers, which identify them as being of special historic interest. Many others make a positive contribution to local character and sense of place. Some, such as buried archaeological remains, have still to be identified. It is important to protect what is significant about these assets and sustain their distinctiveness. Historic assets should be the subject of recording and investigation when they are affected by proposals that alter or destroy them. Historic assets are a non-renewable resource." (PPW 2018, 123-129).

1.3.2 Underpinning PPW are a series of legislative powers and TANs. The *Planning (Wales) Act 2015* sets out a series of legislative changes to deliver reform of the planning system in Wales, to ensure that it is fair, resilient and enables development. The 2015 Act also introduces a mandatory requirement to undertake pre-application consultation for certain types of development. The *Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016* defines in *Schedule 4(l)* the parameters and definitions for the requirement of pre-application consultation by Welsh Ministers, particularly in response to the effect of statutory designated monuments, buildings, and parks and gardens.

1.3.3 Advice on archaeology and buildings in the planning process was contained in Welsh Office Circular 60/96 Planning and the Historic Environment: Archaeology and Welsh Office Circular 1/98 Planning and the Historic Environment, which updated Welsh Office Circular 61/96 Planning and the Historic Environment: Historic Buildings and Conservation Areas following the Shimizu (U.K.) Ltd. v. Westminster City Council Judgement (February 1997). Detailed advice on Environmental Impact Assessment is contained within Welsh Office Circular 11/99 Environmental Impact Assessment. Following adoption of the TAN 24 Historic Environment on 31st May 2017, Welsh Office Circulars 60/96 Planning and the Historic Environment: Archaeology; 61/96 Planning and the Historic Environment: Historic Buildings and Conservation Areas; and 1/98 Planning and the Historic Environment have been cancelled.

1.3.4 Any works affecting an ancient monument and its setting are protected through implementation of the *Ancient Monument and Archaeological Areas Act 1979*. In Wales the 1979 Act has been strengthened by *The Historic Environment (Wales) Act 2016.* The 2016 Act makes important improvements for the protection and management of the Welsh historic environment. It also stands at the centre of an integrated package of secondary legislation (Annexes 1-6), new and updated planning policy and advice, and best-practice guidance on a wide range of topics (*TAN 24 Historic Environment*).

1.3.5 Taken together, these will support and promote the careful management of change in the historic environment in accordance with current conservation philosophy and practice.

1.3.6 The *Ancient Monument and Archaeological Areas Act 1979* and *The Historic Environment (Wales) Act 2016* sets out a presumption in favour of preservation *in-situ* concerning sites and monuments of national importance (scheduled/listed), and there exists in the current *Planning Policy Wales (Chapter 6)* a presumption in favour of preservation *in-situ* of all types of heritage assets.

1.4 Location, Topography and Geology

1.4.1 The proposed development is centred on NGR SO 321858,241800 (Figure 1), just off the south side of Gipsy Castle Lane, and north side of the Brecon Road, Hay-on-Wye. The development area is a sub-rectangular-shaped pasture field, which is currently used as car parking and camping for the Hay Festival.

1.4.2 The geology of the proposed development area is superficial deposits of Quaternary alluvial fan deposits of sands and gravels and Devensian till deposits (Diamicton) overlying interbedded siltstone and mudstone of the Raglan Mudstone Formation bedrock (British Geological Survey 2018).

1.4.3 The geophysical survey was undertaken between 10th and 15th December 2018 (Young 2018; Appendix III). The archaeological field evaluation was carried out between the 4th February to 12th February 2019. Ground conditions were for the most part dry and firm and the weather was predominantly cold but with fine sunshine and scattered periods of rain.

1.5 Archaeological background

1.5.1 The area around Gipsy Castle Lane has a strong prehistoric and Roman presence. Although no sites of these periods are known within the proposed development area, a complex of curvilinear features, probably ditches, was noted in fields to the north of Gipsy Castle Lane in 1965. The Gipsy Castle Lane Enclosure (5833) and associated crop-marks were identified on a 1965 aerial photograph by Cambridge University and clearly shows multiple sets of curving cropmarks. The eastern cropmarks appear to resemble an Iron Age banjo enclosure (farm/settlement) and the western cropmarks a Neolithic henge or causewayed enclosure (ritual).

1.5.2 Roman activity in the wider area is represented by two forts and the conjectural line of the fossilised Kenchester to Brecon Roman Road (11603-RR63), which is aligned to the south of the proposed development area on what is now the B4350 Brecon Road. The road may have provided a link between the locations of the Clifford (4200) and Clyro (SAM RD124) Roman Forts up stream of the development area. The fort at Clifford was identified as a cropmark by aerial reconnaissance in the 1960s, however, little earthwork remains are visible on the ground. The fort is nearly square and is situated on a bend in the River Wye. The fort occupies around 6.5h contained by a set of three defences ditches. No formal investigations have been carried out but the site is considered to be an early campaign base (Burnham and Davies 2010, 237-238).

1.5.3 The successor to Clifford can be found 4km downstream at Clyro. The fort here lies partially under Boatside Farm and the earthworks here were originally recorded by the OS workers in 1832 (1st Edition 1 inch). Originally known as the Gaer, the fort encompasses around 9.5ha in the classic playing card shape. Excavations in the 1960s established two phases of construction, first a 4m wide timber revetted turf rampart and then this was later replaced by a 6m wide rampart, possibly with timber towers. A single 4m wide ditch, rock-cut in places, served both phases although an outlying ditch noted from aerial reconnaissance on the NE side of the fort may indicate an earlier larger fort or marching camp. Dating evidence is limited but suggests a pre-Flavian campaign base (Burnham and Davies 2010, 238-239).

1.5.4 Medieval activity is represented by two sets of ridge and furrow earthworks (CPAT44104 and CPAT44105) noted in the adjacent fields to the east of the proposed development area (CPAT HER). No medieval activity is known from the development area but the site is located close to the town of Hay-on-Wye, which was established certainly by 1100 when a small motte (BR077) was constructed off Swan Bank, possibly by William Revel who was granted Hay-on-Wye by Bernard de Neufmarché, the Norman conqueror of Brycheiniog (1088-95). The nearby St Mary's Church is recorded at the same time as being granted to the Benedictine Priory (Soulsby 1983, 142). Hay Castle (BR076) was built in the late 12th or early 13th century by William de Braose II to replace the small motte. The castle and town had a turbulent history being attacked during the First and Second Barons Wars. King John captured the castle and burnt the town in 1216 to suppress de Braose's rebellion. Llywelyn ab Iorwerth sacked the town and castle in 1231, which led to the first murage grant to build the town wall. The burgages of the town were principally laid out along Belmont Road, Broad Street, Heol y Dŵr and Lion Street (Soulsby 1983, 143). The town at this time the centre of a thriving wool trade. Several centuries of turmoil followed, including attacks by Owain Glyndwr in 1416.

1.5.5 Previous Investigations

1.5.6 An adjacent watching brief (Wainwright 2002) for residential housing recovered little significant archaeological deposits and features save for an undated ditch that was suggested as probably Iron Age and a collection of medieval to Modern ceramics in the topsoil.

1.5.7 Black Mountains Archaeology Ltd carried out a geophysical survey and archaeological field evaluation in 2017 on the adjacent field to the east of the development area (centred on NGR SO (3)22016, (2)41886). The geophysical survey was undertaken on the 17th-18th August 2017 and the results of the survey incorporated into the trenching strategy. The archaeological field evaluation was carried out on the 18th-21st September 2017 and did not identify any features or deposits of archaeological origin in any of the five trenches. The results of the trenching married well with the geophysical interpretation confirming that the natural geology was strongly reflected, as were features of natural origin such as tree-throws, and more modern responses from agricultural activity. There was no evidence of any prehistoric activity in relation to the Gipsy Castle Lane Enclosure and associated cropmarks known from fields to the north of Gipsy Castle Lane. The topsoil and subsoils across all five trenches were fairly uniform and shallow suggesting that this field may never have been ploughed (Lewis 2017).

2 Methodology

2.1.1 The archaeological field evaluation consisted of the excavation of seventeen 20m x 2m trenches. The trenches were positioned to target anomalies identified by the geophysical survey (see Figure 1). The plant provided was in the form of a JCB sized back acting excavator with a 1.8m wide grading bucket. The trenches were laid out using a Geomax Zenith 35 Pro GNSS/Glonass (GPS) Receiver and data logger. The survey was conducted to Ordnance Survey National Grid and Datum with a 20mm tolerance. All trench areas and areas of archaeological potential were surveyed with a Garrett Ace 400i metal detector with a 28cm x 22cm DD PROformance search coil and Garrett Ace 200i metal detector with a 16.5 x 23cm PROformance search coil. A number of metallic items were recovered and are detailed in Section 3.2 below.

2.1.2 All trench sections were cleaned by hand and one scaled section recorded in detail. No features or deposits of archaeological origin were identified in any of the seventeen trenches. The archaeological recording techniques conformed to the best industry standard; all deposits were recorded using a single continuous context numbering system pro forma. All contexts were recorded with the trench number prefix (e.g. context 03 in Trench 1 = 103) and are summarised in Appendix II. All trenches and sample sections were photographed in digital using a Fujifilm FinePix S4800 super wide (30x) 24-720mm camera at 16mp. In all trenches, natural deposits were encountered and recorded. When no archaeological horizons were encountered during the machine excavation of the trenches then the excavations were taken down to the natural sand/gravels and mudstones. Each section of the trench was inspected and sections were hand cleaned and recorded, and the trench measured, before being back-filled. All trenches were backfilled with the excavated material.

2.1.3 All classes of finds were retained (cleaned and catalogued) and arrangements for final deposition have been agreed, as set out in the requirements of the *Chartered Institute for Archaeologists' Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (2014). No deposits with palaeoenvironmental potential were encountered.

2.1.4 The field evaluation was carried out to the standards of the *Chartered Institute for Archaeologists' Standard and Guidance for Archaeological Field Evaluations* (2014).

2.1.5 With the permission of the landowner, the site archive will be deposited with Brecknock Museum and art Gallery for permanent curation. An accession number will be generated on submission. A digital copy of the report and archive summary will be supplied to the regional HER (CPAT), the LPA and the Royal Commission on the Ancient and Historical Monuments of Wales.

3 Results

3.1 Stratigraphical evidence

3.1.1 The archaeological field evaluation consisted of the excavation of seventeen 20m x 2m trenches, totalling 680 square metres. Three trenches had to be abandoned due to the presence of a high-pressure gas main running along the northern boundary of the field and some trenches were realigned to avoid metalled trackways and modern terracing belonging to the campsite. Minor magnetic anomalies identified from the geophysics across the site proved to be road irons and tent pegs. All seventeen trenches were largely uniform in terms of stratigraphy and no features, structures or deposits of an archaeological nature were identified in any of the trenches. Metallic finds recovered from the trenches, spoil heaps and surrounding trench areas were largely the result of discovery with the Garrett metal detectors (see 3.2 below).

3.1.2 The results of each evaluation trench, including contextual information, are detailed in Appendix III.

3.1.3 **Trench 1** (Figure 1; Plate 2)

3.1.4 Level of present ground surface: NW end 93.652mOD, SE end 93.652mOD.

3.1.5 Trench 1 was positioned in the SW area of the field in an area of negative geophysical responses. The trench was length 20m, width 2m and with an average depth 0.6m. The basal layer (101) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. This was overlaid by a mid-brown silty-clay subsoil (102) and a mid-brown silty loam topsoil (103).

3.1.6 No archaeological deposits or features was present in the trench.

3.1.7 **Trench 2** (Figure 1; Plate 3)

3.1.8 Level of present ground surface: W end 94.258mOD, E end 94.584mOD.

3.1.9 Trench 2 was positioned over a possible linear feature identified on geophysics. The trench measured 20m in length by 2m in width, and with an average depth 0.4m. The feature was not identifiable, the natural sandstone gravels being very shallow possibly confusing the geophysical survey results. A small sondage was excavated in the E end of the trench to test the natural gravels.

3.1.10 The basal layer (201) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (202) with frequent small (<0.05m) rounded stones. The overlying topsoil (203) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.11 No evidence of any archaeological deposits or features was present in the trench.

