LOWER OTTER RESTORATION PROJECT (PLOT B)

BUDLEIGH SALTERTON

EAST DEVON

DEVON

Results of a Geophysical Survey

South West Archaeology Ltd. report no. 200816

ARCHAEOLOGICAL SERVICES & HISTORIC BUILDING RECORDING
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LOWER OTTER RESTORATION PROJECT (PLOT B), BUDLEIGH SALTERTON, EAST DEVON, DEVON

RESULTS OF A GEOPHYSICAL SURVEY

By J. Bampton
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Work undertaken by SWARCH for Jacobs
on behalf of Environment Agency

SUMMARY

This report presents the results of a geophysical survey carried out by South West Archaeology Ltd. (SWARCH) as part of the Lower Otter Restoration Project (Plot B) on land at South Farm, Budleigh Salterton, East Devon, Devon. The site is located c.875m north-east of Budleigh Salterton, beside the east bank of the River Otter in a field classified as Barton Fields; i.e. medieval-post-medieval enclosure. A large number of flint scatters have been recovered during field walking across fields adjacent to the site.

The survey identified eleven groups of anomalies, including; a historical field boundary, an undated enclosure or boundary ditch, an undated ditch, a series of geological anomalies or undated ditches, approximately ten possible pits or treethrows, and two possible hollows or sunken structures. Most of these anomalies were concentrated in the north-west part of the site and may be contemporaries of each other. During the survey a relatively large flint scatter was noted and recovered from across the site, particularly its north-west half. This flint scatter included awl/piercers, scrapers, blades and flakes. It seems likely that prehistoric, possibly Bronze Age settlement activity is present on the site, particularly in its north-west quadrant. Ploughing may have resulted in some degree of truncation of any buried archaeological resource.

The survey has identified probable and potentially significant archaeological anomalies on the site interpreted to represent Prehistoric (possible Bronze Age) settlement activity.

August 2020

CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

ACKNOWLEDGEMENTS

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1.0 INTRODUCTION

LOCATION: LAND AT SOUTH FARM (PLOT B)
PARISH: BUDLEIGH SALTERTON
COUNTY: DEVON
NGR: SY 07718 83159
SWARCH REF. BSSF20A

1.1 PROJECT BACKGROUND

South West Archaeology Ltd. (SWARCH) was commissioned by Jacobs (The Client) to undertake a geophysical survey on land at South Farm, Budleigh Salterton, East Devon, Devon, as part of archaeological assessment works for the Lower Otter Restoration Project (LORP). This report addresses Plot B of a series of potential survey areas. This work was undertaken in accordance with a Project Design (PD) (Boyd 2020) drawn up in consultation with the Devon County Historic Environment Team (DCHET) and in accordance with best practice and CIfA guidance.

1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

Plot B (also referred to as 'the site') lies *c.*875m north-east of Budleigh Salterton, adjacent to the east bank of the River Otter and the junction of South Farm Road and Park Lane. It is a single large sub-rectangular field with Park Lane and the banks of the River Otter along its west boundary; and hedge banks along its north-east and south boundaries that open out to agricultural land and fields, with a house beyond its south-boundary and near to the site entrance off of South Farm Road. The site has a coombe/valley running across it from approximately the north-east down to the south-west corners. This valley has steep slopes running up to the north-north-west, although with occasional and slight plateaus/undulations including slight north-south aligned ridges; and very steep slopes running up, towards the south-south-east to a slight plateau in the site's south-east corner. Rolling hills continue to extend beyond the site to the south and east, but immediately north of the site is a very steep hill defining the adjacent northerly field known as 'The Warrens'. Plot B is at an approximate height of between *c.*8m and 30m AOD (Figure 1).

The soils on the site are the well-drained reddish coarse loamy soils mainly over soft sandstone of the Bromsgrove Association (SSEW 1983), which overlie the sandstone of the Helsby Sandstone Formation (BGS 2020).

1.3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

The site is located *c.*875m north-east side of Budleigh Salterton and *c.*2km south of Otterton in the parish of Otterton. Otterton is in the hundred of East Budleigh and deanery of Aylesbeare (Lysons 1822). In Domesday, Otterton (*Otritone*) is listed as a very large manor with 103 households, including 33 salt-workers and a large amount, 150 acres of woodland. Prior to the conquest it was held by Countess Gytha and worth £10; and by 1086 the King had granted the manor to abbey of Mont-Saint-Michel and it was worth £18 (Morris 1992). In the late 12th/early 13th century a priory was founded at Otterton and the manor, along with Sidmouth and East Budleigh, was granted to it. In the late 14th-early 15th century the priory became a parcel of Syon Abbey. After the Dissolution the manor passed to a Richard Duke Esq., part of a prominent local family. The Rolle family purchased the manor *c.*1777 and continued to hold it in 1822 (Lysons 1822).

The place-name of Otterton is simply derived from the name of the river and the Old English *tūn* meaning 'settlement, estate on the River Otter' (Watts 2004).

Devon's Historic Landscape Characterisation (HLC) depicts the site as within *Barton Fields: 'relatively large, regular enclosures seem likely to have been laid out between the C15th-C18th. Some curving boundaries may be following earlier divisions in the pre-existing medieval fields'.*

Mapping from *c.*1806 shows the site as within an established field system, possibly split between two fields, at the edge of the River Otter. The 1843 tithe mapping shows the site as divided across two fields/plots: 1411, *Little Warren*; and 1412, *Austins*, both under arable cultivation. These and the surrounding fields were listed on the tithe apportionment as belonging to South Farm, which was owned by representatives of Lord Rolle and occupied by Agnes Bastin. The surrounding fields had generally prosaic names, describing size, use or personal names and were under arable, pastoral, orchard and coppice use; although predominantly arable on the presumably dryer and workable ground. To the south of the site was plot 1433, which was named *Lime Pit*, which may indicate some industrial process (MDV109874). The north, west and most of the east site boundaries are depicted in 1843 as they exist today. By the time of the 1889 published Ordnance Survey (OS) 1st edition the east boundary has been rectified to its extant state and the south boundary has been established along with the construction of *South Cottages* immediately south of the site. The boundary that divided the site in to two fields in 1843 is also now absent, presenting the site as a single large field. From this mapping onwards the site is ostensibly relatively unchanged, at least regarding its boundaries. On aerial photography from 1946 undulations, including slight ridges, slopes and plateaus can be discerned on the site, and potentially the cropmark of the approximate east-west length of the boundary removed between 1843 and 1889. More recent LiDAR imagery of the site further makes clear the approximate locations of the valley, slopes and plateaus across the site, as well as the directions in which the ground has been ploughed and worked: all of approximately north-south, east-west and north-west-south-east. Supporting cartographic-, aerial photography- and LiDAR imagery sources for this section can be seen in Appendix 2.

The site has been subject to a desk-based assessment in 2018 (CH2M) and a WSI by AOC in 2020 (Teale). The Devon Historic Environment Record (HER) records no entries on the site; however, an extremely large amount of flint scatters have been identified during field-walking across fields to the north and east of South Farm (MDV74342). These include: roughly north of the site prehistoric, Neolithic and Bronze Age flint scatters (MDV10404, MDV10423, MDV59675), stone axes including two greenstone axes (MDV10413, MDV14478, MDV15331, MDV120175), and an instance of 1000's of Bronze Age worked flint excluding any arrowheads that may indicate a fishing over hunting community (MDV10421); to the east of the site, Mesolithic to late-Neolithic flint and chert scatters ranging from 24 to 702 pieces in size (MDV59668-MDV59674, MDV122855); and to the south of the site, prehistoric, early-Neolithic to Late Bronze Age flint scatters and findspots including two possible sling-stones (MDV10412, MDV10418, MDV58837, MDV59667, MDV59676, MDV59677, MDV106796, MDV114524). Possible Roman pottery was also recovered south of the site (MDV41873). Much of this assemblage is part of the Carter Collection, which is held at Otterton Park. Due to the nature of the landscape, it has been suggested that some of these flint finds may have been 'out-washed' from further up their respective valleys or slopes. Other potentially significant assets listed on the HER near to the site include references to cropmarks, identified in aerial photography of a potential ring-ditch (MDV105808), rectilinear enclosure overlooking the Otter Valley (MDV105806) and former medieval boundaries (MDV105809), all approximately north-north-east of the site; and a 'U'-shaped ditch near the coast (MDV117703) to the south of the site.

