Technical Appendix 3: Cultural Heritage Impact Assessment

Stoneworthy BESS

16/05/2024

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EXECUTIVE SUMMARY

3.1. Neo Environmental Ltd has been appointed by Renewable Energy Systems (RES) Ltd (the "Applicant") to undertake a Cultural Heritage Impact Assessment for the proposed BESS on land approx. 1.3km southwest of Pyworthy Torrige District, Devon, England, EX22 6LA. The assessment has been produced to evaluate the potential direct and indirect impacts that the proposal may have upon cultural heritage assets and archaeological remains.

3.2. There are no designated or non-designated archaeology and heritage assets present within the Application Site (**Figures 3.1 and 3.2: Appendix 3A**). The nearest designated sites are the grade II listed 'Old Rectory and Walls Enclosing Garden to North East' (NA14 and 'The Coach House adjoining the Old Rectory to the West' (NA12, located c. 660m to the east-northeast of the proposed site boundary. The nearest monument record appears to be an area containing a possible field system and plough marks (MDV103619) identified from a 2013 geophysical survey undertaken within the field adjacent to the east of the Proposed Development. Archaeological monitoring was subsequently undertaken here during the excavation of cable trenches in 2013, but no features or archaeological deposits were identified.

3.3. In consideration of the proximity of the Proposed Development site to the archaeology identified on the other side of the Derril Water watercourse, land here is likely to have a **moderate potential for sub-surface remains from the medieval and post-medieval periods,** while it has a **low potential for sub-surface remains from the prehistoric and Romano-British periods**. Any remains encountered within the Application Site have the potential to be of **high to moderate importance**, due to it being located within a landscape of prehistoric bowl barrows and in close proximity to a probable medieval settlement site.

3.4. The results of the previously undertaken geophysical survey, which identified features of archaeological potential, will be targeted during a test trenching evaluation which is due to start imminently. The results of the test trenching will be shared directly with the Historic Environment Team at Torridge District Council and Devon County Council. Residual direct effects upon hitherto-unknown archaeology as a result of the Proposed Development are therefore anticipated to be **Negligible, on the assumption that the programme of archaeological test trenching is undertaken and any appropriate mitigation measures are implemented following this**.

3.1. Indirect effects upon the surrounding heritage assets have been assessed as overall 'Minor Adverse' in the worst case. Therefore, **no specific mitigation is considered to be required for the reduction of any visual impacts**, with tree-lined hedgebanks and the natural ridgeline of the local topography ensuring that visual impacts upon heritage assets will be kept minimal throughout the operational phase of the development. Residual indirect effects are therefore considered to be unchanged at Minor Adverse in the worst case.

INTRODUCTION

Background

3.2. Neo Environmental Ltd has been appointed by RES Ltd (the "Applicant") to undertake a Cultural Heritage Impact Assessment ("CHIA") for a proposed battery energy storage system (BESS) development (the "Proposed Development") on land approx. 1.3km southwest of Pyworthy Torrige District, Devon, England, EX22 6LA (the "Application Site").

Development Description

3.3. Stoneworthy Energy Storage System is a proposed battery energy storage system (BESS) comprising approximately 32no. battery enclosures, 16no. PCS (power conversion systems), 16no. MV skids (PCS transformer and switchgear), a 33kV substation building with a high voltage area containing auxiliary transformer and grid compliance equipment, a 132kV grid transformer with associated equipment and a grid connection to a National Grid Electricity Distribution (NGED) overhead line.

3.4. Please see Figure 1 of Volume 2 for the layout of the proposed Development.

Site Description

3.5. The area of the proposed Development (the "Application Site") lies at an elevation of approximately 98 - 110 m AOD and covers a total area of c. 3.6 hectares. It is centred at approximate National Grid Reference (NGR) E 230354 N 101885 and is located c.1km southwest from the village of Pyworthy, c. 1.3km southwest from the village of Derril, and c. 3.8km south west from Holsworthy town.

3.6. Comprising of a single field of agricultural land, the site is currently being used for pastoral farming. The field itself is bound by a mixture of trees, hedgerows and post-and-wire fencing. The land slopes from east to west and there is an area of scrub present towards the north/ northeast. Small pockets of woodland are adjacent to the Application Site's boundaries to the northeast, south and southwest.

3.7. Access will be gained from an unnamed local road adjacent to the northern boundary of the Application Site. This road originates from the Derriton Road c. 1.35km east from the Application Site.

3.8. Recreational Routes include the Public Right of Way (PRoW) Pyworthy 7 located c.0.04km northwest and Pyworthy 3 located c.0.17km southeast of the Proposed Development.

3.9. Electrical infrastructure is present within the Application Site and a Solar Farm development is directly adjacent to its southeastern boundary. Two other solar farms are within close

proximity to the Application site with one c. 2.3km southwest and another c. 2.6km northeast from the Application site. There are also turbines present within the landscape

3.10. The area surround the Application Site is predominantly agricultural, punctuated by individual properties and farmsteads and renewable energy infrastructure.

Figures and Appendices

3.11. The report is supported by the following Figures and Technical Appendices, contained within Volume 3:

- Appendix 3A: Figures
    - Figure 3.1 – Designated Heritage Assets
    - Figure 3.2 – Non-designated Heritage Assets
    - Figure 3.3 – Tithe Apportionment Map (1838)
    - Figure 3.4 – OS 1885 Map
    - Figure 3.5 – OS 1906 Map
    - Figure 3.6 – Lidar Data
- Appendix 3B: Tables of Heritage Assets
- Appendix 3C: Aerial Photography
- Appendix 3D: Geophysical Survey Report and Walkover Survey Report
- Appendix 3E: Written Scheme of Investigation (WSI) for Archaeological Investigation

Statement of Authority

3.12. The aforementioned assessment and the additional information provided within this document were produced by registered archaeologists with the Chartered Institute for Archaeologists (CIfA), of Associate (ACIfA) level or above, and in accordance with their professional guidance.

3.13. Sang Tran BA (Hons) PCIfA was the primary author; he has over six years' of archaeology experience across the UK, including conservation projects, energy projects and large infrastructure projects and is a registered member with the Chartered Institute for Archaeologists (CIfA).

3.14. Paul Neary BA H.Dip MA MSc MIEnvSc MIAI ACIFA CEnv was the second archaeologist and editor; he is dual-qualified as a Chartered Environmentalist and archaeologist. Paul has over

17 years of archaeology and heritage experience within the UK and Ireland, including large road projects, EIA developments and energy projects. He is licensed to direct archaeology work in the Republic of Ireland and has also held archaeology director licenses in Northern Ireland.

LEGISLATION AND PLANNING POLICY CONTEXT

3.15. This CHIA has been considered with regard to all relevant national, regional and local planning policy and guidance:

- National Planning Policy Framework 2023, paragraphs 194 & 199 – 203[1];
- The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, Schedule 4[2];
- Ancient Monuments and Archaeological Areas Act 1979 (as amended)[3];
- Historic England: The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (Second Edition)[4];
- Historic England's Statement of Heritage Significance: Analysing Significance in Heritage Assets. Historic England Advice Note 12 (2019)[5];
- National Heritage Act 1983 (amended 2002)[6];
- Planning (Listed Buildings and Conservation Areas) Act 1990[7];

[1] Department for Levelling Up, Housing & Communities (2023) *National Planning Policy Framework*. HM Government, London.