3.1.12 **Trench 3** (Figure 1; Plate 4)

3.1.13 Level of present ground surface: SW end 94.959mOD, NE end 94.995mOD.

3.1.14 Trench 3 was positioned over a possible magnetic anomaly identified on geophysics. The feature proved to be a modern road iron stake. The trench measured 20m in length by 2m in width and with an average depth 0.35m. A small sondage was excavated in the SW end of the trench.

3.1.15 The basal layer (301) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (302) with frequent small (<0.05m) rounded stones. The overlying topsoil (303) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.16 No evidence of any archaeological deposits or features was present in the trench.

3.1.17 **Trench 4** (Figure 1; Plate 5)

3.1.18 Level of present ground surface: W end 93.569mOD, E end 93.882mOD.

3.1.19 Trench 4 was positioned over several possible magnetic anomalies identified on geophysics. The trench measured 20m in length by 2m in width with an average depth 0.3m. No features were identified but two modern tent pegs were recovered. A small sondage was excavated in the E end of the trench.

3.1.20 The basal layer (401) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (402) with frequent small (<0.05m) rounded stones. The overlying topsoil (403) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.21 No evidence of any archaeological deposits or features was present in the trench.

3.1.22 **Trench 5** (Figures 1; Plate 6)

3.1.23 Level of present ground surface: NW end 93.879mOD, SE end 94.216mOD.

3.1.24 Trench 5 was positioned over a linear identified on geophysics. The feature was a modern metalled track for the campsite, which the landowner wished to remain *in-situ* so the trench was rotated on its NW axis to avoid the track. The trench measured 20m in length by 2m in width, with an average depth of 0.45m. A small sondage was excavated in the NW end of the trench.

3.1.25 The basal layer (501) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (502) with frequent small (<0.05m) rounded stones. The overlying topsoil (503) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.26 No evidence of any archaeological deposits or features was present in the trench.

3.1.27 **Trench 7** (Figures 1; Plate 7)

3.1.28 Level of present ground surface: W end 94.418mOD, E end 94.628mOD.

3.1.29 Trench 7 was positioned over a possible magnetic anomaly identified on geophysics. The feature was not machine excavated as the trench had to be rotated on its E axis to avoid excavating too close to a high-pressure gas main. The trench was 20m in length by 2m in width, with an average depth of 0.8m. A road iron was found in the location of the magnetic anomaly buried in the upper topsoil (001/703) (identified by metal detector). The trench, positioned to the W of a former field boundary and showed a greater depth of topsoil and subsoils than those trenches located to the E of the former boundary (Plate 1 shows former hedgerow *in-situ* in 1960s).

3.1.30 The basal layer was a mid-brown silty-clay subsoil (702) with frequent small (<0.05m) rounded stones. The overlying topsoil (703) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.31 No evidence of any archaeological deposits or features was present in the trench.

3.1.32 **Trench 8** (Figures 1; Plate 8)

3.1.33 Level of present ground surface: NE end 95.433mOD, SW end 96.357mOD.

3.1.34 Trench 8 was positioned over a former field boundary (Plate 1). The trench had to be rotated on its S axis to avoid excavating through another metalled track for the campsite. The trench was 20m in length by 2m in width, with an average depth of 0.6m. A single find was recovered from the topsoil (803), a double frogged Ebbw Vale stamped red brick. A small sondage was excavated in the SW end of the trench but no natural gravels were encountered. The trench, positioned on a former field boundary and showed a greater depth of topsoil and subsoils than those trenches located to the E of the former boundary (Plate 1 shows former hedgerow *in-situ* in 1960s). The former field boundary was visible on the ground surface as a low earthwork but had no defining characteristics below ground (in section).

3.1.35 The basal layer was a mid-brown silty-clay subsoil (802) with frequent small (<0.05m) rounded stones. The overlying topsoil (803) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.36 No evidence of any archaeological deposits or features was present in the trench.

3.1.37 **Trench 9** (Figures 1; Plate 9)

3.1.38 Level of present ground surface: NW end 94.191mOD, SE end 94.834mOD.

3.1.39 Trench 9 was positioned to the west of a former field boundary (Plate 1) in an area of negative geophysical responses. The trench was 20m in length by 2m in width, with an average depth of 0.85m. Two finds were recovered from the topsoil (903), a forged wrought iron nail fragment and a gate post latch (fe). A small sondage was excavated in the SW end of the trench but no natural gravels were encountered. The trench was positioned to the west of a former field boundary and showed a greater depth of topsoil and subsoils than those trenches located to the E (Plate 1 shows former hedgerow *in-situ* in 1960s).

3.1.40 The basal layer (901) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (902) with frequent small (<0.05m) rounded stones. The overlying topsoil (903) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.41 No evidence of any archaeological deposits or features was present in the trench.

3.1.42 **Trench 10** (Figures 1; Plate 10)

3.1.43 Level of present ground surface: NW end 96.125mOD, SE end 96.483mOD.

3.1.44 Trench 10 was positioned over a linear identified on geophysics. The feature was a modern metalled track for the campsite, which the landowner wished to remain *in-situ,* so the trench was rotated on its N axis counter clockwise to avoid the track. The trench measured 20m in length by 2m in width, with an average depth of 0.35m. A small sondage was excavated in the SE end of the trench. The trench was positioned to the east of a former field boundary and showed a shallower depth of topsoil and subsoils than those trenches located to the W (Plate 1 shows former hedgerow *in-situ* in 1960s).

3.1.45 The basal layer (1001) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (1002) with frequent small (<0.05m) rounded stones. The overlying topsoil (1003) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.46 No evidence of any archaeological deposits or features was present in the trench.

3.1.47 **Trench 11** (Figures 1; Plate 11)

3.1.48 Level of present ground surface: NW end 94.699mOD, SE end 95.081mOD.

3.1.49 Trench 11 was positioned in an area of negative geophysical responses. The trench measured 20m in length by 2m in width, with an average depth of 0.75m. A small sondage was excavated in the SE end of the trench. No evidence of any archaeological deposits or features was present in the trench.

3.1.50 The basal layer (1101) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (1102) with frequent small (<0.05m) rounded stones. The overlying topsoil (1103) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.51 No evidence of any archaeological deposits or features was present in the trench.

3.1.52 **Trench 12** (Figures 1; Plate 12)

3.1.53 Level of present ground surface: SW end 100.201mOD, NE end 98.999mOD.

3.1.54 Trench 12 was positioned over several possible magnetic anomalies identified on geophysics. The trench measured 20m in length by 2m in width, with an average depth of 0.5m. The trench was rotated on its NE axis counter clockwise to avoid modern terracing for the campsite.

3.1.55 The basal layer (1201) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (1202) with frequent small (<0.05m) rounded stones. The overlying topsoil (1203) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.56 No evidence of any archaeological deposits or features was present in the trench.

3.1.57 **Trench 13** (Figures 1; Plate 13)

3.1.58 Level of present ground surface: NW end 96.595mOD, SE end 97.365mOD.

3.1.59 Trench 13 positioned over a possible magnetic anomaly identified on geophysics. The trench measured 20m in length by 2m in width, with an average depth of 0.5m.

3.1.60 The basal layer was a mid-brown silty-clay subsoil (1302) with frequent small (<0.05m) rounded stones. The overlying topsoil (1303) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.61 No evidence of any archaeological deposits or features was present in the trench.

3.1.62 **Trench 14** (Figures 1; Plate 14)

3.1.63 Level of present ground surface: SW end 100.733mOD, NE end 99.514mOD.

3.1.64 Trench 14 positioned over a possible magnetic anomaly identified on geophysics. The trench was rotated on its centre axis counter clockwise to avoid modern terracing for the campsite. A small sondage was excavated in the SW end of the trench. The trench measured 20m in length by 2m in width, with an average depth of 0.6m. Two finds were recovered from the topsoil (1403), four forged wrought iron nail fragments and a small flint debitage fragment.

3.1.65 The basal layer (1401) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (1402) with frequent small (<0.05m) rounded stones. The overlying topsoil (1403) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.66 No evidence of any archaeological deposits or features was present in the trench.

3.1.67 **Trench 17** (Figures 1; Plate 15)

3.1.68 Level of present ground surface: W end 93.712mOD, E end 93.826mOD.

3.1.69 Trench 17 was positioned over a linear identified on geophysics. The feature was a modern metalled track for the campsite, which the landowner wished to remain *in-situ* so the trench was rotated on its E axis counter clockwise to avoid the track. The trench measured 20m in length by 2m in width, with an average depth of 0.3m. A sondage was excavated in the W end of the trench. Two finds were recovered from the topsoil (1703), one wrought iron forged nail fragment and an iron strap.

3.1.70 The basal layer (1701) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (1702) with frequent small (<0.05m) rounded stones. The overlying topsoil (1703) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.71 No evidence of any archaeological deposits or features was present in the trench.

3.1.72 **Trench 18** (Figures 1; Plate 16)

3.1.73 Level of present ground surface: W end 95.073mOD, E end 95.137mOD.

3.1.74 Trench 18 was positioned in an area of negative geophysical responses. A sondage was excavated in the W end of the trench. The trench measured 20m in length by 2m in width, with an average depth of 0.4m. Two post-decimal £1 coins were recovered from the topsoil (1803).

3.1.75 The basal layer (1801) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (1802) with frequent small (<0.05m) rounded stones. The overlying topsoil (1803) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.76 No evidence of any archaeological deposits or features was present in the trench.

3.1.77 **Trench 19** (Figures 1; Plate 17)

3.1.78 Level of present ground surface: NW end 94.423mOD, SE end 94.669mOD.

3.1.79 Trench 19 was positioned in an area of negative geophysical responses. The trench measured 20m in length by 2m in width, with an average depth of 0.4m. Two copper alloy finds were recovered from the topsoil (1903), a small oval cufflink and a name plate for 'Marsh's Mild Cure'.

3.1.80 The basal layer (1901) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (1902) with frequent small (<0.05m) rounded stones. The overlying topsoil (1903) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.81 No evidence of any archaeological deposits or features was present in the trench.

3.1.82 **Trench 20** (Figures 1; Plate 18)

3.1.83 Level of present ground surface: NW end 93.802mOD, SE end 94.151mOD.

3.1.84 Trench 20 was positioned in an area of negative geophysical responses. The trench measured 20m in length by 2m in width, with an average depth of 0.4m.

3.1.85 The basal layer (2001) was a natural glacial outwash deposit of Quaternary sands and gravels. The deposit had frequent occurrences of large worn (<0.5m) cobbles contained in an orange-brown sandy matrix. Overlying this was a mid-brown silty-clay subsoil (2002) with frequent small (<0.05m) rounded stones. The overlying topsoil (2003) was a mid-brown silty loam with isolated small (<0.05m) stones.

3.1.86 No evidence of any archaeological deposits or features was present in the trench.

3.2 Finds

3.2.1 The finds recovered during the course of the evaluation were confined to the topsoil (001 general topsoil number as opposed to individual trench topsoil numbers) in seven out of the seventeen trenches (Plates 19-28). The material was processed and catalogued according to fabric type. The assemblage as a whole is dateable to the Post-medieval period. The discrete minor magnetic anomalies identified from the geophysics across the site proved to be road irons and tent pegs, which were not retained. Modern glass and ceramics were noted in the the topsoil but not retained. Post-medieval ceramics were absent from the investigations as were earlier period ceramics.

3.2.2 The five-pointed copper alloy spur rowel (001) is a particularly interesting find. This type dates largely to the 17th century although difficult to date precisely. A rowel is a rotating wheel with points (spikes) attached to a boot spur and used to 'encourage' the horse forward. The copper alloy strap (001) is difficult to date but is likely to be Post-medieval. The four buttons recovered from 001 are probably 19th century as they appear machined. The cufflink from Trench 19 (1903) is likely to be 19th century. An 18th or 19th century date is possible for the very worn silver button from (001), which looks hammered. The buttons and pre-decimal coins are probably casual loss from people working the land. The post-decimal coins and much of the modern material has been deposited through the use of the field as a campsite for the Hay Festival.