1.4 METHODOLOGY

This work was undertaken in accordance with current best practice, CIfA guidance and a PD drawn up in consultation with DCHET (Boyd 2020). Any desk-based assessment aspect of this report follows the guidance as outlined in: *Standard and Guidance for Archaeological Desk-Based Assessment* (CIfA 2014a) and *Understanding Place: historic area assessments in a planning and development context* (English Heritage 2012). The geophysical (gradiometer) survey follows the general guidance as outlined in: *EAC Guidelines for the use of geophysics in Archaeology: Questions to Ask and Points to Consider* (Europae Archaeologiae Consilium/European Archaeological Council 2016) and *Standard and Guidance for Archaeological Geophysical Survey* (CIfA 2014b).

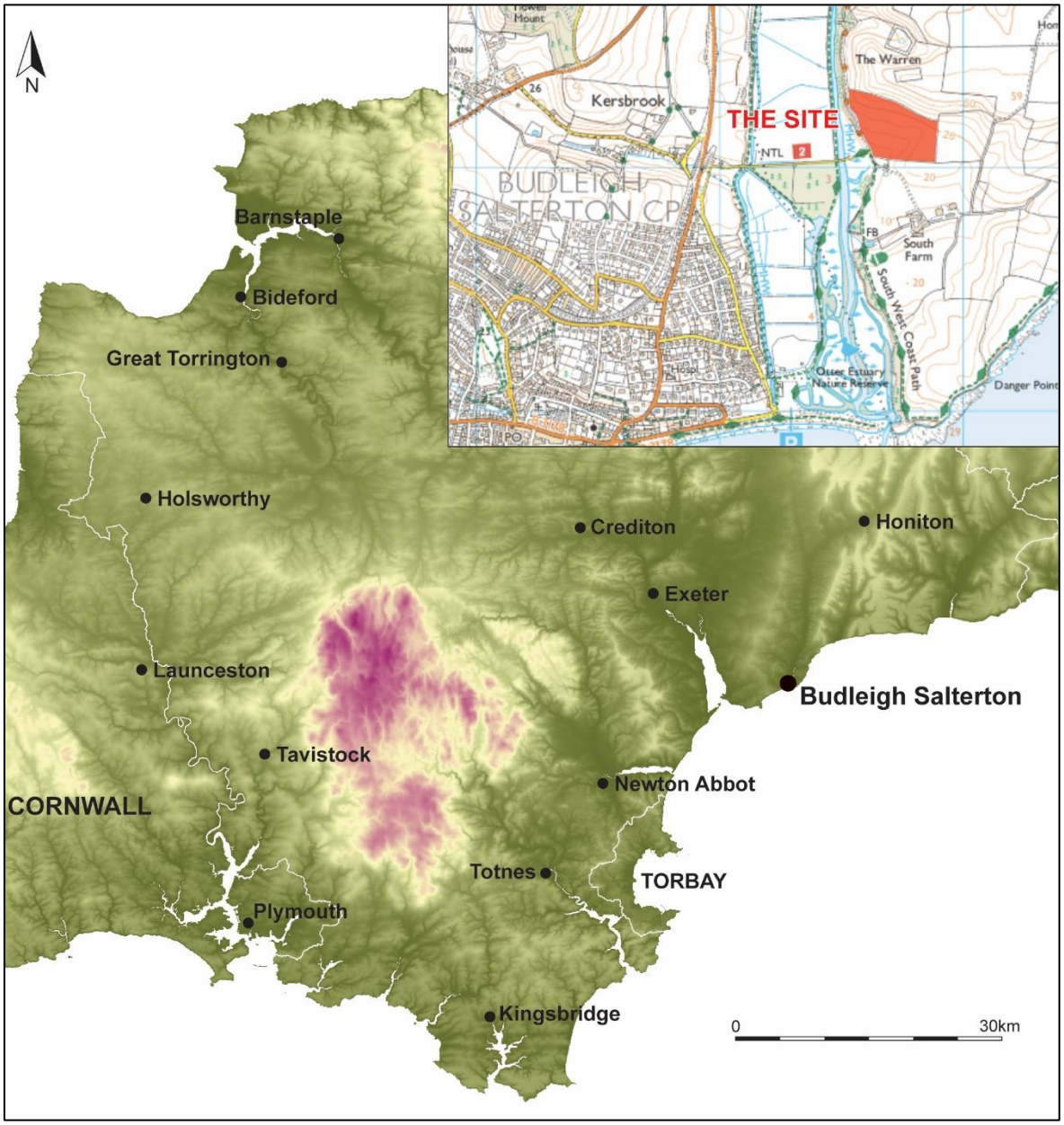

FIGURE 1: SITE LOCATION (THE SITE (PLOT B) IS INDICATED).

2.0 GEOPHYSICAL SURVEY

2.1 INTRODUCTION

An area of *c.*6.6ha was the subject of a magnetometry (gradiometer) survey. The purpose of this survey was to identify and record magnetic anomalies within the proposed site. While identified anomalies may relate to archaeological deposits and structures the dimensions of recorded anomalies may not correspond directly with any associated features. The following discussion attempts to clarify and characterise the identified anomalies. The survey was undertaken on the 23rd and 28th of July 2020 by J. Bampton; the survey data was processed by J. Bampton.

2.2 SITE INSPECTION

The site was located across a single large field that had been ploughed, leaving irregular and intermittent areas of very soft and very hard ground with large and deep ridges across which to survey. The site undulated with a valley running approximately north-east down to the south-west across it with steep to very steep slopes. The north-west slope had slight stepped ridges/plateaus, while the south-east slope was extremely steep with a slight plateau at its top in the south-east corner of the site. Some approximately north-south ridges also ran across the north half of the site, leading into the valley and along parts of these the varying subsoil/natural was visible in the ploughsoil. This may indicate a severe depth of truncation, but also geological variation that may account for certain undulations and ridges in the topography. Only very occasional finds of modern material, such as white refined earthenware, ceramic building material or glass were present across the site indicating that very little if any material had been brought onto the site from elsewhere. However, an extremely large amount of flint was noted across the site, largely plough-struck and undiagnostic, but some blades, flakes, possible cores and tools were noted and recovered. This assemblage/scatter was predominantly across the less steep slopes of the north-west half of the site and within the lower half of the valley that ran across the site. The spread of this material may be indicative of settlement activity on the site, particularly in the north-west quarter; or north and west sides of the site. The north and south boundaries of the site were over-grown hedge and tree lined banks that bordered fields on higher ground on the other side of these boundaries with ditches running along the bottom edge of the banks. The site had two access points along its south boundary and one at the south end of its east boundary. A water pipe/main was exposed in the south boundary in the south-east corner of the site. The east boundary was an overgrown hedge-bank with occasional trees and the west boundary was a hedge-bank that fell away sharply on its outer side to Park Lane; trees and scrub shielded most of Park Lane from the site. Supporting photographs for the site inspection can be seen in Appendix 3.

2.3 METHODOLOGY

The gradiometer survey follows the general guidance as outlined in: *EAC Guidelines for the use of geophysics in Archaeology: Questions to Ask and Points to Consider* (Europae Archaeologiae Consilium/European Archaeological Council 2016) and *Standard and Guidance for Archaeological Geophysical Survey* (CIfA 2014b).