[2] HM Government (2017) *The Town and Country Planning (Environmental Impact Assessment) Regulations*. HM Government, London.

[3] HM Government (1979) *Ancient Monuments and Archaeological Areas Act*. HM Government, London.

[4] Historic England (2017) *The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (Second Edition*. Historic England.

[5] Historic England (2019) *Statement of Heritage Significance: Analysing Significance in Heritage Assets*. Historic England Advice Note 12. Historic England.

[6] HM Government (1983) *National Heritage Act (Amended 2002).* HM Government, London.

[7] HM Government (1990) *Planning (Listed Buildings and Conservation Areas) Act*. HM Government, London.

- Hedgerows Regulations 1997: Schedule 1 – Additional Criteria for Determining "Important" Hedgerows[8]; and
- North Devon and Torridge Local Plan 2011-2031[9].

3.16. The most relevant policy documents to this impact assessment are discussed in more detail below.

National Planning Policy Framework (NPPF) 2023

3.17. The overarching policy and guidance for the conservation and enhancement of the historic environment have been formulated within Chapter 16 of the NPPF 2023 and build upon the core planning principle for the appropriate conservation of heritage assets. The framework classifies the historic environment as: "*all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora*" (NPPF, Glossary).

3.18. Under this reviewed policy document archaeological sites, buildings, parks and gardens, conservation areas, battlefields or other aspects of the historic environment that have significance because of their historic, archaeological, architectural or artistic interest are considered heritage assets. These heritage assets include both designated sites and non-designated sites identified by the Local Planning Authority and must be a consideration in the planning process due to their heritage interest.

3.19. Policies outlined in the document consider both the treatment of the assets themselves and their setting in the landscape, which are the primary material considerations for heritage assets involved in the development planning process. Key paragraphs from this document that are relevant to this project are detailed below.

Paragraph 194

"In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with

[8] HM Government (1997*) The Hedgerows Regulations.* HM Government, London.

[9] Rushcliffe Borough Council (2016) *Rushcliffe Local Plan: Adopted Policies Map*. RBC.

archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation."

Paragraph 199

"When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance."

Paragraph 200

"Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Substantial harm to or loss of:

a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional;

b) assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional."*

Paragraph 201

"Where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:

a) the nature of the heritage asset prevents all reasonable uses of the site; and

b) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and

c) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and

d) the harm or loss is outweighed by the benefit of bringing the site back into use."

Paragraph 202

"Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use".

Paragraph 203

"The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset."

The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (Second Edition)

3.20. This document mainly offers guidance and advice regarding consideration of the setting of heritage assets. The guidance was produced by Historic England and is contextualised by NPPF and the related guidance in the National Planning Practice Guide.

3.21. There are useful concepts regarding setting illustrated in the document, and it lays out the recommended procedure for assessing the effects a development proposal may have on the surrounding assets and their settings. The document defines setting as the surroundings in which an asset is experienced and discusses the effects that developments can have on the different types of setting heritage assets have.

"The contribution of setting to the significance of a heritage asset is often expressed by reference to views, a purely visual impression of an asset or place which can be static or dynamic, long, short or of lateral spread, and include a variety of views of, across, or including that asset." (Paragraph 10)

3.22. As a result, this assessment takes into account the setting of all identified heritage assets and determines the impact that the proposed development may have on them. It is understood that views to and from the heritage asset, as well as any meaningful intervisibility that it shares with its surrounding landscape, can constitute significance. Detailed consideration of these views has been undertaken and any relevant impacts, with mitigation measures where appropriate, have been highlighted.

"Settings of heritage assets change over time. Understanding this history of change will help to determine how further development within the asset's setting is likely to affect the contribution made by setting to the significance of the heritage asset. Settings of heritage assets which closely resemble the setting in which the asset was constructed or formed are likely to contribute to significance but settings which have changed may also themselves enhance significance, for instance where townscape character has been shaped by cycles of change and creation over the long term. Settings may also have suffered negative impact from inappropriate past developments and may be enhanced by the removal of the inappropriate structure(s)." (Paragraph 9)

3.23. As part of this assessment, the changes to an asset's setting over time will be considered where appropriate. This will allow the significance of the setting's contribution to the heritage value of an asset to be understood.

"Conserving or enhancing heritage assets by taking their settings into account need not prevent change; indeed, change may be positive, for instance where the setting has been compromised by poor development. Many places coincide with the setting of a heritage asset and are subject to some degree of change over time. NPPF policies, together with the guidance on their implementation in the Planning Policy Guidance (PPG), provide the framework for the consideration of change affecting the setting of undesignated and designated heritage assets as part of the decision-taking process." (Paragraph 18)

3.24. Historic England, therefore, are not seeking to ensure that heritage assets do not preclude development and their protection should not prevent change. However, the more important a designated asset, the greater the weight should be given to its conservation. This assessment will identify the significance of designated and non-designated heritage assets and apply appropriate weight to the potential impact on them as a result of the Proposed Development.

Hedgerows Regulations 1997

3.25. Part II of Schedule 1 within the Hedgerows Regulations 1997 states the additional criteria for determining "important" hedgerows in an archaeological and historic context. This can be important for a site where hedgerows may require alteration or removal to accommodate the design of a proposal.

"1. The hedgerow marks the boundary, or part of the boundary, of at least one historic parish or township; and for this purpose "historic" means existing before 1850.

2. The hedgerow incorporates an archaeological feature which is-

(a) included in the schedule of monuments compiled by the Secretary of State under section 1 (schedule of monuments) of the Ancient Monuments and Scheduled Areas Act 1979; or

(b) recorded at the relevant date in a sites and Monuments Record.

3. The hedgerow-

(a) is situated wholly or partly within an archaeological site included or recorded as mentioned in paragraph 2 or on land adjacent to and associated with such a site; and

(b) is associated with any monument or feature on that site.

4. The hedgerow-

(a) marks the boundary of a pre-1600 AD estate or manor recorded at the relevant date in a sites and Monuments Record or on a document held at that date at a Record Office; or

(b) is visibly related to any building or feature of such an estate or manor.

5. The hedgerow-

(a) is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Inclosure acts; or

(b) is part of, or visibly related to, any building or other feature associated with such a system, and that system-

(i) is substantially complete; or

(ii) is of a pattern which is recorded in a document prepared before the relevant date by a local planning authority, within the meaning of the 1990 Act(b), for the purposes of development control within the authority's area, as a key landscape characteristic."

North Devon and Torridge Local Plan 2011-2031

3.26. The approach to heritage and archaeology within the planning and development control processes for the North Devon and Torridge Council area is summarised within the following policies:

Policy ST15: Conserving Heritage Assets

Great weight will be given to the desirability of preserving and enhancing northern Devon's historic environment by:

(a) conserving the historic dimension of the landscape;

(b) conserving cultural, built, historic and archaeological features of national and local importance and their settings, including those that are not formally designated;

(c) identifying and protecting locally important buildings that contribute to the area's local character and identity; and

(d) increasing opportunities for access, education and appreciation of all aspects of northern Devon's historic environment, for all sections of the community.