Table 1. Finds catalogue

Context	Type	Description/Detail	Period	Min count
001	Cu	Cu alloy strap with lettering, possibly a name, 15mm x 27mm x 2mm	Post-medieval	1
001	Cu	Cu five-point spur rowel, 55mm diameter.	Post-medieval	1
001	Cu	Four buttons: one flat 22mm diameter with gold lettering in reverse, two flat 20mm diameter one with gold flecks on reverse and one domed 13mm with engraved lines and small loop in reverse.	Post-medieval	4
001	Ag	Worn and corroded silver(?) button 25mm in diameter	Post-medieval	1
001	Pb	Lead sheet	Post-medieval	3
001	Cu	Two worn pre-decimal coins. Edward VII 1903 Penny and George III or IV Half Penny	Post-medieval	2
001	Cu	Post-decimal coins, x5 £1, x2 50p, x6 20p, x1 10p, x2 5p and x1 1p. £7.41 in total.	Modern	17
001	Cu	Various Cu fragments. Pipe bowl, pipe, rod, cog, shot gun cartridge, bracket, sheet, nut and walking stick tip.	Post-medieval/Modern	2
001	Fe	Chisel tip, x4 forged nail fragments and bolt.	Post-medieval/Modern	6

Context	Type	Description/Detail	Period	Min count
803	Brick/Tile	Single Ebbw Vale stamped red brick. Double frogged.	Modern	1
703	Fe	Fe strap	Post-medieval/Modern	1
903	Fe	x1 forged nail fragment and gate post latch	Post-medieval/Modern	2
1403	Flint	Debitage fragment with step fracture on distal end and break at proximal end, which removed the platform. Several flake scars on ventral surface, 20mm x 15mm.	Prehistoric	1
1403	Fe	x4 Forged nail fragments	Post-medieval/Modern	4
1703	Fe	x1 Forged nail fragment and Fe strap	Post-medieval/Modern	2
1803	Cu	Post-decimal coins, x2 £1. £2 in total.	Modern	2
1903	Cu	Oval Cufflink, 20mm x 15mm x 2mm	Post-medieval	1
1903	Cu	Name plate in tin(?) for Marsh's Mild Cure.	Post-medieval/Modern	1
Total	**9 Contexts**		**Total**	**52**

4 Discussion and Conclusions

4.1.1 The archaeological field evaluation did not identify any features or deposits of archaeological origin in any of the seventeen trenches. All seventeen trenches were largely uniform in terms of stratigraphy. The only noted stratigraphical difference being the deeper ploughsoil and subsoils in the western half of the field. The former field boundary noted in Plate 1 providing the boundary between the deeper and shallower deposits. The eastern half of the field had very shallow natural geology and this may have inhibited deep ploughing in the past. The western half certainly has been subjected to historic ploughing. Modern glass and ceramics were noted in the topsoil, but curiously earlier Post-medieval ceramics and glass were absent.

4.1.2 The results of the trenching confirmed the geophysical interpretation that the natural geology was strongly reflected and with little archaeological potential. The minor magnetic anomalies identified from the geophysics across the site proved to be road irons (Trench 3, 303), tent pegs and in some isolated cases possibly wrought iron nails (Trench 14, 1403). There was no evidence of any prehistoric activity in relation to the Gipsy Castle Lane Enclosure and associated cropmarks known from fields to the north of Gipsy Castle Lane (Plate 1).

4.1.3 Metallic finds recovered from the trenches, spoil heaps and surrounding trench areas were largely the result of discovery with metal detectors. These discoveries being largely confined to the topsoil (001 general topsoil number as opposed to individual trench topsoil numbers) in seven out of the seventeen trenches. The assemblage as a whole is dateable to the Post-medieval period.

4.1.4 The five-pointed copper alloy spur rowel (001) is a particularly interesting find. This type dates largely to the 17th century although difficult to date precisely. A rowel is a rotating wheel with points (spikes) attached to a boot spur and used to 'encourage' the horse forward. A comparable five-pointed rowel was discovered in Llangynidr and has been dated to 1600-1660 (Trevaskus 2010). Therefore, it is entirely possible the five-pointed copper alloy spur rowel (001) found on-site could date to the Civil War period. Mr Jeff Davies (pers. comm.) remembered his father many years ago digging up a few cannon balls on the high ground in the field to the north of Gispy Castle Lane (opposite the field evaluation area), which has a clear line of sight to Hay Castle (SAMBr076). While no reference to Civil War encampments or artillery positions could be found there could, however tenuous, nevertheless be a connection between the loss of the rowel and 17th century military activity in the area.

4.1.5 The copper alloy strap (001) is difficult to date but is likely to be Post-medieval. The four buttons recovered from 001 are probably 19th century as they appear machined. The cufflink from Trench 19 (1903) is likely to be 19th century. An 18th or 19th century date is possible for the very worn silver button from (001), which looks hammered. The buttons and pre-decimal coins are probably casual loss from people working the land. The post-decimal coins, which totalled £7.41, and much of the modern material has been deposited through the use of the field as a campsite for the Hay Festival.

5 Bibliography

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6 Appendices

6.1 Appendix I Figures

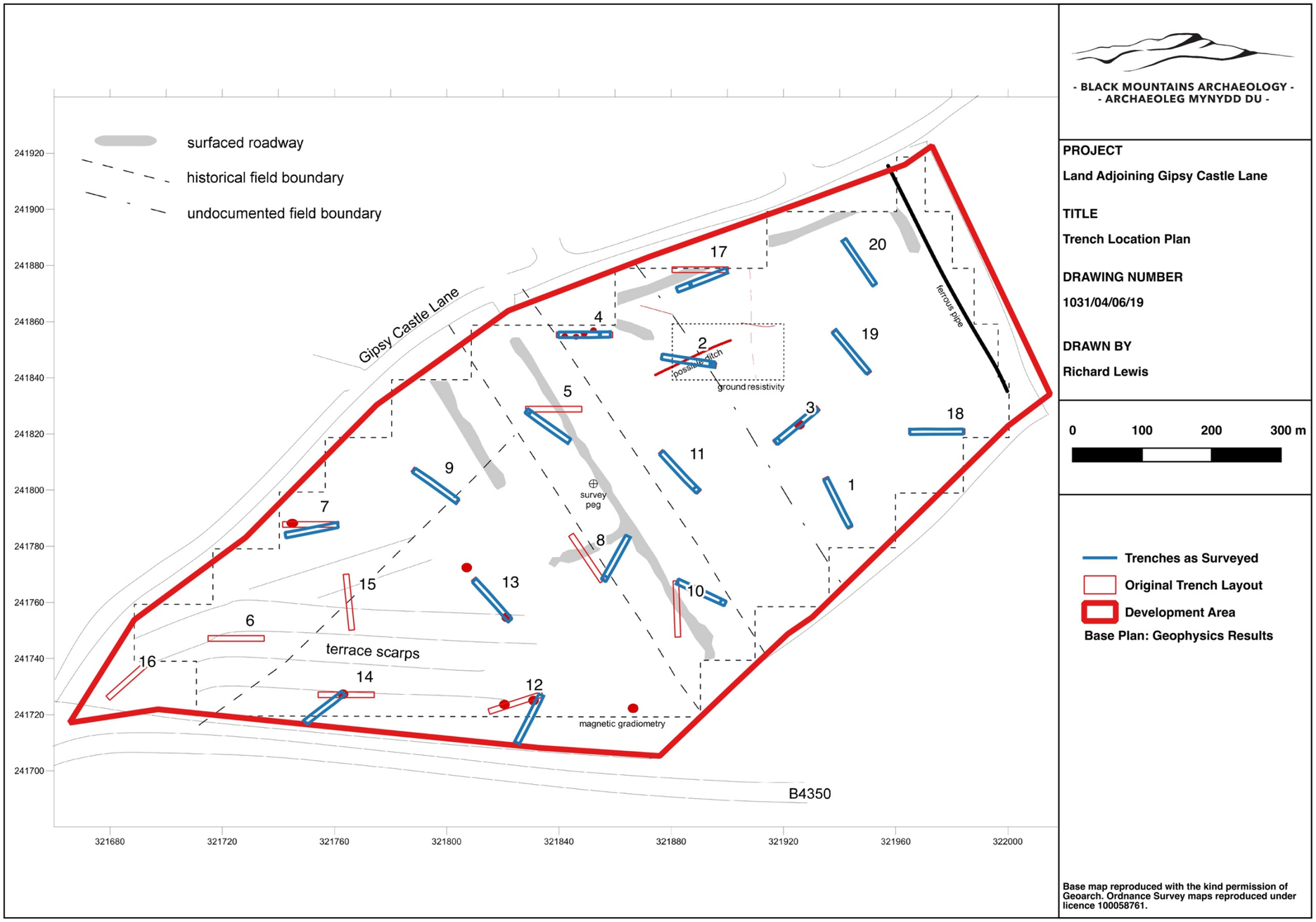

Figure 1. Location of archaeological trenches (blue) overlaid on geophysical survey results (Young 2018). Land south of Gipsy Castle Lane, Hay-on-Wye, HR3 5PW.

6.2 Appendix I Plates

Plate 1. Gipsy Castle Lane Enclosure (5833) and associated crop-marks (blue) identified on a 1965 aerial photograph (Cambridge University). Development area outlined in red.

Plate 2. Trench 1, view N. Scale 1m in 0.5m sections.

Plate 3. Trench 2, view W. Scale 1m in 0.5m sections.

Plate 4. Trench 3, view to NE. Scale 1m in 0.5m sections

Plate 5. Trench 4, view to W. Scale 1m in 0.5m sections.

Plate 6. Trench 5, view to SE. Scale 1m in 0.5m sections.

Plate 7. Trench 7, view to SE. Scale 1m in 0.5m sections.

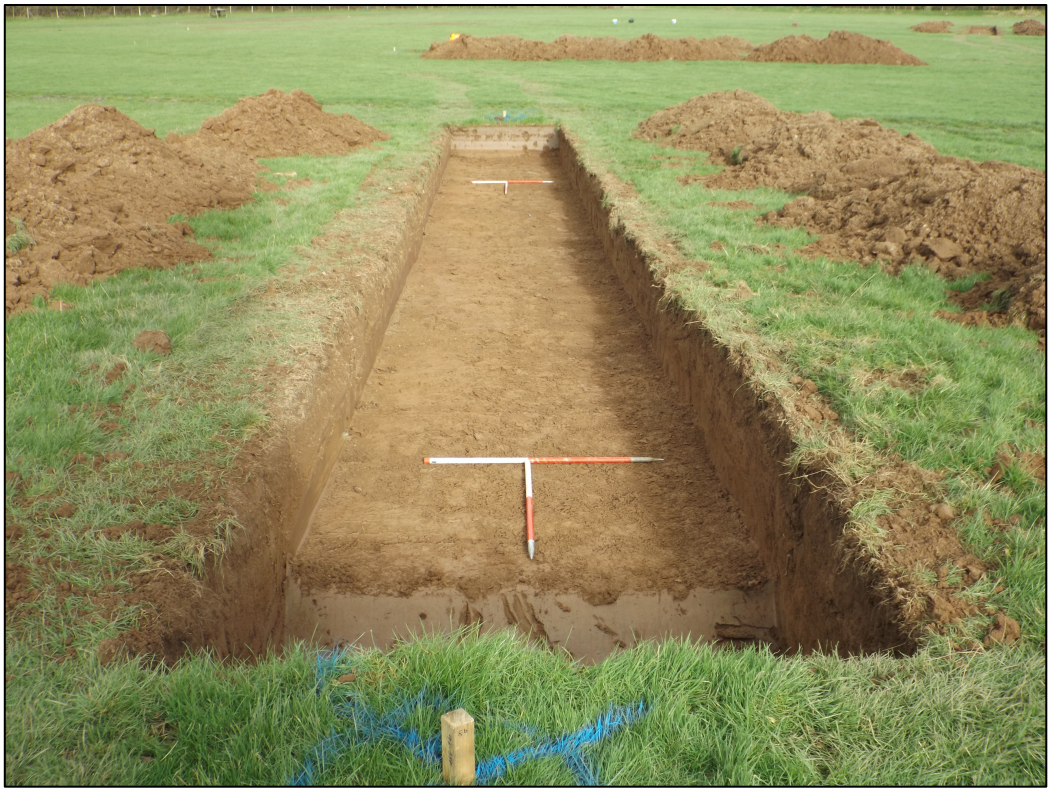

Plate 8. Trench 8, view to NE. Scale 1m in 0.5m sections.