The survey was carried out using a twin-sensor fluxgate gradiometer (Bartington Grad601). These machines are sensitive to depths of up to 1.50m. The survey parameters were: sample intervals of 0.25m, traverse intervals of 1m, a zigzag traverse pattern, traverse orientation was circumstantial, grid squares of 30×30m. The gradiometer was adjusted ('zeroed') every 0.5-1ha. The survey grid was tied into the Ordnance Survey National Grid- and set out using a Leica CS15 GNSS Rover GPS. The data was downloaded onto *Grad601 Version 3.16* and processed using *TerraSurveyor Version*

3.0.36.0. The primary data plots and analytical tools used in this analysis were *Shade* and *Metadata*. The details of the data processing are as follows:

Processes:
Clip +/- 2.5SD; removes extreme data point values.
DeStripe all traverses, median; used to equalise underlying differences between grids (potentially caused by instrument drift or orientation, directional effects inherent in magnetic instrument, or differences in instrument set up during survey e.g. using two gradiometers).
DeStagger all traverses out- and inbound by 0.50m; reduces staggering effects within data derived from zig-zag collection method.

Details:
6.5699ha surveyed
Stats unadjusted/prior to data clipping; Max. 99.93nT, Min. -102.45nT; Standard Deviation 3.06nT, mean 0.03nT, median 0.00nT.
Stats threshold adjusted/post processing; Max. 7.73nT, Min. -7.67nT; Standard Deviation 1.48nT, mean 0.04nT, median 0.00nT.

2.4 RESULTS

Table 1 with the accompanying Figures 2 and 3 show the analyses and interpretation of the geophysical survey data. Additional graphic images of the survey data and numbered grid locations can be found in Appendix 1.

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
1	Very weak positive, probable	Ovoid/ Circular	Sunken structure or large pits/hollows	Indicative of relatively broad in-filled hollows such as sunken/terraced in structures. On the very small side of such structures, *c.*4m-5m across (note caution that dimensions when interpreting geophysical survey are not accurate). The northern example may equate to two features, possibly intercutting. Based on surface finds and if these are structural, these are possibly associated with prehistoric/Bronze Age activity on the site. Sunken/terraced, post-ring structures from the Bronze Age are not uncommon in the south-west (see Discussion). Response of <*c.*+4nT to +6nT.
2	Very weak positive, probable	ovoid	Large pit, treethrow, hollow; or sunken structure	Indicative of a discrete cut and in-filled feature such as a large pit, tree-throw or sunken structure. As above this may equate to a small structure (*c.*3m-4m across) or a hollow or pit-type feature of natural or man-made origin. Proximity to other anomalies of high archaeological potential/probability may indicate a relationship to them. Undated although possible prehistoric/Bronze Age origin. Personal experience of smaller possible storage or working huts near to domestic structures in prehistory has been identified in the south-west (see Discussion). Response of *c.*+5nT.
3	Very weak positive, possible	Ovoid	Pits, treethrows, natural features	Indicative of discrete cut and in-filled features such as pits or treethrows. Although similar very weak responses may often equate to natural features, the response strength of anomalies more likely indicative of features across this site implies that archaeological responses could have low responses. Some of these examples are near to a former boundary and may be indicative of treethrows associated with a tree-lined boundary. Response of <*c.*4nTnT.
4	Very weak positive, probable	Linear	Ditch, enclosure or boundary	Indicative of a ditch with a right angled bend indicative of an undated enclosure or former field boundary. Occasional intermittent response and response strength may be indicative of severe truncation by ploughing. Possibly associated with Groups 1, 5 and 6. Probably predates the historical boundary Group 8. Possibly associated with a prehistoric landscape associated with flint scatter on site. Responses of <*c.*+3nT.
5	Very weak positive, possible	Linear	Ditch	Indicative of a ditch or shallow ground disturbance such as a wheel rut. Its alignment off of the bend in Group 4 may indicate that is part of the same field system/enclosure. However, this is an extremely ephemeral response and it may be shallow ground disturbance in a coincidental location. Response of <*c.*+1nT.
6	Very weak negative, possible	Linear	Ditch or geological anomaly	Indicative of geological variation/striation; however, extrapolation to the linear anomaly of Group 4 may allude to a truncated section of associated ditch/boundary. If representative of a feature this may be near fully truncated; it is more likely natural variation in the geology that defines a break in the slope of the sites valley. Response of <*c.*+/-1nT.
7	Very weak positive, possible	Linear	Ditch, geological anomaly or agricultural activity	Indicative of geological variation, shallow ground disturbance or ditches. The approximate east-west example of this group defines the top edge of clear geological variation on the slope (Group 11) of the site and it is probably associated with this geological variation. The approximate north-south example is most likely associated with other examples of slight curving geological anomalies (Group 11) that lead into the sites valley. However given the probable truncation by ploughing, and some shallow ground disturbance visible on site these examples have been highlighted in case some similar examples prove to be features. Response of <*c.*+2nT.
8	Very weak positive, probable	Linear	Historical Boundary	Indicative of a ditch that equates to a boundary depicted on mapping from 1843. This anomaly has a weak, relatively diffuse and intermittent response indicative of poor survival. It has probably been severely truncated by ploughing. Possibly some diffuse negative responses indicative of former bank material, but not clearly definable from the natural variation. Response of <*c.*2nT.

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
9	Very weak negative, possible	Linear	Drain	Indicative of a line of compact/stony material. Aligned off of the bend in the historical boundary (Group 8) and possibly indicative of a land drain (perhaps stone filled or lined). Associated with Group 8, probably post-medieval. Extremely weak response may indicate a redeposited natural fill. Response of <-1nT.
10	Very Weak, positive, probable	Linear	Ditch	Indicative of a ditch. Near to the southern boundary and entrance of the site; it may be associated with post-medieval agricultural activity. Undated. Although still a weak response the anomaly has relatively clear edges indicative of a true feature. Response of <+2nT.
11	Very weak positive and negative	Diffuse amorphous linears/ curvi-linears	Geological anomaly	Indicative of geological variation that define the approximate location of the sites undulations, including: the valley aligned approximately north-east by south-west; a slight plateau in the south-east corner of the site; possible channels funnelling into the valley; and ridges aligned approximately north-south across the north-west slope of the valley/side of the site. These ridges in particular corresponded to an orangey-red hue in the soil compared to the majority of the site, alluding to underlying subsoil/natural being brought to the sites surface. Response of <*c.*+/-1.5nT.
Other anomalies				
-	Strong dipolar, probable	Point/ ovoid	Ferrous objects/debris	Black crosses in Figure 3. The site has a large number of dipolar responses. These strongest examples are indicative of ferrous objects that are typically presumed to be modern, such as farm machinery fragments. Similar and weaker responses can be indicative of geological features/anomalies. No examples indicative of a thermoremanent debris are apparent on the site. Some of these examples may form approximate lines and could represent some form of modern investigation such as dip-wells or geotechnical investigation. These are highly probable to be non-archaeological in nature.
-	Weak positive and negative	Linear	Ploughing activity	Examples/samples displayed as green lines in Figure 3. Indicative of ploughing activity that runs predominantly north-south across the site and parallel to the boundary around the edges of the field. LiDAR and satellite imagery indicate that ploughing and works have occurred east-west across the site and north-west by south-east at various times; parallel to either the north, east or south site boundaries. The varied slopes of the site mean the effect of agricultural works on soil-creep/hill-wash can be better managed through varied ploughing practices. During the survey some ploughing at the west end of the site had occurred to presumable form catchment/barriers to soil degradation; one example was clear in the survey data and depicted in the south-west corner of the site in Figure 3. Responses of <*c.*+/1nT.
-	Magnetic disturbance, probable	-	Magnetic disturbance	Near the edges of the site magnetic disturbance from fence lines, debris and a service pipe is apparent. In the south-west of the site this response is associated with a metallic water pipe, the main service for which presumably runs alongside the site boundary or an adjacent boundary. In the south-west part of the site was part of a fence-line associated with the adjacent property was present and some ground disturbance had occurred. A sandy material had been spread across part of this corner of the site and this made-ground may account for this response in part.

TABLE 1: INTERPRETATION OF GRADIOMETER SURVEY DATA.

2.5 COMMENT ON THE FLINT ASSEMBLAGE (BY P. WEBB)

A total of 30 flint artefacts (428g) were recovered from topsoil contexts across the survey area; particularly its north-west half and its valley area. These were picked up as noticed and were not recovered during a systematic fieldwalking, but emphasise the potential for a more extensive flint assemblage to exist.