Policy DM07: Historic Environment

(1) All proposals affecting heritage assets should be accompanied by sufficient information, in the form of a Heritage Statement, to enable the impact of the proposal on the significance of

the heritage asset and its setting to be properly assessed. As part of such an assessment, consideration should be given, in order of preference, for avoiding any harm, providing enhancement, then minimising and mitigating any harm.

(2) Proposals which conserve and enhance heritage assets and their settings will be supported. Where there is unavoidable harm to heritage assets and their settings, proposals will only be supported where the harm is minimised as far as possible, and an acceptable balance between harm and benefit can be achieved in line with the national policy tests, giving great weight to the conservation of heritage assets.

(3) Proposals to improve the energy efficiency of, or to generate renewable energy from, historic buildings or surrounding these heritage assets will be supported where:

(a) there is no significant harm or degradation of historic fabric including traditional windows; and

(b) equivalent carbon dioxide emission savings cannot be achieved by alternative siting or design that would have a less severe impact on the integrity of heritage assets.

3.27. This impact assessment will therefore consider all designated and non-designated heritage assets identified within the above local policies in order to ensure that direct and indirect impacts upon them as a result of the Proposed Development are properly assessed in compliance with both national and local policy.

CONSULTATION

3.28. Pre-application consultation was undertaken between January 2024 and April 2024 with Devon County Council and Torridge District Council Historic England. A summary of their comments is contained below.

Table 3-1: Table of Consultation

Consultee	Comments	Actions
Stephen Reed (Devon County Council) Senior Historic Environment Officer 18/03/2024	*Thanks for the report. We usually require the results of a 3% sample evaluation for sites that have been subject to a geophysical survey (5% for sites with no survey) as supporting information for any planning application. I would be able to provide more detailed advice upon receipt of a proposed site layout.*	Archaeological trial trenching to be done in line with council guidance documents and report sent to Devon County Council when completed (Appendix 7D).

Ryan Steppel (Torridge District Council) Planning Officer 26/04/2024	*The area subject to this enquiry has been subject to a geophysical survey that has identified anomalies associated with the extant historic field system here. However, there are some anomalies that do not correspond to the historic pattern of fields here and may be associated with early settlement and agricultural activity in this landscape.* *Similar features elsewhere in the county have been shown to be remains of prehistoric or Romano-British field systems. However, the information submitted in support of this application is not sufficient to enable an understanding of the significance of these heritage assets or of the impact of the proposed development upon these heritage assets. Given that the geophysical survey has identified anomalies indicative of archaeological features, and that the significance of these heritage assets is a yet unknown the Historic Environment Team would advise that any future planning application is supported by the results of a programme of intrusive archaeological field evaluation.*	Archaeological trial trenching to be done in line with council guidance documents and report sent to Devon County Council when completed (Appendix 7D).

ASSESSMENT METHODOLOGY

Aims and Objectives

3.29. The aims of the assessment are as follows:

- To identify all known heritage assets within the study zone based on all available public resources;
- To identify the archaeological potential of the Application Site through collation of results from the desk-based assessment, site walkover survey and geophysical (magnetometry) survey;
- To determine what if any level of recording will be required for any extant remains;
- To assess the significance of any direct or indirect effect of the Proposed Development on cultural heritage assets and their settings and potential archaeological remains within the study zone, from construction through to decommissioning;
- To identify mitigation measures where possible and aid in the design process to reduce the potential impacts of the proposed scheme;
- To provide recommendations for any further archaeological/heritage assessment work that should be undertaken as part of the Proposed Development.

Professional Guidance

3.30. The assessment has been conducted in accordance with the appropriate professional guidance, which includes:

- Code of Conduct, Chartered Institute of Field Archaeologists (CIfA) (2014)[10]
- Standards and Guidance for Archaeological Desk Based Assessment, CIfA (2014)[11]

Assessment Criteria

3.31. All assessments of significance and impacts have been undertaken in line with the following tables and terminology, where the magnitude of impact and importance/sensitivity of a

[10] CIfA (2014) *Code of Conduct*. Chartered Institute for Archaeologists.

[11] CIfA (2014) *Standards and Guidance for desk-based assessment*. Chartered Institute for Archaeologists.

heritage asset and its setting are qualitatively determined through professional judgement, and effects of 'moderate adverse' would be considered significant:

Table 3-2: Significance of Direct Effects

Magnitude of Impact	Importance/Sensitivity of the Heritage Asset			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very Low	Minor	Negligible	Negligible	Negligible

Table 3-3: Significance of Indirect Effects

Magnitude of Impact	Importance/Sensitivity of the Heritage Asset/Setting			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

Desk-based Assessment

Scope of Assessment

3.32. The desk-based assessment was conducted to ascertain all historical and archaeological information relevant to the Application Site and the local area. A search of high-grade designated heritage assets such as Scheduled Monuments, World Heritage Sites, Registered Parks and Gardens of Special Historic Interest (PGSHI), Registered Battlefields and Heritage Coasts has been carried out within a 5km study zone of the Proposed Development, while Listed Buildings and Conservation Areas have been assessed within a 2km study zone.

3.33. Non-designated sites within the local Historic Environment Record (HER) and similar sources have also been identified within a 1km study zone. These sites are usually of a lower sensitivity to visual impacts but both features and events within the record can be a good indication of the likely archaeological potential of land within the Application Site.

3.34. The sizes of the above study zones were selected to ensure that comprehensive and informative data was collated to characterise the direct and indirect impacts that the Proposed Development may have on historical and archaeological assets, as well as the archaeological potential of the land within the Application Site boundary. Due to the nature of the records, some degree of overlap is possible (for example a site that has been recorded within both the HER and as a Listed Building) and some assets may therefore have been repeated. Where appropriate, sites of exceptional value or sensitivity outside the relevant study zones have also been assessed.

Main Sources Consulted

- The National Heritage List for England (NHLE);
- The Devon Historic Environment Record (HER);
- Published sources available in the Devon HER;
- Register of Parks and Gardens of Special Historic Interest (Historic England);
- Register of Historic Battlefields (Historic England);
- GIS shapefiles hosted via UK Government and Local Authority links;
- Defra Data Services Platform (Lidar data);
- Historic England National Mapping Programme;
- Aerial imagery via Google Earth, Bing Maps, World Imagery Wayback and ArcGIS Pro global mapping;
- Historic England Aerial Photo Explorer;
- National Collection of Aerial Photography;
- Cambridge University Collection of Aerial Photography;
- http://www.britainfromabove.org.uk/;
- Excavation reports hosted by Archaeology Data Service and OASIS; and
- Historic Maps accessible via the OS and National Library of Scotland.

Map Regression Analysis

3.35. Analysis of historic maps can reveal the changes in landuse and field boundaries in the area and can highlight potential areas of archaeological interest that may have been lost in the

subsequent years. Relevant maps were consulted to undertake this analysis as part of the desk-based assessment and site walkover survey.

Aerial Photography

3.36. To identify potential archaeological features within the Application Site that are not recorded within the relevant databases, aerial photography of the land was examined in order to identify any cropmarks or markings within the Application Site that may be indicative of previously unknown features. This includes both modern and historical aerial imagery, where available.