Plate 9. Trench 9, view to SE. Scale 1m in 0.5m sections.

Plate 10. Trench 10, view to SE. Scale 1m in 0.5m sections.

Plate 11. Trench 11, view to SE. Scale 1m in 0.5m sections.

Plate 12. Trench 12, view to SW. Scale 1m in 0.5m sections.

Plate 13. Trench 13, view to SE. Scale 1m in 0.5m sections.

Plate 14. Trench 14, view to SW. Scale 1m in 0.5m sections.

Plate 15. Trench 17, view to E. Scale 1m in 0.5m sections.

Plate 16. Trench 18, view to SE. Scale 1m in 0.5m sections.

Plate 17. Trench 19, view to E. Scale 1m in 0.5m sections.

Plate 18. Trench 20, view to E. Scale 1m in 0.5m sections.

Plate 19. Trench 8, Ebbw Vale brick (803).

Plate 20. Silver button (top) (001) and Copper alloy cufflink (bottom) (1903).

Plate 21. Copper alloy buttons (001).

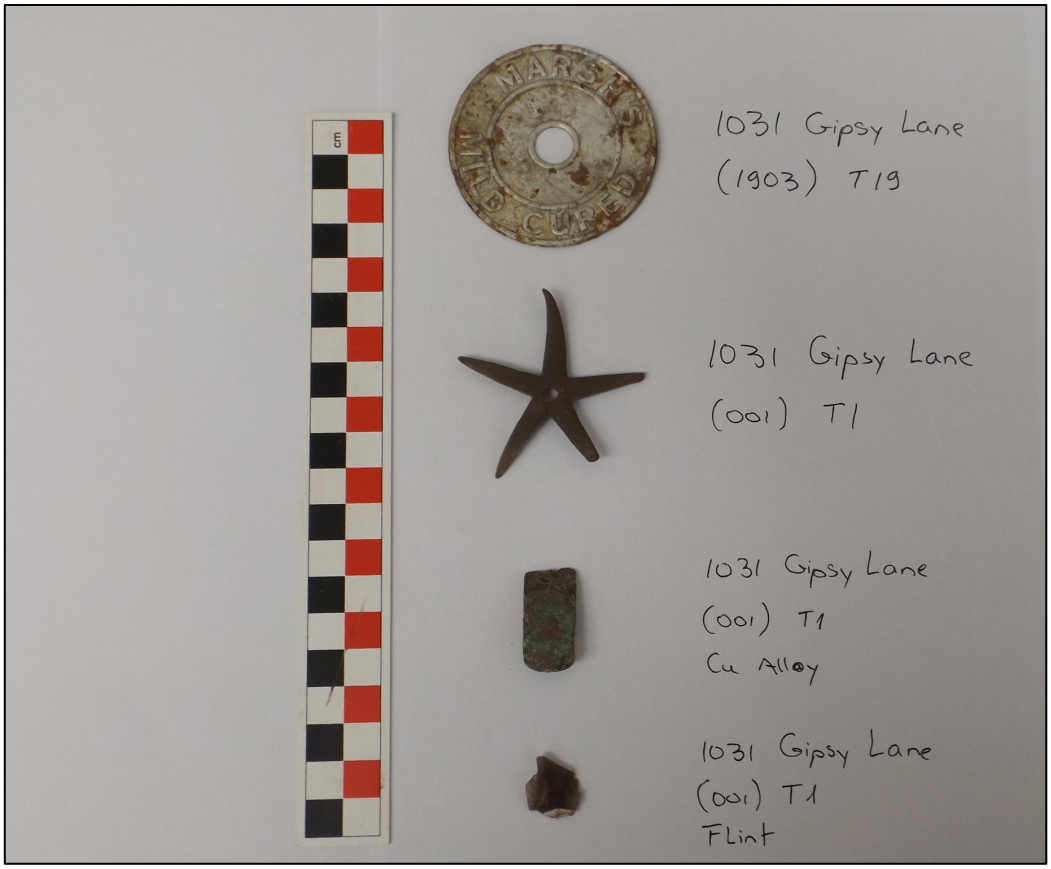

Plate 22. Marsh's Mild Cure name plate (1903), Copper alloy rowel (001) and strap (001) and flint debitage (001).

Plate 23. Copper alloy items recovered from topsoil (001).

Plate 24. Pre-decimal and post decimal coins.

Plate 25. Iron (Fe) objects (latch, nails and chisel) recovered from 903 and 001.

Plate 26. Iron (Fe)objects from 1703 and 703.

Plate 27. Iron (Fe) objects from 403 and 1403.

Plate 28. Lead (Pb) objects.

6.3 Appendix II Context Inventory

6.3.1 General Site

6.3.2 Context 001 represents the general topsoil found across the field but outside of each trench locations. A number of artefacts were recovered from the vicinity of the trenches in this context and details can be found in Section 3.2 above.

Context	Type	Depth	Description	Period
001	Deposit	0m – 0.15 to 0.3m	Mid-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural

6.3.3 Trench 1

6.3.4 Level of present ground surface: N end 95.374mOD, S end 95.769mOD. Trench length 20m, width 2m. Average depth 0.6m. Trench 1 was positioned in an area of negative geophysical responses. No archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
103	Deposit	0m – 0.15m	Mid-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
102	Deposit	0.15m – 0.45m	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
101	Deposit	0.45m – 0.6m n.b	Natural sandstone gravels. Frequent large worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.5 Trench 2

6.3.6 Level of present ground surface: W end 94.258mOD, E end 94.584mOD. Trench length 20m, width 2m. Average depth 0.4m. Trench 2 was positioned over a possible linear feature identified on geophysics. The feature was not identifiable, the natural sandstone gravels being very shallow possibly confusing the geophysical survey results. A small sondage was excavated in the E end of the trench. No evidence of any archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
203	Deposit	0m – 0.1m	Mid-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
202	Deposit	0.1m – 0.3m	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
201	Deposit	0.3m – 0.4m Sondage depth to 0.8m n.b	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.7 Trench 3

6.3.8 Level of present ground surface: SW end 94.959mOD, NE end 94.995mOD. Trench length 20m, width 2m. Average depth 0.35m. Trench 3 was positioned over a possible magnetic anomaly identified on geophysics. The feature proved to be a modern road iron stake. A small sondage was excavated in the SW end of the trench. No evidence of any archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
303	Deposit	0m – 0.1m	Mid-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
302	Deposit	0.1m – 0.3m	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
301	Deposit	0.3m – 0.35m Sondage depth to 0.5m n.b	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.9 Trench 4

6.3.10 Level of present ground surface: W end 93.569mOD, E end 93.882mOD. Trench length 20m, width 2m. Average depth 0.3m. Trench 4 was positioned over several possible magnetic anomalies identified on geophysics. No features were identified but two modern tent pegs were recovered. A small sondage was excavated in the E end of the trench. No evidence of any archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
403	Deposit	0m – 0.1m	Mid-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
402	Deposit	0.1m – 0.3m	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
401	Deposit	0.3m Sondage depth to 0.85m n.b	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.11 Trench 5

6.3.12 Level of present ground surface: NW end 93.879mOD, SE end 94.216mOD. Trench length 20m, width 2m. Average depth 0.45m. Trench 5 was positioned over a linear identified on geophysics. The feature was a modern metalled track for the campsite, which the landowner wished to remain *in-situ* so the trench was rotated on its NW axis to avoid the track. A small sondage was excavated in the NW end of the trench. No evidence of any archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
503	Deposit	0m – 0.15m	Mid-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
502	Deposit	0.15m – 0.45m n.b	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
501	Deposit	0.5m – 0.7m (sondage depth) n.b	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.13 Trench 7

6.3.14 Level of present ground surface: W end 94.418mOD, E end 94.628mOD. Trench length 20m, width 2m. Average depth 0.8m. Trench 7 was positioned over a possible magnetic anomaly identified on geophysics. The feature was not machine excavated as the trench had to be rotated on its E axis to avoid excavating too close to a high-pressure gas main. A road iron was found in the location of the magnetic anomaly buried in the upper topsoil **001** (identified by metal detector). No evidence of any archaeological deposits or features was present in the trench. The trench, positioned to the W of a former field boundary, showed a greater depth of topsoil and subsoils than those trenches located to the E (Plate 1 shows former hedgerow *in-situ* in 1960s).

Context	Type	Depth	Description	Period
703	Deposit	0m – 0.25m	Dark-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
702	Deposit	0.25m – 0.8m n.b	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.15 Trench 8

6.3.16 Level of present ground surface: NE end 95.433mOD, SW end 96.357mOD. Trench length 20m, width 2m. Average depth 0.6m. Trench 8 was positioned over a former field boundary (Plate 1). The trench had to be rotated on its S axis to avoid excavating through another metalled track for the campsite. A single find was recovered from the topsoil (803), a double frogged Ebbw Vale stamped red brick. A small sondage was excavated in the SW end of the trench but no natural gravels were encountered. No evidence of any archaeological deposits or features was present in the trench. The trench, positioned on a former field boundary, showed a greater depth of topsoil and subsoils than those trenches located to the E (Plate 1 shows former hedgerow *in-situ* in 1960s). The former field boundary was visible on the ground surface as a low earthwork but had no defining characteristics below ground (in section).

Context	Type	Depth	Description	Period
803	Deposit	0m – 0.2m	Dark-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
802	Deposit	0.2m – 0.6m Sondage depth to 0.95m n.b	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.17 Trench 9

6.3.18 Level of present ground surface: NW end 94.191mOD, SE end 94.834mOD. Trench length 20m, width 2m. Average depth 0.85m. Trench 9 was positioned to the west of a former field boundary (Plate 1) in an area of negative geophysical responses. Two finds were recovered from the topsoil (903), a forged wrought iron nail fragment and a gate post latch (fe). A small sondage was excavated in the SW end of the trench but no natural gravels were encountered. No evidence of any archaeological deposits or features was present in the trench. The trench, positioned to the west of a former field boundary, showed a greater depth of topsoil and subsoils than those trenches located to the E (Plate 1 shows former hedgerow *in-situ* in 1960s).

Context	Type	Depth	Description	Period
903	Deposit	0m – 0.3m	Dark-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
902	Deposit	0.3m – 0.85m	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
901	Deposit	0.85m n.b	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.19 Trench 10

6.3.20 Level of present ground surface: NW end 96.125mOD, SE end 96.483mOD. Trench length 20m, width 2m. Average depth 0.35m. Trench 10 was positioned over a linear identified on geophysics. The feature was a modern metalled track for the campsite, which the landowner wished to remain *in-situ* so the trench was rotated on its N axis counter clockwise to avoid the track. A small sondage was excavated in the SE end of the trench. No evidence of any archaeological deposits or features was present in the trench. The trench, positioned to the east of a former field boundary, showed a shallower depth of topsoil and subsoils than those trenches located to the W (Plate 1 shows former hedgerow *in-situ* in 1960s).