The recovered flint assembladge was predominantly derived from a nodular source, likely from the deposits associated with Beer Head (*c.*15km to the north-east); with only one piece (2g) derived from a probable gravel source. The assemblage contains a range of piece types, including: debitage (19 pieces, 195g); objective pieces (one piece, 92g); retouched tools (nine pieces, 134g); and utilised tools (one piece, 7g) demonstrating the full scope of lithic production, from initial core reduction to the production and use of finished tools.

The retouched tools show a range of types including: two awl/piercers (20g); one backed blade (14g); one backed flake (6g); one edge-trimmed blade (4g); two edge-trimmed flakes (19g); and two scrapers (71g) suggesting a range of tasks including hide and food preparation. The poor quality of much of the retouch and presence of a utilised flake (7g) suggest that many of the pieces were produced with expediency in mind.

Many of the pieces are of a type produced throughout prehistory, though the mix of blades, blade-like flakes and flakes, along with the presence of a crested blade suggests earlier Neolithic activity, though the presence of larger and squat flakes could indicate that this activity extended into the Bronze Age.

These flints are currently stored in the offices of South West Archaeology Ltd. And it is anticipated that they will be archived to the Royal Albert Memorial Museum (RAMM) once a transfer of title has been agreed, etc.

2.6 DISCUSSION

The geophysical survey identified eleven groups of anomalies, these include; a historical field boundary, an undated enclosure or boundary ditch, an undated ditch, a series of geological anomalies or undated ditches, approximately ten possible pits or treethrows, and two possible hollows or sunken structures. Also evident in the survey data was a frequent amount of geological variation indicative of the sites topography, and evidence of agricultural activity and modern debris.

The general 'noise' (inherent geological variation) of the site was relatively quiet <*c.*+/-1nT with relatively frequent spikes/points of up to between +4nT and -7nT. Gravel/sand based subsoil, potentially from a weathered sandstone and/or river gravel geology can produce diffuse geophysical responses. This may account for the general weak responses of the identified anomalies. Despite the survey responses strengths being generally weak they do clearly show both probable historical features, anomalies of possible archaeological origin and subtle, probable geological features. Cartographic and additional sources that support the following discussion and interpretation can be seen in Appendix 2.

The possible hollows/sunken structure anomalies (Group 1) are possibly indicative of truncated archaeological features. However, while it should be noted that no firm conclusions can be reached on the geophysical data alone, these ovoid anomalies have comparable examples from the South West and have been proven to often represent Middle Bronze Age structures (Bampton 2015; Bampton 2016; Bampton 2017; Bampton and Morris 2015). Many of these proven examples are distinctive regional examples from Cornwall and South Devon; however, the geophysical response of Group 1 is comparable. Although these examples (Group 1) are ostensibly very

small/smaller than a typical Middle Bronze Age roundhouse (typically 6-15m in diameter), examples seen at Budock near Falmouth (Bampton 2016) were revealed that were under 4m in diameter and flanked a more typical domestic structure. There has been discussion regarding this general structure type in Cornwall and possible ritual closure at the end of their life-use (Jones and Quinnell 2011). It is not typical for these settlements to be enclosed, however, the presence and proximity of a probable ditch (Group 4) that does not correspond to the current or historical field system may be indicative of a contemporary field system or enclosure. Groups 1, 2, 4, 5 and parts of Group 3 all exist across a relative plateau that is visible on the ground, perhaps having been utilised in the same period. When in the approximate location of these anomalies one has a view into the Otter Valley along to the coast, as well as some shelter and potential further vantage points from the high, steep hill on the north side if the site. Although it is probably a geological or ephemeral/shallow anomaly indicative of a break in slope parallel to the sites valley, Group 6, may equate to a truncated extension of Group 4. Furthermore, Group 5, may also be associated with Group 4, as part of a possible prehistoric field system/enclosure; or it may represent modern ground disturbance.

Ten possible pits or treethrows (Groups 2 and 3) could be of man-made or natural origin. The large quantity of struck flint on the site, although perhaps washed-in, may be indicative of a large amount of archaeological deposits/features that have been ploughed into the topsoil across the site. The assemblage of flint from the site may have originated from any manner of archaeological feature or layer. Some of these pit anomalies are ostensibly along the line of the historical field boundary (Group 8) and may represent former tree-lines or activity at the edge of the former field. The presence of a potential former lime pit (based on field name evidence) in a field to the south of the site (MDV109874) may also allude to the existence of prospection pits along this part of the Otter valley.

The historical boundary (Group 8) is mostly represented by an ephemeral and intermittent response and probably does not survive to any great degree. A section near to the possible prehistoric assets (Groups 1 and 4) appears to survive more clearly. It may be that soil depth in this section of slight plateau has afforded slightly more protection for any buried archaeological resource compared to on the slopes of the site. The very straight probable land drain (Group 9) is probably associated with this historical boundary.

The undated probable ditch (Group 10), near the sites southern edge and entrance, is probably also associated with agricultural activity/drainage after the establishment of the extant field system; and/or predating the sites current southern boundary as established/rectified in the second half of the 19th century. The ground-/surface level of the field immediately south of the site, adjacent to this anomaly is set higher than on the site and it seems unlikely that this anomaly would extend as part of a single feature into the field to the south.

Geological variation was evident in the survey data and it largely corresponded to the topography of the site and visible variation in the ploughsoil on the site. This is described in Table 1. One of the linear anomalies of Group 7 essentially defines the upper break of slope to one such broad diffuse geological area of variation that defines the valley that runs across the site. The other, approximately north-south example of Group 7 linear anomaly is almost certainly geological or shallow ground disturbance. However, these two anomalies (Group 7) form identifiable patterns/trends; and given the potential of the site to yield a severely truncated buried archaeological resource of potential prehistoric date, these anomalies have been highlighted as having potential, although extremely low.

There is no evidence in the geophysical data for the right-angled kink in the sites east boundary/south-east corner that was removed in the 19th century. This may allude to the boundary as present on the 1843 mapping as being a simple hedge- or fence-line or only being a shallow or

insubstantial boundary; or may be indicative of the severe truncation through ploughing of any buried archaeological resource.

The evidence of agricultural activity, such as ploughing and presence of strong dipolars, probable ferrous, anomalies and areas of magnetic disturbance on the site is explained in the 'other anomalies' section of Table 1.

In summary the site appears to contain a flint scatter and geophysical anomalies that together could be interpreted as indicative of a prehistoric, perhaps Neolithic and/or Bronze Age settlement of two or more structures and potentially an associated enclosure/ditch/field system. It also contains possible pits or treethrows that could be contemporary with any prehistoric- or later activity on the site. Any groundworks across the north-west half of the site could have the potential to disturb any buried archaeological resource; although it is probable that any buried archaeological resource will have been severely truncated by ploughing and areas devoid of potential archaeological anomalies may have already been subject to full truncation by agricultural activity.