Lidar Data

3.37. Lidar datasets for the region were consulted to identify what data may exist for land inside the proposed development site. Relevant data that can be useful for archaeological purposes comprise Digital Terrain Model (DTM) and Digital Surface Model (DSM) of 0.5m, 1m and 2m resolutions. These datasets are relatively recent and updated on a regular basis, so were consulted more than once during the assessment.

Assessment of Direct Effects

3.38. Potential direct effects during the construction phase are considered as physical disturbance of known or associated archaeological remains. These impacts can be caused through the construction processes within the footprint of the Development, including ancillary works such as access tracks. Direct impacts can affect both above ground and subsurface remains, which will both be considered within this assessment.

3.39. The presence and character of any existing archaeological features will be identified within the site boundary, and the archaeological potential of the site assessed through a desk-based assessment of the surrounding archaeological resource and landscape. The significance of any impacts will be determined by considering the construction methodology within the Application Site and to what extent this would disturb any sub-surface remains.

Assessment of Indirect Effects

3.40. The assets that were identified through the sources previously listed were assessed for their significance and sensitivity of their settings. The magnitude of the visual impacts upon these assets was determined by considering the views and intervisibility shared with the Proposed Development, as well as the nature, character, date, extent, setting and surviving remains of the feature where relevant. Indirect effects were then assigned using this information on the following scale:

- Major
- Moderate

- Minor
- Negligible

3.41. Indirect effects of 'moderate' or above are considered significant and appropriate mitigation measures have been recommended where appropriate to lower the potential impact.

Zone of Theoretical Visibility

3.42. A Zone of Theoretical Visibility (ZTV) was produced to identify sites with a greater potential for being indirectly impacted by the Proposed Development. The ZTV has been overlaid on the heritage assets within the study zones, to identify those that will potentially be visually impacted by the Proposed Development during the operational phase.

3.43. Digital Terrain Modelling sourced from digital height data derived from Ordnance Survey Ireland, with the viewer height set at 2m high was used to calculate the ZTV. The produced ZTV was 'bare earth' and therefore did not account for any elements in the landscape such as trees, hedgerows, walls or buildings that may help screen views, nor account for the influences of the weather upon any views.

The Importance of Setting

3.44. Setting can be important to the way in which historic assets or places are understood, appreciated and experienced. The Historic England document 'The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (Second Edition)' is used as guidance for determining the contributions made by settings to the heritage value of their assets, and how these settings may be sensitive to indirect impacts.

3.45. Where development is proposed it is important to identify and define the setting of the heritage asset and to assess how development might impact upon this resource. Setting often extends beyond the property boundary, or 'curtilage', of an individual historic asset into a broader landscape context. Less tangible elements can also be important in understanding the setting. These may include function, sensory perceptions or the historical, artistic, literary and scenic associations of places or landscapes. In the light of this guidance, development proposals should seek to avoid or mitigate detrimental impacts on the settings of historic assets.

Site Visit

3.46. A walkover survey was conducted at the Application Site in February 2024. The primary aim of the survey was to identify any potential archaeological or historical features within the Application Site that are not recorded. The land and fields within the Application Site were documented photographically along with any possible features identified. The results of this survey also considered available information on the known designated and non-designated

sites within and close to the Application Site. Possible views and intervisibility with surrounding heritage assets were therefore also considered during the visit.

Assessment Limitations

3.47. The consulted sources contain records of known archaeological and historic features. The record is not an exhaustive record of all surviving historic environment features and does not preclude the possible existence of archaeological remains of significance within the study zone, which are at present unknown or have been added to the records recently. It was assumed that official data provided by public bodies was accurate and up-to-date.

3.48. A site visit and walkover survey can help to identify the potential for any surviving features of archaeological interest at ground level, as well as establishing the likelihood for views and intervisibility to and from identified heritage assets in the surrounding area. However, the assessment was undertaken through a desk-based approach, with a view to providing sufficient information through the above methods described.

Geophysical Survey

3.49. A walkover and geophysical survey of the Application site was undertaken during February 2024 by South West Archaeology (SWARCH). A summary of the methodology used during the survey is as follows:

"The geophysical (gradiometer) survey was undertaken in accordance with current best practice and CIfA guidance; and follows the guidance outlined in Geophysical Survey in Archaeological Field Evaluation (English Heritage 2008b); Standard and Guidance for Archaeological Geophysical Survey (CIfA 2014b); EAC Guidelines for the use of geophysics in Archaeology: Questions to Ask and Points to Consider (Europae Archaeologiae Consilium/European Archaeological Council 2016)."

"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."

BASELINE CHARACTERISATION

3.50. The following section outlines the historical and archaeological background within and around the Application Site. This provides a clear depiction of the context and significance of the heritage assets that could potentially be impacted by the Proposed Development.

Archaeological Period Classifications

3.51. The period classifications below provide chronological context for the archaeological assets which are discussed as part of this report.

- Mesolithic (10,000 – 4,000BC)
- Neolithic (4,000 – 2,500BC)
- Bronze Age (2,500 - 700BC)
- Iron Age (700BC – AD43)
- Roman (AD43 – AD450)
- Early Medieval (AD450 - AD1066)
- Medieval (AD1066 - AD1540)
- Post Medieval & Modern (AD1540 onwards)

Archaeological and Cultural Heritage Assets

3.52. The full list of assets identified within their respective study zones is presented within **Table 1: Appendix 3B**. There are no designated or non-designated sites recorded within the Application Site itself. A total of eight Scheduled Monuments were identified within the 5km study zone, while six Listed Buildings (including one Grade II* and five Grade II) were identified within the 2km study zone (**Figure 3.1: Appendix 3A**). In addition, a total of 33 non-designated assets from the Historic Environment Record (HER) were identified within the 1km study area (**Figure 3.2: Appendix 3A**). However, no World Heritage Sites, Historic Parks and Gardens, Registered Battlefields or Conservation Areas were identified within their respective study zones.

The following six listed buildings were identified within a 2km radius:

- Grade II* Church of St Swithin (NA09)
- Grade II Robert Beckley Monument 3 Metres South of South Porch, Church of St Swithin (NA10)

- Grade II Boundary Stone (NA11)
- Grade II The Coach House, Adjoining The Old Rectory To The West (NA12)
- Grade II The Villa (NA13)
- Grade II The Old Rectory and Walls Enclosing Garden to North-east (NA14)

3.53. In addition to the listed buildings, there are eight scheduled monuments in the 5km study area (see Appendix 3A: Figure 3.1); all bowl barrows relate from the Late Neolithic period to the Late Bronze Age and suggest that the proposed development site lies within an area of prehistoric activity. The scheduled monuments identified within a 5km radius are:

- Bowl Barrow 70m east of Beechwood Bungalow (NA01)
- Two Bowl Barrows 430m north-west od Leworthy (NA02)
- Two Bowl Barrows 450m and 500m west of Leworthy (NA03)
- Two Bowl Barrows 690m and 760m south-west of Leworthy (NA04)
- Bowl Barrow on Affaland Moor 840m south-west of Leowrthy (NA05)
- Bowl Barrow on Affaland Moor 780m north-west of Forda Mill (NA06)
- Bowl Barrow 470m north-east of Dux (NA07)
- Three Bowl Barrows 240m south-east of Highermoor (NA08)