Context	Type	Depth	Description	Period
1003	Deposit	0m – 0.15m	Dark-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
1002	Deposit	0.15m – 0.35m	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
1001	Deposit	0.35m n.b Sondage depth to 0.75m n.b	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.21 Trench 11

6.3.22 Level of present ground surface: NW end 94.699mOD, SE end 95.081mOD. Trench length 20m, width 2m. Average depth 0.75m. Trench 11 was positioned in an area of negative geophysical responses. A small sondage was excavated in the SE end of the trench. No evidence of any archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
1103	Deposit	0m – 0.2m	Dark-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
1102	Deposit	0.2m – 0.4m	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
1101	Deposit	0.75m n.b Sondage depth to 1.15m n.b	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.23 Trench 12

6.3.24 Level of present ground surface: SW end 100.201mOD, NE end 98.999mOD. Trench length 20m, width 2m. Average depth 0.5m. Trench 12 positioned over several possible magnetic anomalies identified on geophysics. The trench was rotated on its NE axis counter clockwise to avoid modern terracing for the campsite. No evidence of any archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
1203	Deposit	0m – 0.15m	Dark-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
1202	Deposit	0.15m – 0.45m	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
1201	Deposit	0.55m n.b	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.25 Trench 13

6.3.26 Level of present ground surface: NW end 96.595mOD, SE end 97.365mOD. Trench length 20m, width 2m. Average depth 0.5m. Trench 13 positioned over a possible magnetic anomaly identified on geophysics. No evidence of any archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
1303	Deposit	0m – 0.2m	Dark-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
1302	Deposit	0.2m – 0.35m n.b.	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.27 Trench 14

6.3.28 Level of present ground surface: SW end 100.733mOD, NE end 99.514mOD. Trench length 20m, width 2m. Average depth 0.6m. Trench 14 positioned over a possible magnetic anomaly identified on geophysics. The trench was rotated on its centre axis counter clockwise to avoid modern terracing for the campsite. A small sondage was excavated in the SW end of the trench. Two finds were recovered from the topsoil (1403), four forged wrought iron nail fragments and a small flint debitage fragment. No evidence of any archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
1403	Deposit	0m – 0.2m	Dark-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
1402	Deposit	0.2m – 0.6m n.b.	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
1401	Deposit	From 0.7m n.b (Sondage)	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.29 Trench 17

6.3.30 Level of present ground surface: W end 93.712mOD, E end 93.826mOD. Trench length 20m, width 2m. Average depth 0.3m. Trench 17 was positioned over a linear identified on geophysics. The feature was a modern metalled track for the campsite, which the landowner wished to remain *in-situ* so the trench was rotated on its E axis counter clockwise to avoid the track. A sondage was excavated in the W end of the trench. Two finds were recovered from the topsoil (1703), one wrought iron forged nail fragment and an iron strap. No evidence of any archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
1703	Deposit	0m – 0.15m	Dark-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
1702	Deposit	0.15m – 0.3m	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
1701	Deposit	From 0.85m n.b (Sondage)	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.31 Trench 18

6.3.32 Level of present ground surface: W end 95.073mOD, E end 95.137mOD. Trench length 20m, width 2m. Average depth 0.4m. Trench 18 was positioned in an area of negative geophysical responses. A sondage was excavated in the W end of the trench. Two post-decimal £1 coins were recovered from the topsoil (1803). No evidence of any archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
1803	Deposit	0m – 0.15m	Dark-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural

Context	Type	Depth	Description	Period
1802	Deposit	0.15m – 0.4m	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
1801	Deposit	From 0.75m n.b (Sondage)	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.33 Trench 19

6.3.34 Level of present ground surface: NW end 94.423mOD, SE end 94.669mOD. Trench length 20m, width 2m. Average depth 0.4m. Trench 19 was positioned in an area of negative geophysical responses. Two copper alloy finds were recovered from the topsoil (1903), a small oval cufflink and a name plate for 'Marsh's Mild Cure'. No evidence of any archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
1903	Deposit	0m – 0.2m	Dark-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
1902	Deposit	0.2m – 0.4m	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
1901	Deposit	From 0.4m n.b (Sondage)	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

6.3.35 Trench 20

6.3.36 Level of present ground surface: NW end 93.802mOD, SE end 94.151mOD. Trench length 20m, width 2m. Average depth 0.4m. Trench 20 was positioned in an area of negative geophysical responses. No evidence of any archaeological deposits or features was present in the trench.

Context	Type	Depth	Description	Period
2003	Deposit	0m – 0.2m	Dark-brown silty loam topsoil with isolated small (<0.05m) stones.	Natural
2002	Deposit	0.2m – 0.4m	Mid-brown silt-clay subsoil with frequent small (<0.05m) rounded stones.	Natural
2001	Deposit	0.4m – 0.5m n.b (Sondage)	Natural sandstone gravels. Frequent large (<0.5m) worn cobbles contained in an orange-brown silt matrix.	Natural

All depths below present ground surface. n.b = not bottomed

Acknowledgements and Copyright

6.3.37 The fieldwork was undertaken by Richard Lewis BA MCIfA and Iulia Rusu BA MA PCIfA. The report was prepared by Richard Lewis. The author would like to thank Mr MT Davies, Mr JL Davies, P&B Brown and Mrs S Hooper for their help and support during the project. Thanks also to Mark Walters (CPAT) for helpful archaeological advice and support.

6.4 Appendix III Geophysical Survey

GeoArch

Report 2018/27

Geophysical Survey at Gypsy Castle Lane, Hay-on-Wye, Powys [SO 218418]

Dr Tim Young

24th December 2018

Geophysical Survey at Gypsy Castle Lane, Hay-on-Wye, Powys [SO 218418]

Dr T.P. Young

Abstract

Geophysical survey by magnetic gradiometry was undertaken over an area (centred on [SO 218418]) of 3.35ha in fields to the south of Gypsy Castle Lane, Hay-on-Wye, used seasonally as a campsite for the Hay Festival.

The magnetic survey showed the widespread distribution of minor dipolar magnetic anomalies across the site. The distribution of these anomalies corresponds closely with the layout of the campsite as visible in aerial photography. The anomalies are interpreted to be mostly of three distinct origins: anomalies produced by fittings of the campsite, those associated with ferrous objects lost or discarded around the campsite and thirdly anomalies associated with fragments of road planings (recycled road asphalt). This final group grades into continuous areas of variable ('speckled') high magnetic noise associated with the visible areas of roadways formed of road planings and other materials.

These ferrous anomalies would obscure any low-amplitude anomalies over much of the survey, but a small area in the north-central part of the area showed several traces of positive linear anomalies. Such anomalies might be indicative of archaeological cut features, ditches or gullies. Since these anomalies were resolved only over very short lengths/areas, a small trial area (40m x 20m; centred on [SO 21904185]) was investigated using ground resistivity.

The results of the ground resistivity survey were complexly and diffusely featured. The anomalies include a broad NNW-SSE linear positive resistivity anomaly adjacent to the line of a mapped former field boundary, probably representing a degraded field bank. Faint lineation parallel to this feature may indicated former ploughing, although vehicle movements parallel to the bank and roadways may also have contributed. Narrow NW-SE negative linear anomalies might be of archaeological origin (ditches), but their slightly irregular nature (and the lack of corresponding magnetic anomalies) suggests they are probably more likely to be of geological origin. A diffuse irregular N-S positive anomaly corresponding to poorly-marked magnetic anomalies immediately to the North is also on uncertain origin, although an informal track or driveway is possible. The WSW-ENE magnetic anomaly interpreted as a possible ditch is very poorly feature in the resistivity dataset, corresponding to a diffuse negative anomaly of variable width. This potential ditch would extremely difficult to trace by resistivity and the complexity of the trial area suggests that archaeological features would be difficult to identify in general on this geology by resistivity alone (at least under the groundwater conditions at the time of survey). No expansion of the resistivity survey could therefore be justified.

In summary, although only a very short length of possible ditch was identified by the magnetic survey, it would appear likely that had any concentrations of archaeological features indicative of settlement been present in the area, they would probably have been similarly recognisable, even through the 'noise' of recent detritus. Features of non-settlement origin with a lower-amplitude magnetic signature might, however, have been difficult to identify in these conditions and the negative results of the magnetic survey should not necessarily be taken to indicate a lack of buried archaeological features.

Contents

Methods

Survey rationale and background

The survey was undertaken as a component of the assessment of the archaeological potential of the site. The site is centred at [SO 218418], lying at approximately 91m – 98m aOD on the north-facing gentle slope between several low mounded hills, to the south of the course of the Rover Usk. The solid geology is mapped (BGS 2004) as Raglan Mudstone Formation (Silurian – Devonian; part of the former 'Old Red Sandstone'). The relatively low ground of the surveyed area is mapped as Devensian diamicts, with the adjacent low hills permitting cropping-out of the bedrock. Although the field was pasture at the time of survey, it is employed seasonally as a campsite for the Hay Festival.

The survey was commissioned by Richard Lewis of Black Mountains Archaeology. The survey was conducted in December 2018, under good weather conditions, within the CIfA (2014) and HE (2008) guidelines.

Survey layout

The survey was laid-out using a Trimble survey-grade RTK GPS system (5700 base station and 5800 rover). A temporary base-station was located near the road gate (Figure 2). The survey was staked out to design locations at 20m intervals of National Grid using the Trimble 5800 rover. The grid pegs were positioned to within 40mm of the relative design location reported by the GPS. The survey was post-processed using the *datfixweek*, *convert-to-rinex* and *rinexweek* utilities, to produce rinex files from the logged GPS data and from the nearest 5 OS-Net stations, backdated to permit baseline process in *Trimble Geomatics Office*. The resultant GPS accuracy means that all grid locations are known to within 50mm.

During the survey a pre-existing survey marker was found in the centre of the field (Figure 2). The coordinates of this were recorded, in case the marker should prove useful during any subsequent fieldwork. The recorded coordinates were:
E = 321852.34
N = 241802.28
Z = 94.66

LiDAR topographic base

The topographic base mapping for the images of the survey in this report is derived from the publicly-accessible 2m-pixel LiDAR DTM dataset (http://lle.wales.gov.uk/GridProducts#data=LidarCompositeDataset). The DTM data were download as ASCII files, imported into *Surfer* for imaging. The LiDAR data are illustrated in Figure 2.

Magnetic gradiometry

Magnetic gradiometry was undertaken with a Bartington Grad 601 Dual fluxgate gradiometer. Survey data were collected at 0.125m intervals on traverse 2m apart, giving an effective traverse interval of 1.0m (a data grid of 0.125m x 1.0m). Grids were walked on South to North traverses in a zig-zag pattern.

Data were downloaded from the instrument, assembled and cleaned using DW Consulting's *Terrasurveyor Lite v3* software. The grids were assembled, the data clipped and the destriping function employed for data in which there was an imbalance between the two gradiometers.

The data were then exported from *Terrasurveyor* and interpolated to a 0.125m node-spacing using Golden Software's *Surfer* package to reduce pixilation where required.

Ground resistivity

The ground resistivity survey was undertaken with a Geoscan RM15 resistivity meter, operating a 'parallel twin electrode' configuration, employing two pairs (three electrodes) with 0.5m probe spacings placed at 0.5m centres on a PA5 frame, via an MPX15 multiplexer.

In this configuration, the mobile probe spacings of 0.5m give the predicted main component of the response from 0.5-0.7m depth. Data were collected with a 0.5m sample interval on 1.0m instrument traverses (i.e. the raw data has 0.5 x 0.5m node spacing). Two 20m grids were walked on South to North traverses in a zig-zag pattern.

Data were downloaded from the instrument and collated using Geoscan Research's *Geoplot* software. Data processing was limited to one pass of the 'despike' function in Geoplot (to remove rogue points of poor ground contact), with radius set to 1 and a threshold of 3 standard deviations, using Gaussian statistics.

Data were then exported from Geoplot and imported to Golden Software's *Surfer*. The data were gridded by kriging to a node-spacing of 0.125m for production of the final, less pixelated, image.

Use of this report

The technique chosen for the broad-area survey, magnetic gradiometry, was selected for its utility in

detecting a wide range of feature types. As with any geophysical technique, it is always possible for archaeological features to be present, but not to be distinguished, or distinguishable, by variation in the physical properties being examined (in this case magnetic susceptibility), or to be obscured by the effect large amounts of modern material exhibiting high magnetic susceptibility or high ferromagnetism.

The ground resistivity survey was undertaken because this tool can provide information on cut features in which the substrate and fill do not have markedly different magnetic susceptibilities but differ in texture (leading to different water retention).

Absence of detectable geophysical anomalies cannot be taken as indicative of the absence of archaeological features. All anomalies have been interpreted as far as possible, with contrasting possible interpretations given where appropriate. Geophysical techniques cannot provide an unambiguous evaluation of buried features. Where a higher degree of certainty is required, physical ground-truthing of any geophysical anomalies resolved by the survey will be required.

Results

General

There were no technical issues with either survey. Raw magnetic data are presented in Figure 3 with the interpolated and georeferenced data shown in Figures 4, 7 and 8. The magnetic dataset is extremely 'noisy' with abundant small but intense dipolar anomalies (forming a strong contrast with land immediately to the east, outside the campsite, surveyed previously; Young 2017). A summary interpretation is illustrated in Figure 9.

The raw ground resistivity data are illustrated in Figure5 and the interpolated and georeferenced ground resistivity data are shown in Figures 6 and 8. The resistivity survey showed a very narrow range of resistivity leading to an apparently rather noisy dataset (i.e. a high signal:noise ratio). The featuring was complex, but diffuse.