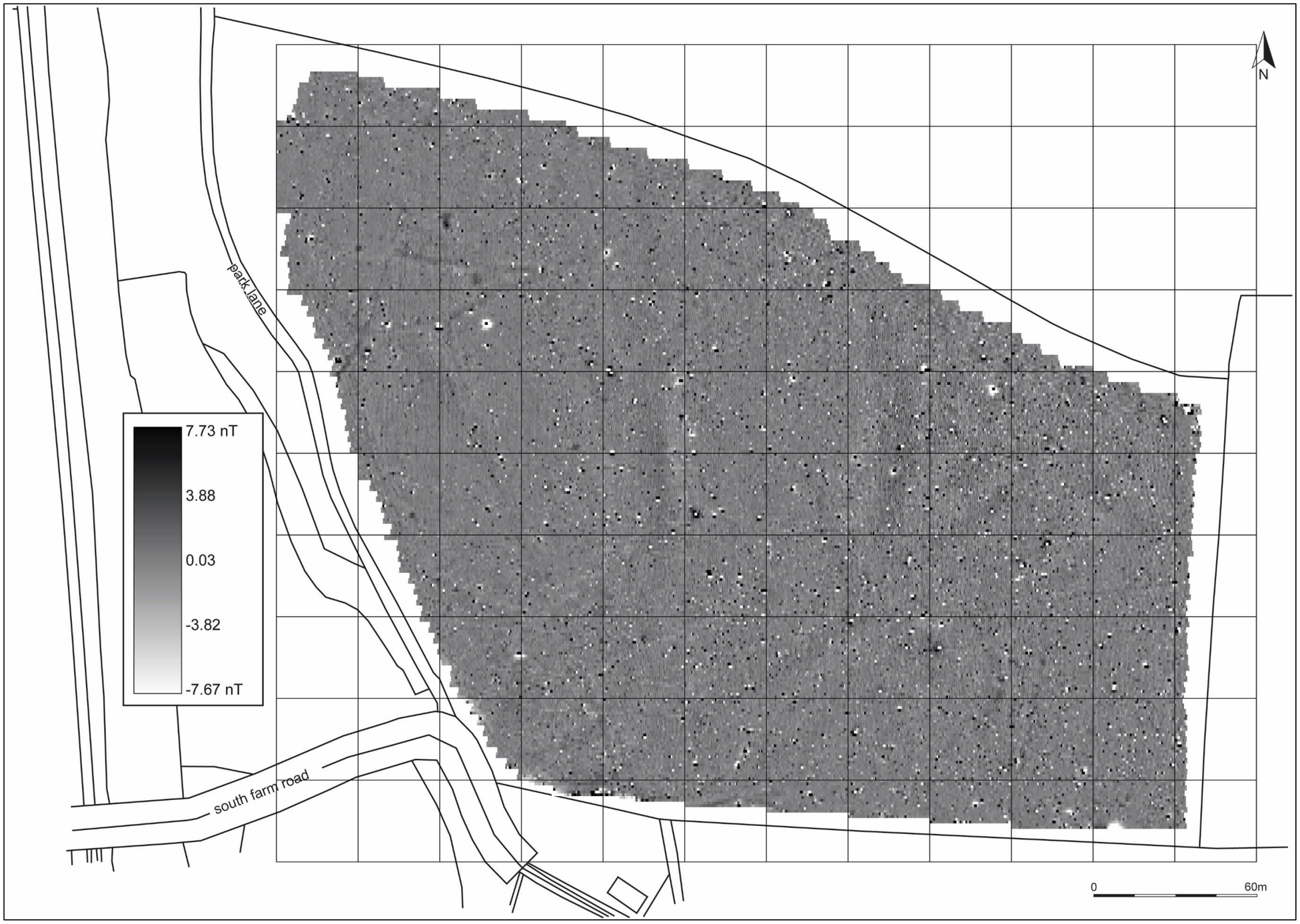

FIGURE 2: SHADE PLOT OF GRADIOMETER SURVEY DATA; MINIMAL PROCESSING.

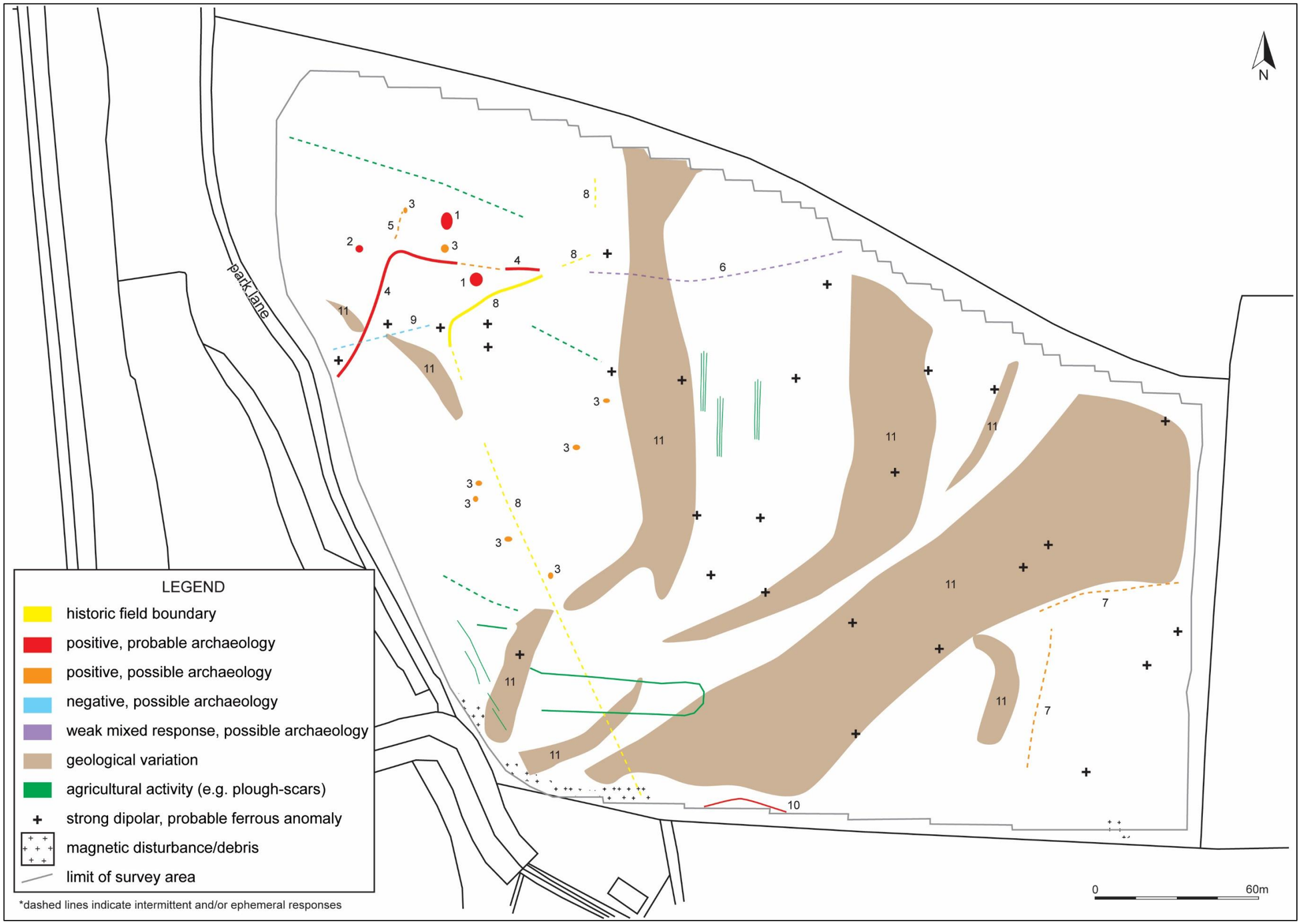

FIGURE 3: INTERPRETATION OF GRADIOMETER SURVEY DATA.

3.0 CONCLUSION

The site (Plot B) is located *c.*875m north-east of Budleigh Salterton, beside the east bank of the River Otter. It is across a field classified by the HLC as 15th-18h century *Barton Fields*. Cartographic evidence shows field boundaries have been removed from the site and that the south and east boundaries were altered in the 19th century to their approximate state at the time of the survey. The HER records extensive flint scatters across the fields to the north, east and south of the site (e.g. MDV74342). Roman pottery findspots and a possible lime pit have also identified to the south of the site and cropmarks including medieval field systems and possible enclosures overlooking the site and Otter valley have been identified to the north of the site.

The survey identified eleven groups of anomalies, including; a historical field boundary, an undated enclosure or boundary ditch, a further undated ditch, a series of geological anomalies or undated ditches, approximately ten possible pits or treethrows, and two possible hollows or sunken structures. Also evident in the survey data was a frequent amount of geological variation indicative of the sites topography, and evidence of agricultural activity and modern debris. During the survey a relatively large flint scatter was noted and recovered from across the site, particularly its north-west half. This flint scatter included scrapers, blades, flakes and a awl/peircers. These finds may have washed in via former watercourses leading to the River Otter; or have been ploughed to the surface from buried archaeological features.