3.54. The Proposed Development boundary and the surrounding area also contains a number of non-designated archaeological sites within and adjacent to its boundary, as obtained via a search of the Devon Historic Environment Record (HER) (see Appendix 3A: Figure 3.2). The following sites lie inside the 1km radius of the Proposed Development site boundary:

Table 3-4: Non-designated assets within 1km

Neo Ref.	Name	Time Period
NB01	Field System and Plough Marks, Crinacott Farm, Pyworthy	Medieval
NB02	Field Boundary, land west of Parsonage Street	Post-Medieval
NB03	West Yeomadon Farm	Post-Medieval
NB04	Trelana Farm	Post-Medieval
NB05	Field Boundary south of Trelana	Early Medieval

NB06	Strip Field Boundaries south of Trelana	Medieval
NB07	Agricultural Activity, land at Derril Water	Medieval – Modern
NB08	Field Boundary east of Monks Farm	Medieval
NB09	Agricultural Activity, land at Derril Water	Medieval
NB10	Pits, land at Derril Water	Unknown
NB11	Agricultural Activity, land at Derril Water	Medieval – Modern
NB12	Pits, land at Derril Water	Unknown
NB13	Pits, land at Derril Water	Unknown
NB14	Field Systems, land at Derril Water	Medieval
NB15	Archaeological Features, land at Derril Water	Unknown
NB16	Archaeological Features, land at Derril Water	Unknown
NB17	Settlement, land at Derril Water	Early Bronze Age - Roman
NB18	Pits, land at Derril Water	Unknown
NB19	Quarries, land at Derril Water	Post-Medieval
NB20	Settlement, land at Derril Water	Medieval – Modern
NB21	Settlement, land at Derril Water	Early Bronze Age - Roman
NB22	Pit or Tree Throw, land at Derril Water	Unknown
NB23	Pits, land at Derril Water	Unknown
NB24	Field Drainage or Walls, land at Derril Water	Medieval – Modern
NB25	Settlement, land at Derril Water	Medieval – Post-Medieval
NB26	London and South-Western Railway	Modern
NB27	Trelana Methodist Chapel	Post-Medieval – Modern

NB28	The Coach House, Adjoining the Old Rectory to the West	Modern
NB29	The Old Rectory and Walls Enclosing Garden	Modern
NB30	Pyworthy Manor	Medieval

Historical Background

3.55. The fields comprising the Application Site are located 1.3km southwest of Pyworthy. Pyworthy is a village and parish, situated in northwest Devon, in the union of Holsworthy, in the Southern division of the county, Black Torrington hundred, The Archdeaconry of Totnes and the Diocese of Exeter. In the Domesday Book (1086), Pyworthy appears under the name of Paorde and was held by a person named Alfred during the time of King Edward (c. 1066)[12] and exchanged between many families (Fitzjohn, Boniface, Arscots, Kingdon and Bulteel[13]).

3.56. Pyworthy stands on high ground with the 13th century St. Swithin's Church centrally situated and is the most notable site within Pyworthy, with some sources claiming the church predating 1066[14] and the first mention of a rector in 1262 and dedicated by Bishop Grandisson of Exeter in 1334[15].

3.57. The OS 1885 and OS 1906 maps shows that lands surrounding and within the Application Site predominately comprised agricultural fields since the mid-1800s to the early 1900s (**Figures 3.4 and 3.5: Appendix 3A**).

Local Archaeological Fieldwork / Previous Excavations

Gradiometer Survey at Crinacott Farm: Wessex Archaeology, 2013 (EDV6098)

> *"The detailed gradiometer survey has been successful in detecting anomalies of definite,*
>
> *probable and possible archaeological interest across the site. These anomalies include linear and pit-like responses, which may also be geological, former field boundaries, and several curvilinear anomalies. Event digitised using source in description."*

Archaeological Watching Brief at Crinacott Farm: Wessex Archaeology, 2013 (EDV6513)

> *"Based on the results of a geophysical survey, three areas were identified where groundworks were to be subject to an archaeological watching brief. Due to the lack of below ground disturbance there was a limited impact on potential buried archaeological features or*

[12] C.Thorn & F.Thorn (1985) *Domesday Book: Devon, part one* (Phillimore, Chichester) (eds.), no. 17:16
[13] Lysons, D. & S. (1822) *Magna Britannia: Volume 6*, Devonshire. Cadell & Davies, London.
[14] The Holsworthy Benefice (2023) *Accessed at: https://www.holsworthybenefice.org.uk/*
[15] White's Devonshire, (1878); Kelly's Directory, (1910); The Churches of Devon (1968)

deposits, observable groundwork was therefore restricted to three excavated cable trenches, however no features or archaeological deposits were identified."

Monitoring and Recording at Land West of Parsonage Street: AC Archaeology, 2016 (EDV7207)

"Archaeological monitoring and recording was carried out by AC archaeology during groundworks associated with the construction of a solar farm on land west of Parsonage Wood, Pyworthy, Devon. The groundworks exposed a single ENE to WSW aligned probable ditch (F103) that was located towards the northern extent of the monitored area."

Geophysical Survey at Southlands Solar Farm: Wardell Armstrong, 2015 (EDV6860)

"Geophysical survey undertaken on land at Southlands Farm, near Holsworthy, Devon. The survey was undertaken to provide information in relation to a planning application for a solar development at the site. A number of the geophysical anomalies detected at the site are believed to be agricultural in origin, including evidence for former ridge and furrow cultivation, former field boundaries, and possible land drains. No other definite archaeological remains were detected at the site."

Walkover and Geophysical Survey at Land West of Crinacott Farm, Pyworthy, Torridge, Devon: South West Archaeology (EDV6860)

"The walkover survey ascertained the site has an undulating topography and bounded to all sides by tree-lined hedge banks. The fields are large and open with views outwards and inwards from much of the site evidenced by the visibility of Pyworthy Church Tower from most of the site. A large hollow earthwork mound suggesting a former quarry pit was the only earthwork noted. The gradiometer survey identified 21 groups of anomalies across the site, predominantly linear ditches and/or bank features associated with phases of existing and historic field-systems, possible pits and/or tree throws and anomalies associated with modern utilities."

Geophysical Survey at Land at Derril Water, Pyworthy, Torridge, Devon (EDV8774)

"The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and other undated settlement."

Archaeological Evaluation (June 2021 & July 2022) on Land at Monks Farm and Trelana, Pyworthy, Devon: Oakford Archaeology (EDV tbc)

"The first trenching phase in June 2021 results have been very consistent with trenches positioned to target geophysical anomalies but no evidence was recovered from the features to determine the activities taking place. Presence of circular enclosures and field system may relate to prehistoric occupation. In addition, five linear ditches poorly aligned with existing field system, are likely associated with the circular enclosures.

The second trenching phase in July 2022 included 19 trenches targeting the potential deserted medieval village, identified from the geophysical survey. Small assemblage of finds, which included pottery produced from mid-10th to early 15th century, one fragment of granite quern stone found in 1729, six lithics and a s small assemblage of metal, mostly nails and possible medieval horseshoe, were recovered.