Geology:

The magnetic gradiometer survey contains no anomalies or lineations interpretable as of geological origin. The ground resistivity survey shows variations (lineations) on several orientations, of which that oriented approximately NE-SW (and corresponding in direction to very broad variations in the LiDAR data) is interpreted as reflecting the bedrock.

The campsite:

The modern temporary campsite is represented in the magnetic gradiometer data by several elements:

- Zones of densely-packed intense but small dipolar anomalies corresponding to the surface indications of informal roadways formed of road planings (grey tone on Figure 9).
- Zones and areas of less densely packed intense but small ferrous-type anomalies These probably include both dispersed road material and discarded ferrous detritus
- Large ferrous-type anomalies, most notably close to the eastern termination of two of the upper terraces. These may be indicative of ground collars for signage, or similar, or possibly just large lost/discarded ferrous items (large red dots on Figure 9)
- An array of four intense point anomalies approximately corresponding to the southern margin of the hardcore inside the gateway [321840 241850] (small red dots on Figure 9), interpreted as the base of former fencing or reinforcement.
- The topographically-generated anomalies associated with the margins of the terraces recently created in the western part of the field to increase the capacity of the campsite.

The ground resistivity survey shows a 'streaky' NNW-SSE oriented set of anomalies immediately to the south of a similarly-oriented group of closely-spaced alternating positive and negative lineations. The course of these anomalies is indicated by the red dashed line of Figure 9. The 'streaky' nature of these anomalies of alternating sense suggests that thy might be vehicle tracks (although the overall width of the set, 3.5m, is wide for an informal track). An alternative possibility is presented by the central persistent negative component of the anomaly in the resistivity data – that the anomaly may have been generated by the disturbance associated with the creation of a narrow trench for non-ferrous services (such as a plastic water pipe).

Other services

The eastern margin of the survey approximately coincides with a significant ferrous pipe oriented NNW-SSE (thick black line of Figure 9). A major gas pipe is known to traverse the site approximately 5m to the south of the northern bounding hedge, but other features obscured the observation of any geophysical anomaly associated with this.

Agricultural lineations:

Lineations in the resistivity dataset that can be interpreted as being due to post-medieval to modern ploughing are present on an orientation NNW-SSE. This is parallel to the field boundaries on early OS mapping and observable in the field and on the LiDAR data (dashed and pecked narrow black lines on Figure 9), The most westerly of the field boundaries present on old OS mapping was not observed in the field, having been largely destroyed by the creation of the camping terraces in the western part of the field.

Anomalies of archaeological importance:

Only one single magnetic anomaly of potential archaeological significance was identified. A strong linear magnetic anomaly oriented WSW-ESE (thick red line on Figure 9) was identified over a length of 32m. Such anomalies are normally associated with the fills of ditches, although agricultural activity and geological features may on occasion produce similar anomalies. The resistivity survey was designed specifically to examine the source of this anomaly. The course of the magnetic anomaly was very poorly imaged in the resistivity survey as a diffuse negative linear anomaly between [321885 241846] and [321901 241853]. This anomaly is less distinct than those interpreted to be of agricultural or geological origin. This means that the archaeological nature of the feature cannot be elaborated or confirmed and also that ground resistivity did not appear to be likely to be capable of resolving other archaeological features under the ground conditions at the time of survey (which does not preclude that resistivity might be a more useful tool

under different conditions, at a different time of year or weather conditions).

Some very slight possible linear magnetic anomalies are also present in the gradiometer dataset in the same general area (thin red lines on Figure 9). Little can be said about these on the present poor evidence.

Interpretation

The magnetic dataset is dominated by anomalies associated with the use of the area as campsite for the Hay Festival. The road planings form discrete roadways that are strongly marked in the magnetic data and isolated fragments of the same material probably contribute to the more generally-distributed 'noise'. Much of the 'noise' shows a distribution of aligned clusters suggesting a correlation with individual campsite pitches – and this is probably due to small lost or discarded ferrous items. The magnetic data bear very close comparison in plan with aerial photographs of the campsite (e.g. the Google Earth images attributed to September and December 2009, with the western terraces as added by the image of 11th July 2013

The single large field present today has only recently be formed from two components, previously separated by a NW-SE fence, along the line of much earlier division. Early OS mapping also shows a second internal division parallel to (and east of) this fence, and the first edition OS also showing the western component further subdivided by an internal boundary running approximately NE-WW. The LiDAR and field observation also indicate a third N-S division, and the bank associated with this division presented as a positive resistivity anomaly.

The LiDAR shows some finer scale NW-SE featuring parallel to the sub-divisions of the field, as well as broader lineation running NE-SW. The NW-SE lineation is probably agricultural in origin (and may even be a modification of ridge and furrow ploughing). This lineation is picked-out by zones of alternating resistivity (compare Figures 2 and 8), The broad NE-SW lineation may possibly be controlled by bedrock geology; it too is reflected in the resistivity dataset, where it lies parallel to the single significant magnetometer anomaly.

References

BGS 2004. *Geological Survey of Great Britain (England & Wales), Sheet 197 (solid & drift), Hay-on-Wye*. British Geological Survey.

Chartered Institute for Archaeologists 2014. *Standard and guidance for geophysical survey.*

English Heritage 2008. *Geophysical Survey in Archaeological Field Evaluation.*

Young, T.P. 2017. Geophysical Survey of land off Gipsy Castle Lane, Hay-on-Wye, Powys). *GeoArch Report 2017/21*, 5pp.

Figure Captions

Figure 1. Location of survey area. N to top. Map marked with 1km National Grid squares, with coordinates given on margins.

Figure 2. Grid layout displayed on basemap formed from LiDAR DTM, illuminated from the WNW. The outer survey limit is of the magnetic gradiometer survey, the inner 20m x 40m are is the limit of the ground resistivity survey. Pegged grid markers are indicated as red crosses, the temporary base-station by a red circle with cross, and the pre-existing survey maker by a black circle with cross (see text for coordinates). N to top National Grid coordinates are given in metres.

Figure 3. Raw gradiometer data – as bitmapped images from *Terrasurveyor*. Greyscale -4nT (black) to +4nT (white). 20m grid squares shown, North to top.

Figure 4. Gradiometer data as interpolated image from *Surfer*. Greyscale -4nT (black) to +4nT (white). North to top. Basemap linework derived from LiDAR DTM.

Figure 5. Raw ground resistivity data– as bitmapped images from *Geoplot*. 0.5m spaced mobile probes. Greyscale 91Ω measured resistance (black) to 122Ω measured resistance (white). North to top, 20m x 40m area.

Figure 6. Ground resistivity data as interpolated image from *Surfer*. 0.5m spaced mobile probes. Greyscale 91Ω measured resistance (black) to 122Ω measured resistance (white). North to top, 20m x 40m area.

Figure 7. Gradiometer data as interpolated image from *Surfer* covering the same area as the ground resistivity data in Figures 5 and 6. Greyscale -4nT (black) to +4nT (white). North to top.

Figure 8. Ground resistivity data as interpolated image from *Surfer*. 0.5m spaced mobile probes. Greyscale 90Ω measured resistance (black) to 126Ω measured resistance (white). Overlaid on gradiometer data as interpolated image from *Surfer*. Greyscale -4nT (black) to +4nT (white). North to top. Basemap linework derived from LiDAR DTM.

Figure 9. Anomalies identified within the geophysical data. See text for full explanation.

Thick red line: positive linear magnetic anomaly interpreted as possible ditch; thin red lines: slight linear magnetic anomalies: possible features; dashed red line, complex linear magnetic anomaly passing southward into diffuse positive resistivity anomaly.

Thick black line: ferrous pipe; grey tone: roadways formed of recycled road asphalt; dashed black lines former field boundaries, preserved as ridges (western line largely destroyed by sculpting of terraces); pecked line is a similar bank with a positive resistivity anomaly, but not indicate as a field boundary on early maps.

Red dots: intense, larger magnetic point anomalies indicative of significant ferrous items. Large dots indicative of large anomalies, possibly campsite fitments, small dots indicate an array (possibly a fence or reinforcement) bounding the area of hard-standing in the north of the site.