Of significance are the anomalies interpreted to represent two large pits/treethrows or potentially sunken structures along with an associated probable (enclosure/field-system?) ditch. Along with the flint finds across the site, these may indicate the presence of a prehistoric (probable Bronze Age) settlement on a slight plateau in the north-west quadrant of the site. The strength of the surveys geophysical responses may be partially explained by the nature of the underlying, weathered sandstone geology, but given the intermittence of many responses probably also alludes to a relatively large amount of truncation of the site, probably from ploughing.

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Devon Heritage Centre (DHC)

Otterton Tithe Apportionment, 1843
Otterton Tithe Map, 1843
Ordnance Survey 1st edition, 25 inch map, Sheet: Devon XCIII.16, surveyed 1888, published 1889
Surveyors draft map for the Ottery St Mary area, 1806

APPENDIX 1: ADDITIONAL GRAPHICAL IMAGES OF THE GRADIOMETER SURVEY

FIGURE 4: GEOPHYSICAL SURVEY GRID LOCATION AND NUMBERING.

FIGURE 5: RED-GREY-BLUE SHADE PLOT OF GRADIOMETER SURVEY DATA; BAND WEIGHT EQUALISED; GRADIATED SHADING; CLIPPED BY 2.5SD (STANDARD DEVIATION).

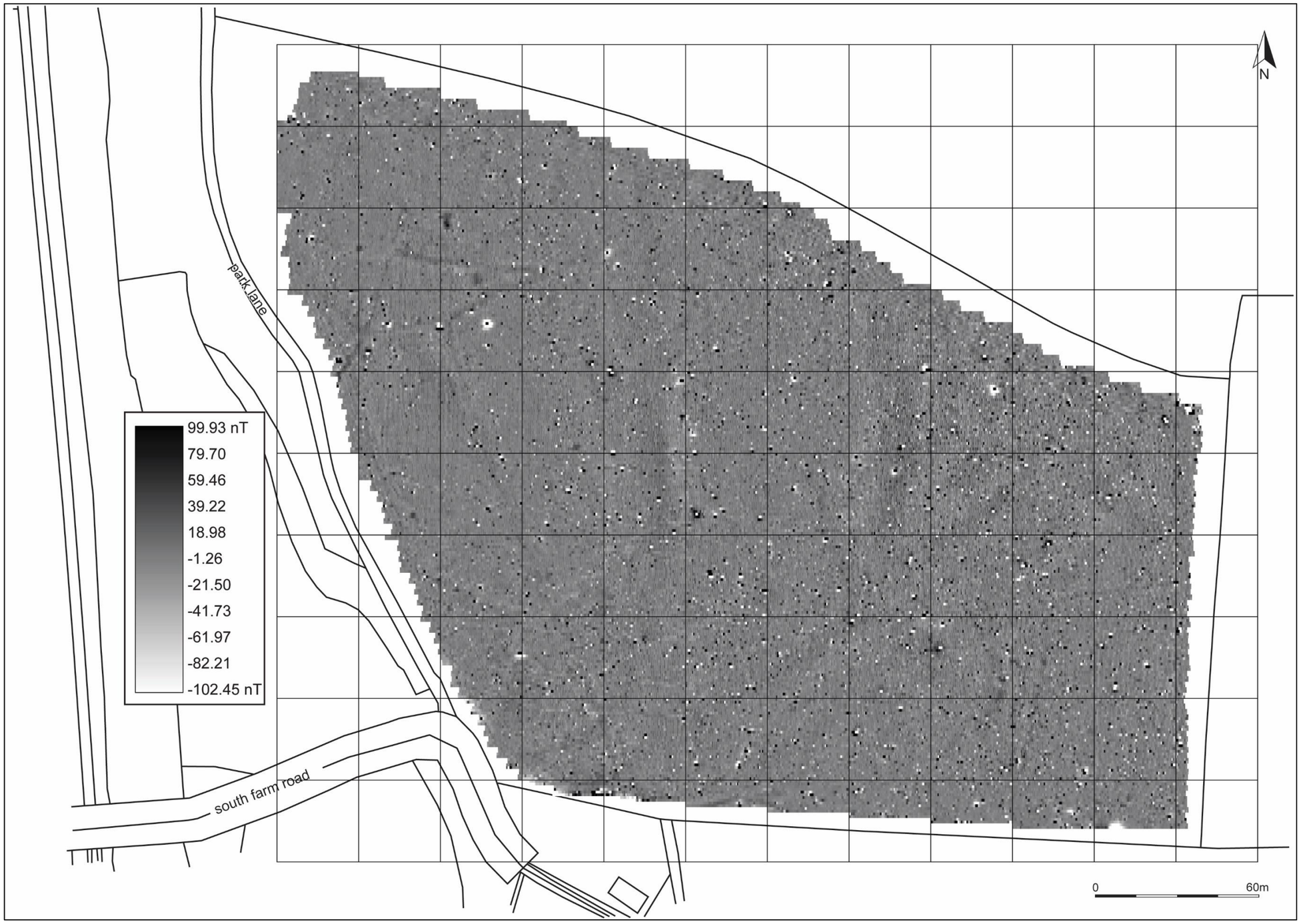

FIGURE 6: SHADE PLOT OF GRADIOMETER SURVEY DATA; MINIMAL PROCESSING; DATA NOT CLIPPED, BUT IMAGE CLIPPED TO 2.5SD.