Radiocarbon dating results from a ring ditch terminus and pit clearly indicate that both features, or the charcoal within them at least, are late prehistoric and late Romano-British in date respectively. Further, the two dates are not contemporary with each other and the radiocarbon distributions do not overlap (Fig 2), with at least two centuries between the two dated events."

Map Regression Analysis

3.58. **Appendix 3A: Figure 3.3** contains the 1838 Tithe Appointment Map. **Appendix 3A: Figure 3.4** contains the1885 OS map and **Appendix 3A: Figure 3.5** contains the 1906 OS map. These maps have been selected to show the progression of land use and field boundaries in the area, and can highlight any potential areas of archaeological interest that may have been lost in the subsequent years.

3.59. The 1838 Tithe Appointment Map shows a northern field and a southern field with a field boundary running east-west across the proposed development area. No features of archaeological interest are discernible on the tithe map, but the records provide the names and land uses of the fields as follows:

- *Field 763 – Higher Derrill Park (arable occasionally)*
- *Field 764 – Derrill Park (coarse pasture)*

3.60. The 1885 OS map shows that the land has not changed since the 1838 Tithe Appointment Map within the Application Site comprised two agricultural fields, split into a north and south field by a boundary running approximately west to east through the centre of the site. Land within both fields is depicted as being uncultivated and likely to be coarse pasture, similar to that described within the tithe apportionment records. Nearby buildings associated with the 'Monks' and 'Lana' farmsteads are depicted, as is the 'Methodist Chapel (Wesleyan)', but no associated buildings appear to be within the Application Site boundary. No archaeological features of significance are depicted within the Application Site on this map.

3.61. The 1906 OS map show that since its depiction on the 1885 OS map, the southern field has been split into two (a larger eastern field, and a smaller western field), with a field boundary running north to south, parallel with Derril Water. The 1906 OS map displays three agricultural field within the Application site, compared to two in the 1885 OS map. The larger southern field now depicted as cultivated or improved grassland (presumably arable as the tithe map said it's 'occasionally arable'), but the north field and smaller south field are still coarse pasture/meadow.

Aerial Photography

3.62. Vertical aerial imagery of the Application Site from RAF 1946-1949 (**Appendix: 3C**) shows that since its depiction on OS historic mapping, the site had not seen any internal changes. The composition of the site appears to remain as three fields with the same internal field boundaries. No archaeological features or cropmarks of archaeological potential are identifiable on this map or via analysis of modern aerial photography of the Application Site via Google Earth, ArcGIS Pro and Bing Maps.

Lidar Data

3.63. Lidar datasets for the region were consulted to identify what data may exist for land inside the proposed development site. Relevant data that can be useful for archaeological purposes comprise Digital Terrain Model (DTM) and Digital Surface Model (DSM) of (1m and 2m resolutions **(Figure 3.6: Appendix 3A)** This data was reviewed in order to identify the potential for hitherto-unknown archaeological features as well as identify the possible extents of known features.

The only clear internal features that show up are some gentle undulations and faint natural topography, with a gentle slope towards the Derril Water on the west side of the site. No archaeological features were identified or observed from the Lidar data.

Site Visit

3.64. An archaeological walkover survey of the Application Site was conducted during February 2024 by Peter Webb of South West Archaeology Ltd in accordance with best practice and guidance with Chartered Institute of Field Archaeologists 2014a (revised 2017 and 2020): Standard and Guidance for Historic Environment Desk-based Assessment. The survey was undertaken concurrently with the geophysical survey and its results are contained within the combined report held in **Appendix 3D**. A summary of the walkover survey results is also presented below.

3.65. The walkover survey was conducted on heavily waterlogged ground conditions of the site which is comprised arable (pastoral) cultivation fields and bordered to the north by an unnamed road; to the east, south and west by agricultural land and light woodland; with an existing solar farm to the east and bounded to all sides by tree- lined hedgebanks with internal post and wire fencing.

3.66. The field is large and open, and views outwards are largely to the east and northeast, with Pyworthy Church Tower visible from much of the site, but these views are largely across the existing solar arrays and buildings of Crinacott Farm. The ridgeline limits views to the north, whilst views to the south are limited. Views to the west are possible, but this boundary is screened and the views are dominated by the prominent pylons and power lines and the distant wind turbines. The overhead cables cross the entire site (running variously between

approximately north to south and north-east to south-west); their associated pylons present within the survey area.

3.67. The local area is characterised by the high survival of field banks and boundaries dividing the fields, with particularly large boundaries noted at the divisions between land holdings. Most field boundaries consist of an earth bank with a ditch on each side, topped by a low hedge. These are often additionally fenced with modern fencing posts and barbed wire on each side. Many fields have limited field gates or openings, some only accessible through one gate from another field or from the road.

3.68. Overall, the walkover survey identified no earthworks of archaeological significance within the proposed site area; the few that were identified are likely to be removed field boundaries or relate to medieval or post-medieval agricultural land use, which are located outside of the proposed development area. However, the ground and vegetation conditions under which the walkover survey was carried out were not ideal for the identification of slight earthworks. In general, there are a lack of heritage assets identified on the Devon Historic Environment Record in this area, which may correspond with a lack of archaeological remains; may be a result of medieval and later agricultural activity removing evidence for earlier occupation or may derive from a lack of archaeological investigation in this area.

Geophysical Survey

3.69. A geophysical survey of the Application Site was conducted during February 2024 by South West Archaeology Ltd in accordance with best practice and general guidance as outlined in 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 full survey report is held within Appendix 3D and a summary of the survey results for the Application Site is also presented below. The survey covered a wider area than the proposed red line boundary.

3.70. The results of the geophysical survey would suggest that the archaeological potential for the Application Site is relatively low, with anomalies in this field being limited to former field boundaries, drainage features, and modern/agricultural activity.

3.71. A summary of the geophysical results is as follow:

"The results of the geophysical survey would suggest that the archaeological potential for much of the site is low. Many of the identified features are likely to relate to historic phases of field-system, some reflecting historic boundaries depicted on cartographic sources from the mid-19th century, along with drainage features likely to date to a similar period."

"Several of the anomaly groups correspond with boundaries depicted on historic mapping, indicating that these features were in use from at least the middle of the 19th century and removed during the later 20th century (Group 1); whilst others are later in date, only appearing on historic mapping during the early 20th centuries (Group 2)."

"Further linear features across much of the site (Group 3) appear set in a broadly herring-bone pattern typically suggestive of a post-medieval to modern drainage system; the negative nature of several of the anomalies suggests that they may be earlier stone drains."

3.72. The results of the geophysical survey and their anomaly group numbers are set out in the table below:

Table 3-5: Geophysical Survey Anomalies within Application Site

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation
18	Weak positive & negative, probable	Linear	Historic boundary – double ditch & bank
19	Moderate positive & negative, probable	Linear	Historic boundary – double ditch & bank
20	Moderate positive & negative, probable	Linear	Drainage features
21	Strong positive & negative, probable	Linear	Modern utility
N/A	Weak positive & negative	Linear	Agricultural activity
N/A	Strong dipolar (mixed response)	Discrete	Ferrous anomaly
N/A	Strong bipolar (mixed response)	Irregular	Modern disturbance

ASSESSMENT OF DIRECT EFFECTS

Recorded Archaeological and Heritage Assets

3.73. There are no designated or non-designated heritage assets located within the boundary of the Application Site (see **Figure 3.1: Appendix 3A**). The closest scheduled monuments are a series of Bowl Barrows (NA02 & NA03) located 1.43km to the southeast of the Application Site, while the closest listed buildings are the Coach House (NA12) and the Old Rectory (NA14) located 0.75km to the east. The nearest non-designated asset to the Application Site is the field system and plough marks (NB01) at Crinacott Farm, located in the adjacent field to the east of the Application Site 0.03km to the southeast.