Figure 1

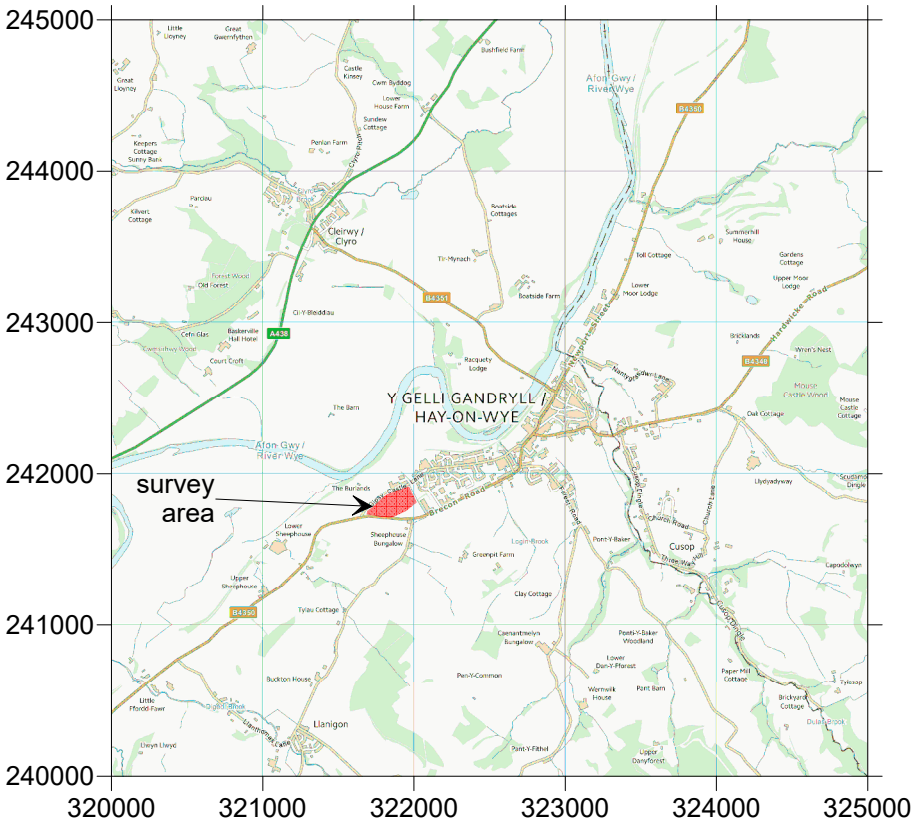
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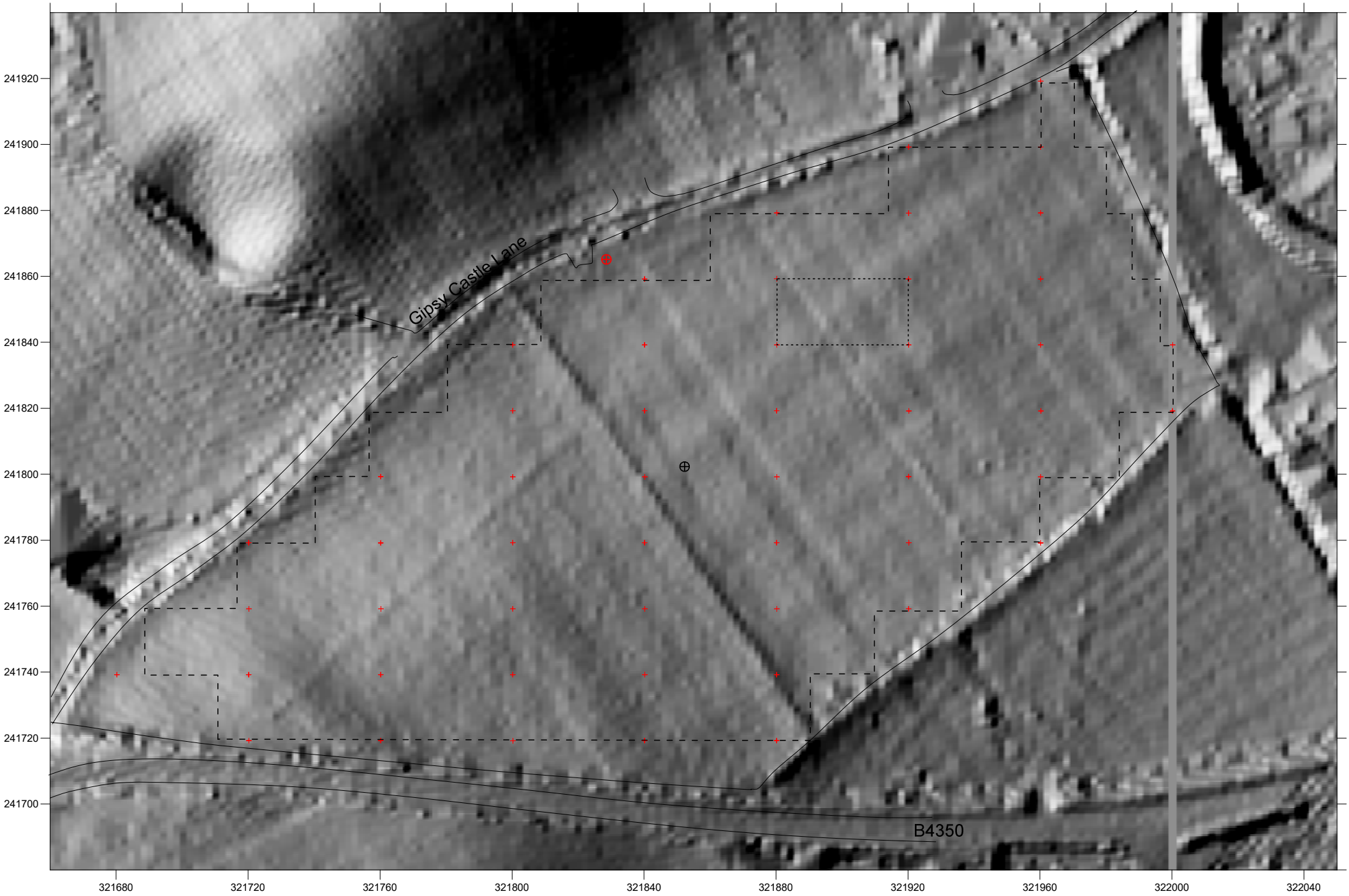
Figure 2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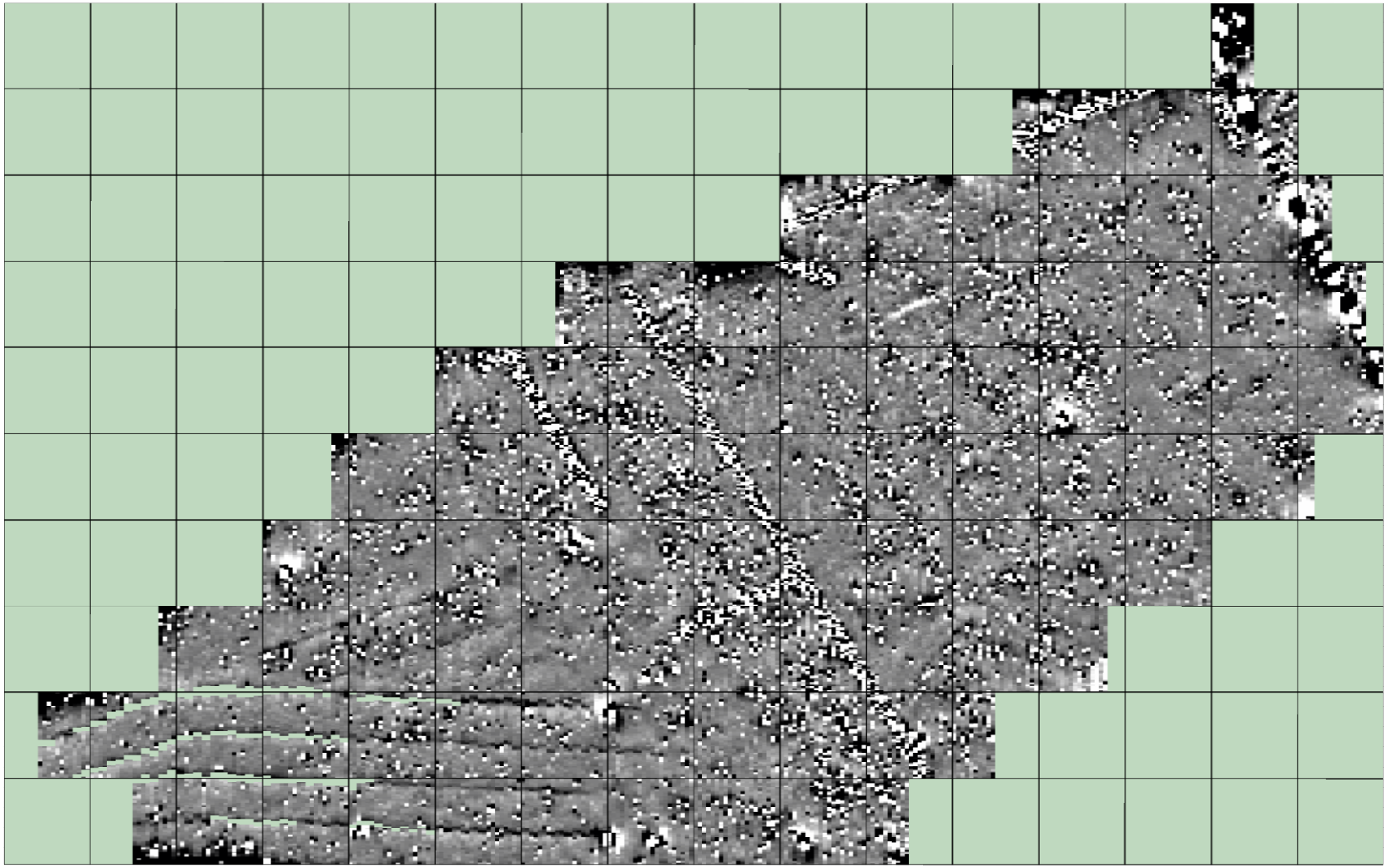

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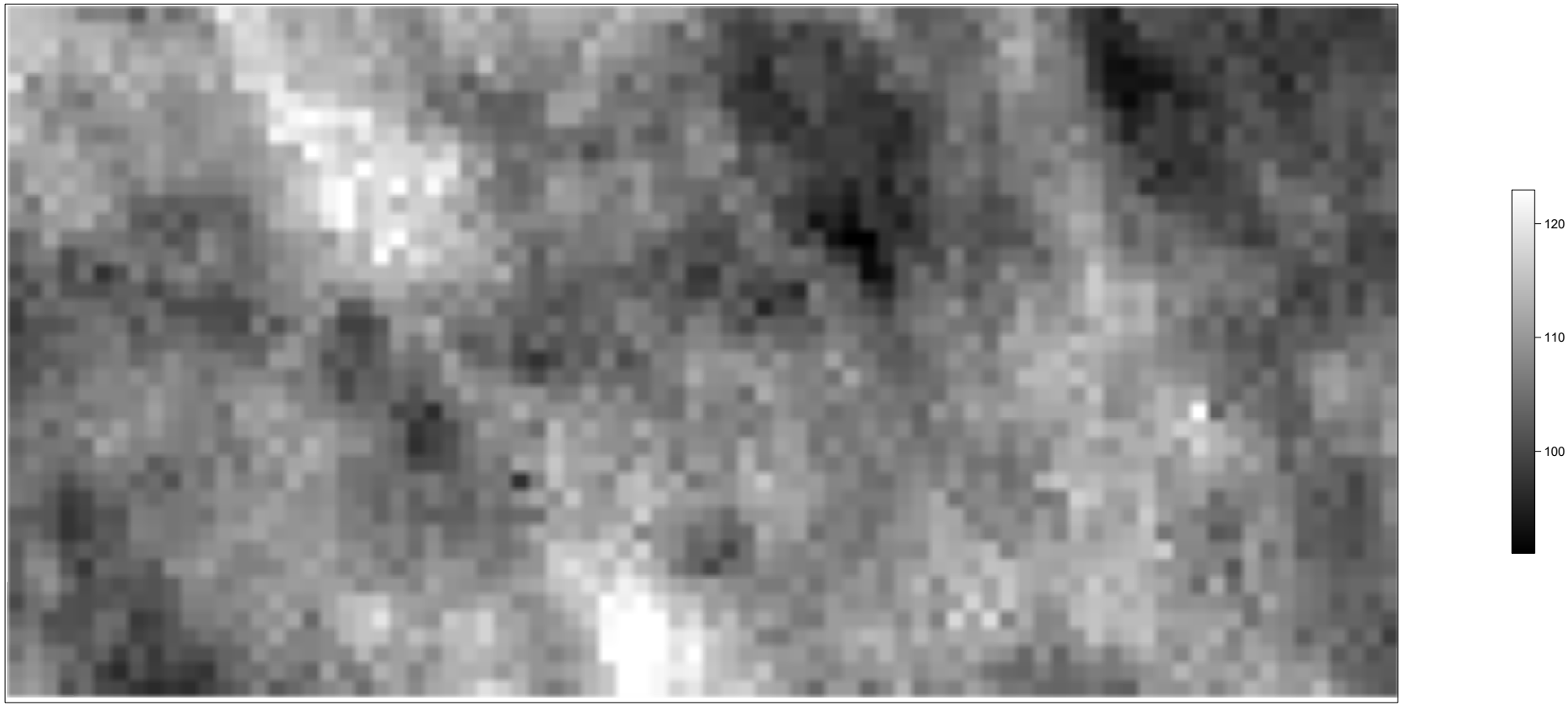

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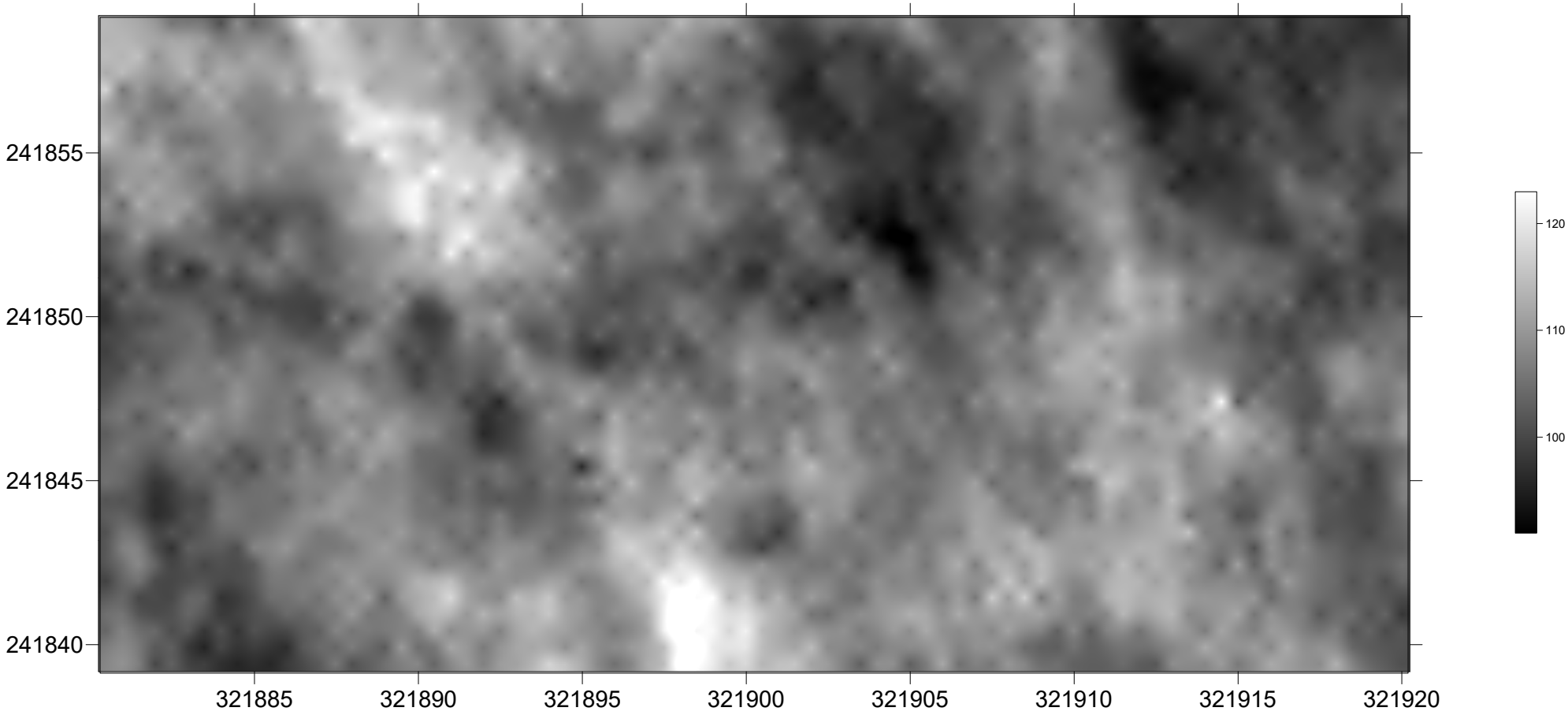
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Figure 7