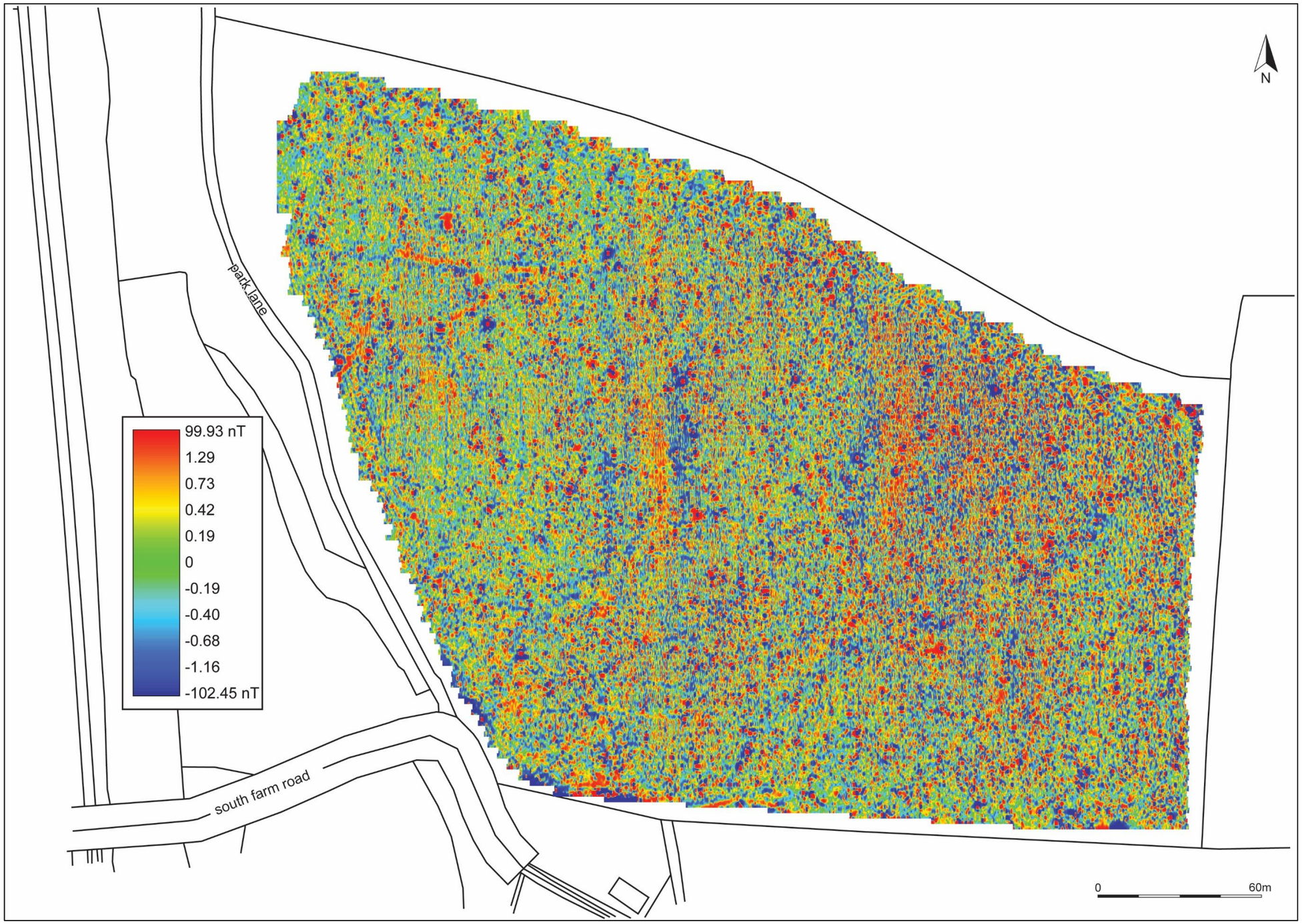

FIGURE 7: RED-GREEN-BLUE SHADE PLOT OF GRADIOMETER SURVEY DATA; BAND WEIGHT EQUALISED; GRADIATED SHADING; DATA NOT CLIPPED, BUT IMAGE EQUIVALENT TO 2.5SD CLIPPING.

APPENDIX 2: SUPPORTING SOURCES

FIGURE 8: EXTRACT FROM THE SURVEYOR'S DRAFT MAP, *C.*1806; THE APPROXIMATE LOCATION OF THE SITE IS INDICATED (DHC).

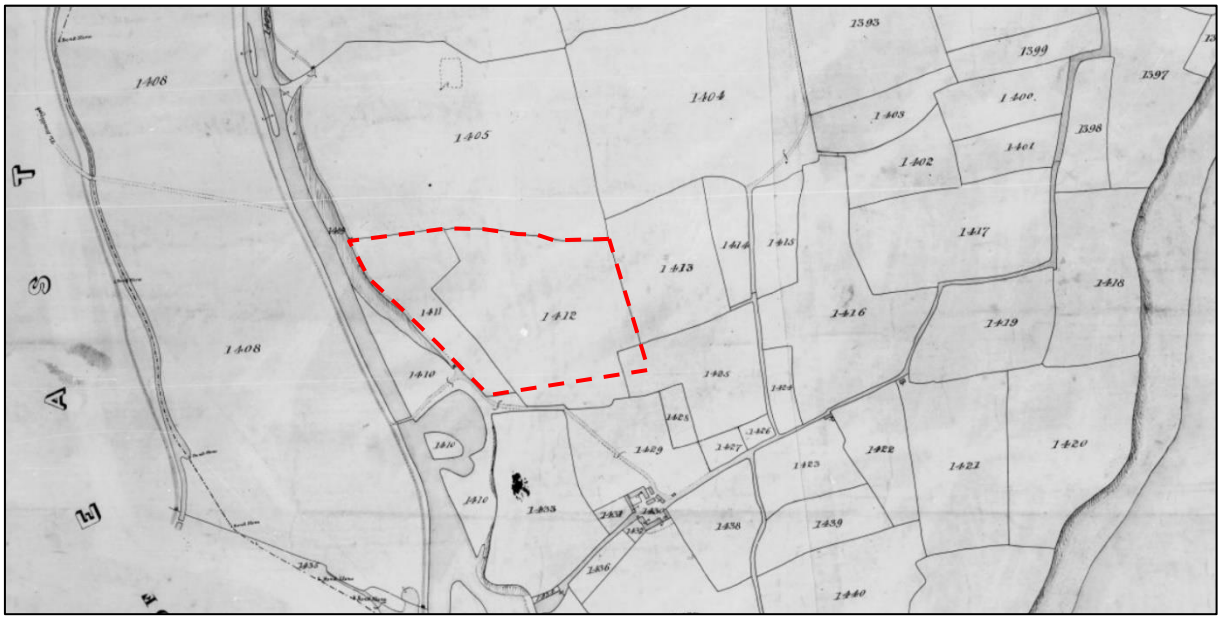

FIGURE 9: EXTRACT FROM THE OTTERTON TITHE MAP, 1843; THE SITE IS OUTLINED IN RED (DHC).

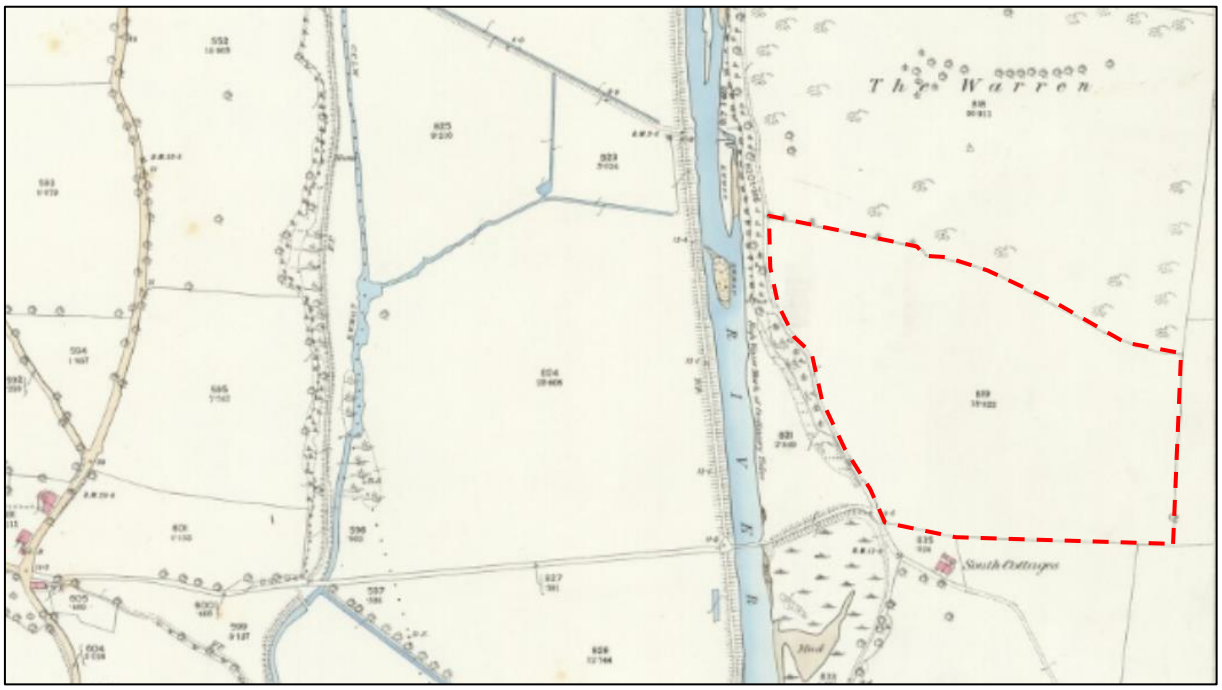

FIGURE 10: EXTRACT FROM THE ORDNANCE SURVEY 1ST EDITION, 25 INCH SERIES, PUBLISHED 1889; THE SITE IS OUTLINED IN RED (DHC).

FIGURE 11: AERIAL PHOTOGRAPHY OF THE SITE, 1946; THE SITE IS OUTLINED IN RED (KYP).