3.74. As such, there are no recorded designated or non-designated heritage assets expected to be at risk of any direct effects resulting from the construction of the Proposed Development. Similarly, while the non-designated records for Trelana Methodist Chapel (NB27), archaeological features (NB15 and NB16), Early Bronze Age to Roman settlement (NB17), field drainage or medieval walls (NB24). Medieval to Post-Medieval settlement (NB25), field system and plough marks at Crinacott Farm (NB01) and associated field boundary (NB02) are all located in adjacent fields to the west, southwest and southeast, they are not expected to be at risk of any direct effects from proposed development within the Application Site boundary.

3.75. In consideration of the above, no direct effects will occur on known assets as a result of the Proposed Development. However, the potential for impacting upon hitherto-unknown features within the Application Site is discussed below.

Archaeological Potential

3.76. The lack of any recorded sites inside the Application Site does not suggest any specific indicators for archaeological remains, while the baseline analysis and walkover survey identified indistinct features limited to field boundaries and general agricultural usage. Features observed within the Application Site from the geophysical survey may represent pits/tree throws, ring-ditches/drip-gullies and/or field system remains from the prehistoric, medieval or post-medieval periods.

3.77. It is also noted that confirmed remains from local fieldwork results mentioned previously are derived from possible prehistoric and medieval field-systems. As such, by considering the above ground disturbance calculations, the potential for the proposed development to impact upon medieval and post-medieval agricultural is considered to be moderate within the Application Site, while the potential for prehistoric and Romano-British sub-surface remains is considered to be low.

3.78. Consultation with the council planning and archaeology departments has also highlighted that, although there is a lack of designated heritage assets inside the Application Site, there

may be general potential for hitherto-unknown prehistoric remains due to the number of bowl barrows (scheduled monuments) identified in the surrounding area. The locations of these monuments (see Figure 3.1: Appendix 3A) indicates that the landscape in general has potential for remains associated with prehistoric settlement activity. However, as the site inspection highlighted, the likely arable use of this field within the Application Site through the post-medieval and modern periods may have affected the possibility for survival of sub-surface archaeological remains.

3.79. Direct impacts relating to hitherto-unknown sub-surface remains therefore cannot be accurately ascertained at this stage, but the predicted likelihood of such impacts can be estimated by considering the ground disturbance of the construction methods that will be used, as below.

Ground Disturbance from Construction Methods

3.80. Different levels of intrusion and disturbance are anticipated for different construction elements. As such, the potential for impacting upon sub-surface remains is dependent on the type and scale of each construction element. The following information provides quantitative detail on each aspect of construction that is expected to have potential direct impacts upon archaeology.

3.81. All technical details are based on the best information available and are indicative only. They may change due to situations such as ground conditions, micro-siting or changes in technology. Individual impacts from each element of construction are estimates based on information available at this stage, and are assigned based on their resulting ground disturbance relative to the overall Application Site area, as well as the archaeological potential of the land.

3.82. Construction involving topsoil stripping has, in general, a lower potential for impacting upon sub-surface remains below the archaeological horizon, but retains a similar potential for encountering archaeological remains as construction involving deeper excavation work.

Excavation works

Substation

3.83. A substation compound area measuring approximately 60m by 25m, requiring a ground disturbance of 1500m^2.

CCTV Bases

3.84. There will be approximately 13 CCTV cameras positioned along the perimeter fence, 4m in height and a total ground disturbance of 1.1m^2 of the Application Site area.

Battery Storage Enclosure

3.85. There will be 32 battery storage enclosures measuring approximately 6.7m by 2.7m and a total ground disturbance of 578.9m^2.

Topsoil stripping

Access and Site Tracks

3.86. The access and site tracks will measure 5m wide and will involve an average of 300mm depth of soil removed, therefore resulting in a total ground disturbance of approximately 2,748m^2. Local widening at turns for access reasons. Occasionally they will use a geosynthetic reinforcement or soil stability to reduce depth

Temporary Compound Area

3.87. The temporary compound area in an abnormal shape, resulting in a total ground disturbance area of c. 1900m^2. This will be constructed by the stripping of topsoil and subsequent layering of crushed stone similar to the process for the site tracks.

Piling

Perimeter Fence

3.88. Fence around substation compound is Palisade fencing with metal at 2.75m centres. Fence is up to 2.5m high with a 10cm gap for Mammal Movement. Total length is 170.0m with a total of 61 posts, resulting in a total area of ground disturbed by the perimeter fence of 9.8m2

3.89. Perimeter Fence around half of the BESS Compound is Metal Mesh with steel posts. Fence is up to 2.5m high with mammal gates present spaced every 5-10m (130mm High & 130mm Wide). In total it is 142.0m long with 47 posts required, resulting in a total area of ground disturbed by the perimeter fence of 7.6m2.

3.90. Perimeter Fence around half of the BESS Compound is Acoustic Grade Fencing. Fence is up to 4.0m high. In total it is 147.0m long with 49 posts required, resulting in a total are of ground disturbance of 7.9m2.

Vehicle Movements

3.91. Vehicle movements are expected to be largely accommodated by the internal site tracks. Where off-road driving is required (e.g., placement or removal of piling), there is potential for ground compression or rutting in adverse/wet conditions. However, this is not expected to have any notable effect on sub-surface archaeology and the current agricultural use of the Application Site indicates that the ground is already subject to frequent movement of agricultural machinery.

Piling

3.92. Piling is anticipated to be done by a c. 2.95 tonne pile driver with rubber tracks. The relatively low weight of the vehicle (compared to standard agricultural vehicles which are currently on use on the Application Site) and the rubber tracks (as opposed to tyres) indicate that its activity is not expected to have any impact upon potential sub-surface remains.

Excavation and Topsoil Stripping

3.93. A standard 360° excavator will be used on site to excavate material. Movement of this vehicle will be limited; movement up once during excavation and down once during backfilling. The excavator will be on tracks and will largely move on areas due to be subsequently stripped of topsoil.

Summary of Ground Disturbance

3.94. Overall, the proposed footprint constitutes a relatively small percentage of the total area of the Application Site (3.6ha):

- 7735.2m^2 for infrastructure (c. 21.49% of the Application Site area); and
- 25.3m^2 for piling (c. 0.07% of the Application Site area).

3.95. The total ground disturbance area resulting from the Proposed Development is therefore **11763.5m^2** or c. **32.68%** of the Application Site area. As such, the potential for encountering or disturbing below-ground archaeology within the Application Site during the construction phase is considered to be relatively low compared to other types of development.