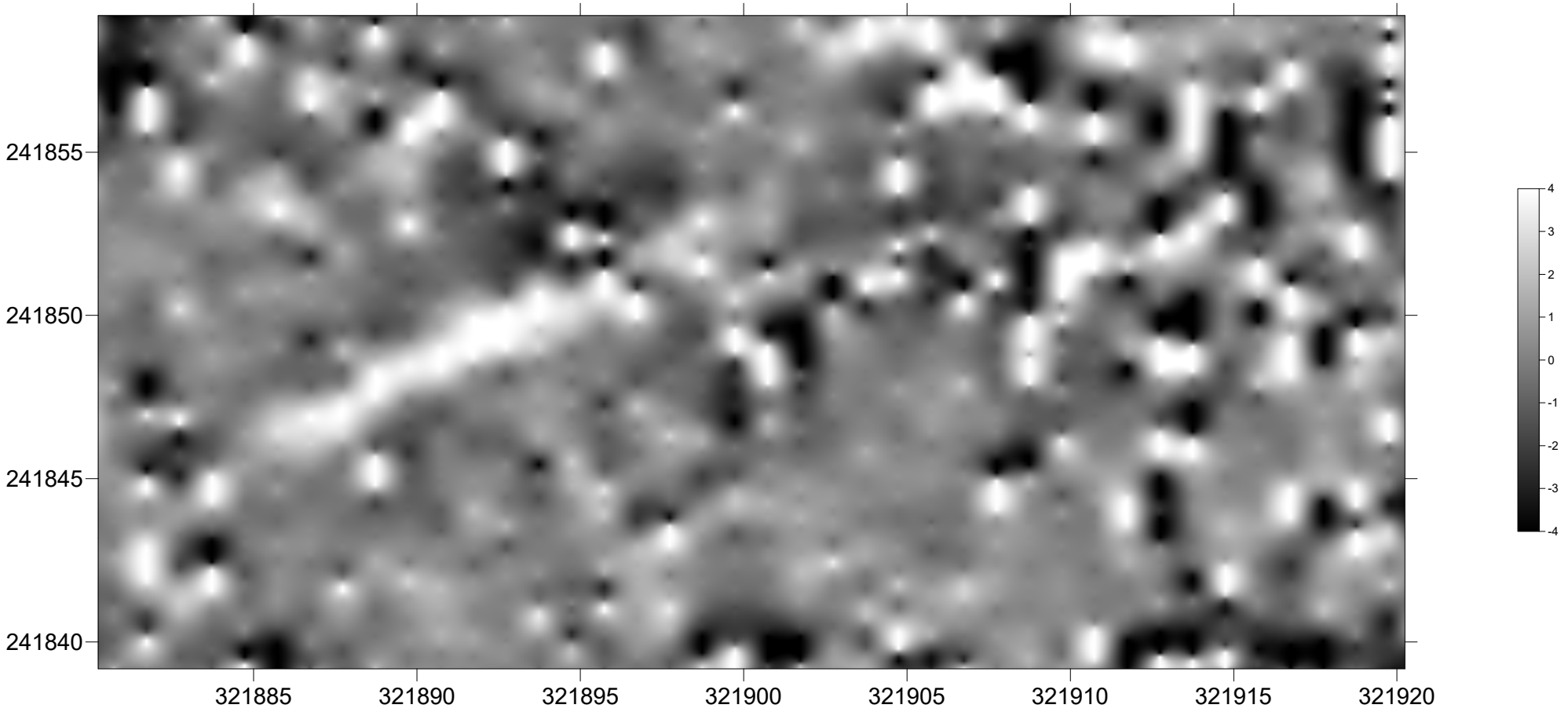
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Figure 8

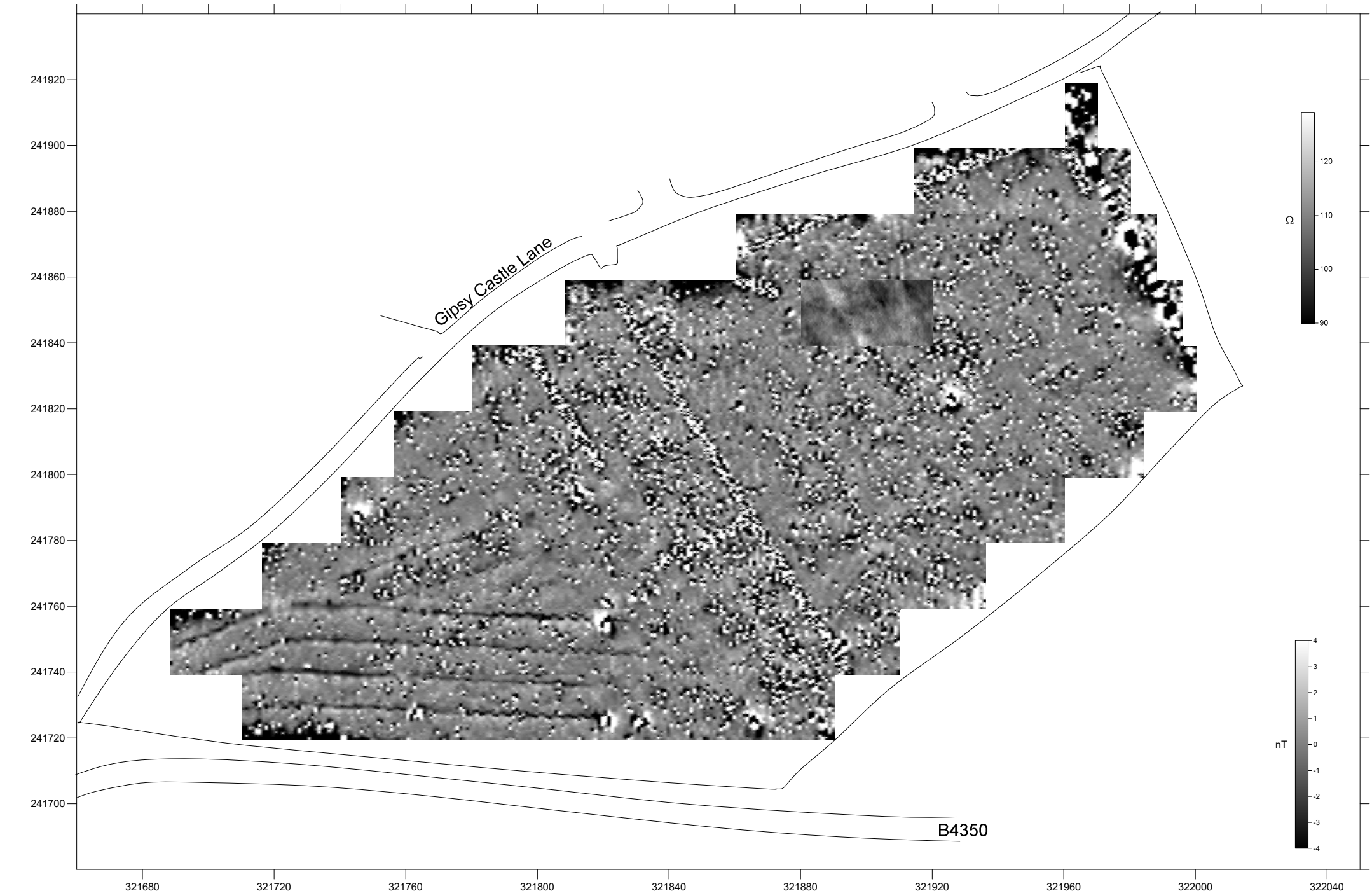
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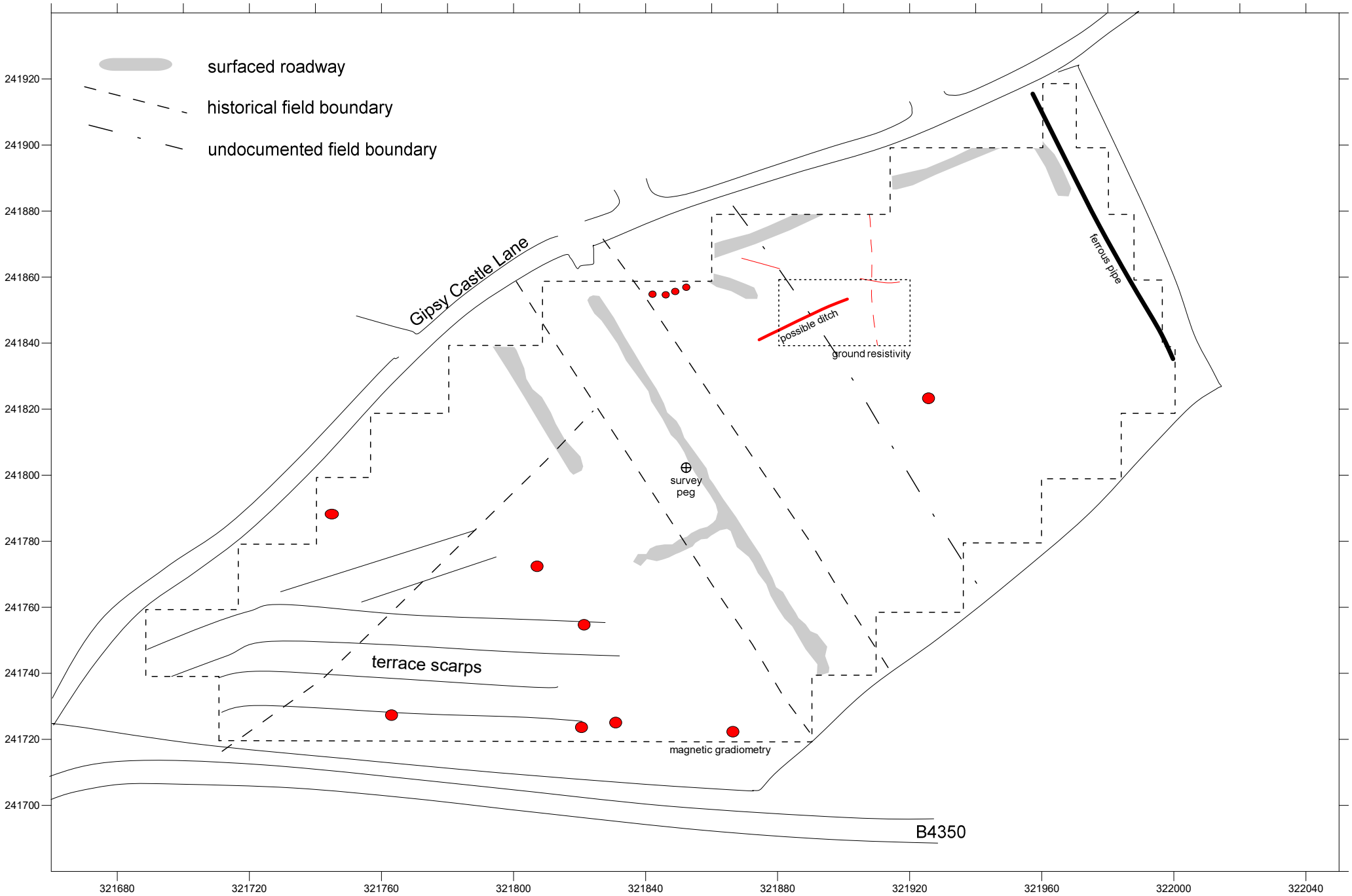
Figure 9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