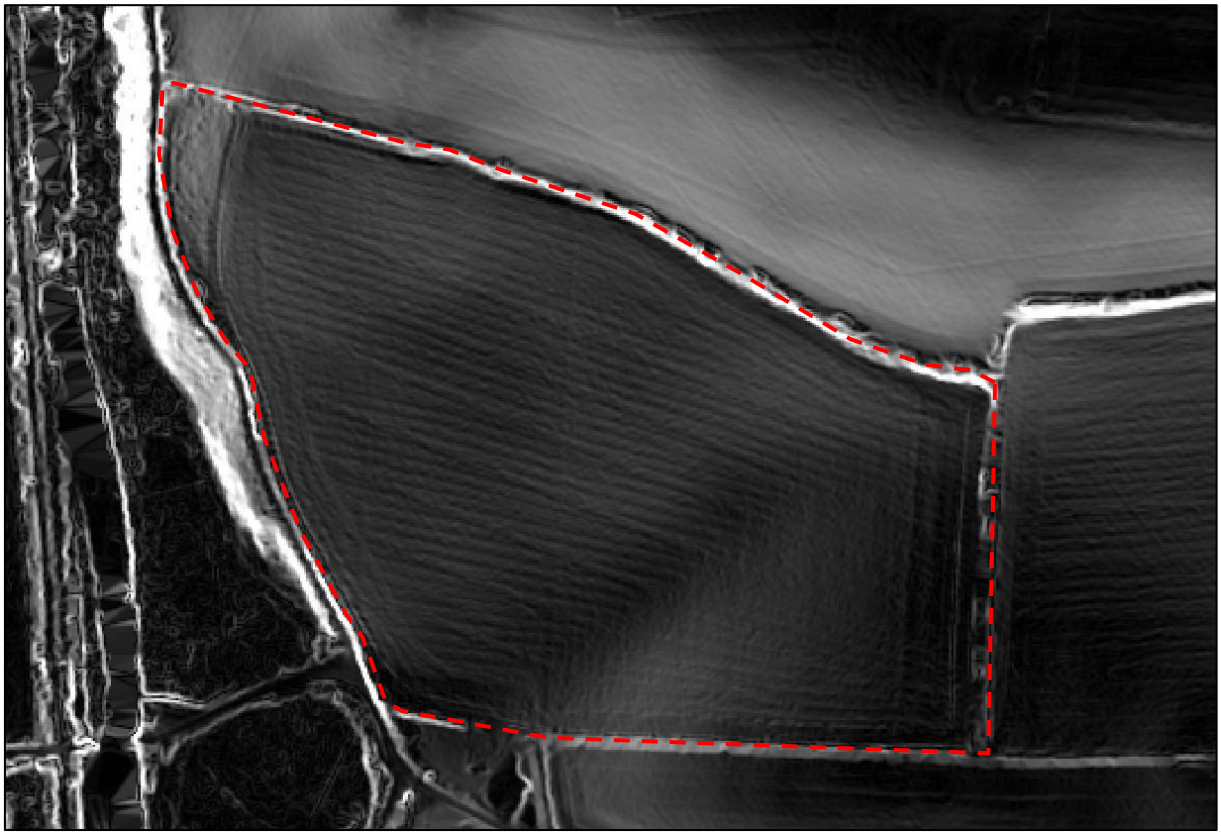

FIGURE 12: IMAGE DERIVED FROM LIDAR DATA; THE SITE IS OUTLINED IN RED (PROCESSED USING QGIS VER2.18.4, TERRAIN ANALYSIS/SLOPE, VERTICAL EXAGGERATION 3.0). DATA: CONTAINS FREELY AVAILABLE DATA SUPPLIED BY NATURAL ENVIRONMENT RESEARCH COUNCIL (CENTRE FOR ECOLOGY & HYDROLOGY; BRITISH ANTARCTIC SURVEY; BRITISH GEOLOGICAL SURVEY); ©NERC.

APPENDIX 3: SUPPORTING PHOTOGRAPHS

1. SITE ENTRANCE IN SOUTH BOUNDARY OFF OF SOUTH FARM ROAD; VIEWED FROM THE SOUTH (NO SCALE).

2. SOUTH BOUNDARY AT SITE ENTRANCE; VIEWED FROM THE WEST (NO SCALE).

3. SITE SHOT, FROM THE SITE ENTRANCE; VIEWED FROM THE EAST (NO SCALE).

4. SITE SHOT, FROM THE SITE ENTRANCE; VIEWED FROM THE SOUTH-SOUTH-EAST (NO SCALE).

5. SITE SHOT, FROM THE SITE ENTRANCE; VIEWED FROM THE SOUTH-SOUTH-WEST (NO SCALE).

6. SITE SHOT, FROM THE SITE ENTRANCE; VIEWED FROM THE WEST (NO SCALE).

7. SITE SHOT FROM ALONG SOUTH BOUNDARY; VIEWED FROM THE SOUTH-EAST (NO SCALE).

8. SITE SHOT FROM ALONG THE SOUTH BOUNDARY; VIEWED FROM THE SOUTH (NO SCALE).

9. SITE SHOT, FROM ALONG THE SOUTH BOUNDARY; VIEWED FROM THE WEST (NO SCALE).

10. SITE SHOT, FROM THE SOUTH-EAST CORNER; VIEWED FROM THE EAST (NO SCALE).

11. SITE SHOT, FROM THE SOUTH-EAST CORNER; VIEWED FROM THE SOUTH (NO SCALE).

12. EAST BOUNDARY FROM ACCESS IN SOUTH END OF BOUNDARY; VIEWED FROM THE SOUTH (NO SCALE).

13. SITE SHOT FROM ALONG EAST BOUNDARY; VIEWED FROM THE EAST (NO SCALE).

14. SITE SHOT FROM NORTH-EAST CORNER; VIEWED FROM THE NORTH (NO SCALE).

15. SITE SHOT FROM THE NORTH-EAST CORNER; VIEWED FROM THE NORTH-EAST (NO SCALE).

16. SITE SHOT FROM THE NORTH-EAST CORNER; VIEWED FROM THE EAST (NO SCALE).

17. SITE SHOT FROM ATOP A RIDGE ALONG THE NORTH BOUNDARY; VIEWED FROM THE EAST (NO SCALE).

18. SITE SHOT FROM ATOP A RIDGE ALONG THE NORTH BOUNDARY; VIEWED FROM THE NORTH-WEST (NO SCALE).

19. SITE SHOT FROM ATOP A RIDGE ALONG THE NORTH BOUNDARY; VIEWED FROM THE NORTH (NO SCALE).

20. SITE SHOT FROM ATOP A RIDGE ALONG THE NORTH BOUNDARY; VIEWED FROM THE EAST (NO SCALE).

21. SITE SHOT FROM THE NORTH-WEST CORNER; VIEWED FROM THE NORTH-WEST (NO SCALE).

22. SITE SHOT FROM ABOVE THE SLIGHT PLATEAU ON THE NORTH-WEST SLOPE LOOKING ALONG THE OTTER VALLEY; VIEWED FROM THE NORTH (NO SCALE).

23. SITE SHOT FROM ABOVE THE SLIGHT PLATEAU ON THE NORTH-WEST SLOPE; VIEWED FROM THE SOUTH-WEST (NO SCALE).

24. SITE SHOT FROM ALONG THE WEST BOUNDARY; VIEWED FROM THE SOUTH (NO SCALE).

25. SITE SHOT FROM ALONG THE WEST BOUNDARY LOOKING TOWARDS SLIGHT PLATEAU IN NORTH-WEST SLOPE; VIEWED FROM THE SOUTH-WEST (NO SCALE).

26. SITE SHOT FROM THE SOUTH-WEST CORNER; VIEWED FROM THE SOUTH (NO SCALE).

27. SITE SHOT FROM THE SOUTH-WEST CORNER ALONG VALLEY; VIEWED FROM THE SOUTH-WEST (NO SCALE).

28. SITE SHOT FROM THE SOUTH-WEST CORNER LOOKING ALONG THE OTTER VALLEY; VIEWED FROM THE NORTH (NO SCALE).

29. SITE SHOT FROM THE SOUTH-WEST CORNER LOOKING TOWARDS SOUTH FARM ROAD BRIDGE ACROSS OTTER VALLEY; VIEWED FROM THE EAST (NO SCALE).

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