Assessment of Indirect Effects

3.96. The calculated ZTV was overlain onto the heritage assets map in order to identify those which have a greater potential to be visually impacted by the Proposed Development. The ZTV does not account for intervening hedgerows, trees or built structures, which will limit the intervisibility between the building/monument and the Proposed Development.

3.97. Within the 5km study zone, a total of four scheduled monuments, one grade II* listed buildings and two grade II listed buildings are located within the ZTV. These assets are therefore assessed for indirect impacts below. It was also identified that twenty-seven of the thirty non-designated features within the 1km study zone lie within the calculated ZTV; where these are considered to have substantial standing remains and/or sensitive settings, these will also be assessed for indirect effects. Indirect effects resulting on heritage assets as a result of the proposal are anticipated to be Adverse and Reversible.

Scheduled Monuments

3.98. A total of eight scheduled monuments lie within the 5km radius of the Application Site and are all Bowl Barrows, with a large cluster concentrated towards the southeast. Bowl Barrows date from the Late Neolithic to the Late Bronze Age, constructed as earthen or rubble mounds and are funerary monument which provide evidence for territorial control and land use in this part of Devon.

Two Bowl Barrows 430m northwest of Leworthy (NA02)

3.99. The 'Two Bowl Barrows 430m north-west of Leworthy' are scheduled monuments c. 1.43km to the south-east of the Application Site. They form a cluster of large mounds and are well intact. Their Historic England entry is as follows:

This monument includes two bowl barrows aligned north-east south-west situated 430m north-west of Leworthy on a prominent ridge location overlooking the valley of a tributary to the River Deer. They form the northernmost pair of a dispersed group of eight barrows. The north-eastern barrow survives as a circular mound which measures 18.2m in diameter and is 0.4m high. The second barrow survives as a circular mound which measures 20.7m in diameter and is 0.6m high. In each case the surrounding ditch from which material to construct the mound was derived is preserved as a buried feature. The remaining six barrows within this group are the subject of separate schedulings.

3.100. The Two Bowl Barrows 430m northwest of Leworthy are considered to be partially sensitive to visual impacts that may potentially occur as a result of the Proposed Development. However, clear views and intervisibility with the bowl barrows are not anticipated to be possible due to the screening effects from intervening tree-lined hedgerows 2-3m in height which are expected to block views across the mostly flat. As such, visibility with the bowl barrows was not possible during the walkover survey (Plates 8 & 9: Appendix 3D). Any partial views possible would not be considered harmful to the setting of the assets or their heritage value. Indirect effects upon this cluster of bowl barrows are therefore anticipated to be Minor to negligible.

Two Bowl Barrows 450m and 500m west of Leworthy (NA03)

3.101. The 'Two Bowl Barrows 450m and 500m west of Leworthy' are scheduled monuments c. 1.43km to the south-east of the Application Site. They form a cluster of large mounds and are well intact. Their Historic England entry is as follows:

This monument, which falls into two areas, includes two bowl barrows aligned north-south and situated on a high ridge overlooking the valley of a tributary to the River Deer. These two barrows form part of a dispersed group of eight barrows spread across the length of this ridge. The northern barrow survives as a 0.7m high circular mound which measures 25.9m in diameter. The southern barrow survives as a circular mound which measures 28.8m in diameter and 1.2m high. Surrounding both barrows is the ditch from which material to build

the mounds was obtained and these survive as buried features 3m wide. The boundary banks north east of the northern mound and south of the southern mound are excluded from the scheduling, although the ground beneath them is included.

3.102. The Two Bowl Barrows 450m and 500m west of Leworthy are considered to be partially sensitive to visual impacts that may potentially occur as a result of the Proposed Development. However, clear views and intervisibility with the bowl barrows are not anticipated to be possible due to the screening effects from intervening tree-lined hedgerows 2-3m in height which are expected to block views across the mostly flat. As such, visibility with the bowl barrows was not possible during the walkover survey (Plates 8 & 9: Appendix 3D). Any partial views possible would not be considered harmful to the setting of the assets or their heritage value. Indirect effects upon this cluster of bowl barrows are therefore anticipated to be Minor to negligible.

Two Bowl Barrows 690m and 760m southwest of Leworthy (NA04)

3.103. The 'Two Bowl Barrows 600m and 760m south-west of Leworthy' are scheduled monuments c. 1.46km to the south-east of the Application Site. They form a cluster of large mounds and are well intact. Their Historic England entry is as follows:

This monument, which falls into two areas, includes two bowl barrows aligned north-south and situated on a high upland ridge known as Affaland Moor. These two barrows form part of a group of eight barrows spread along the ridge. The northernmost barrow of the two survives as a 0.2m high circular mound with a diameter of 25m. This mound was slightly damaged by the construction of a military building, which has subsequently been removed. The second barrow lies to the south west, measures 25m in diameter and is 1.2m high. Both mounds are surrounded by separate ditches from which material to construct the barrows was derived. These are preserved as buried features 2.5m wide. A boundary bank crossing the north side of the northern barrow is excluded from the scheduling, but the ground below is included.

3.104. The Two Bowl Barrows 690m and 760m southwest of Leworthy are considered to be partially sensitive to visual impacts that may potentially occur as a result of the Proposed Development. However, clear views and intervisibility with the bowl barrows are not anticipated to be possible due to the screening effects from intervening tree-lined hedgerows 2-3m in height which are expected to block views across the mostly flat. As such, visibility with the bowl barrows was not possible during the walkover survey (Plates 8 & 9: Appendix 3D). Any partial views possible would not be considered harmful to the setting of the assets or their heritage value. Indirect effects upon this cluster of bowl barrows are therefore anticipated to be Minor to negligible.

Bowl barrow 470m northeast of Dux (NA07)

3.105. The 'Bowl Barrow 470m north-east of Dux' is a scheduled monument located c. 1.7km to the north of the Application Site. It is described within its Historic England entry as follows:

"This monument includes a bowl barrow situated on the watershed between the valleys of a tributary to the River Tamar and a tributary to Derwent Water. The monument includes a circular mound which measures 33.2m in diameter and 1.3m high. The surrounding quarry ditch from which material to construct the mound was derived is preserved as an approximately 3m wide buried feature."

3.106. The setting of the bowl barrow comprises an agricultural field on the south side of the adjacent local road. Its immediate setting is somewhat beneficial to its heritage value, although the wider setting, including the Application Site, is not considered to contribute to this value. The bowl barrow is therefore considered to be partially sensitive to visual impacts that may potentially occur as a result of the Proposed Development. However, views and intervisibility with the bowl barrow are not anticipated to be possible from points within the Application Site as the walkover survey identified that views in this direction from the Application Site will be screened by tree-lined hedgebanks, a ridgeline on its south side and prominent pylons and power lines (see **Plate 8: Appendix 3D**). As such, indirect effects upon this bowl barrow are anticipated to be **Negligible**.

Listed Buildings

Church of St Swithin (NA09), Robert Beckley Monument (NA10) & The Villa (NA13)

3.107. The Grade II* listed Church of St Swithin is a listed building located 1.3km to the north-east of the Application Site and shares a setting with Robert Beckley Monument (NA10) and The Villa (NA13). They are described within the Historic England entries as follows:

Church of St Swithin - Anglican parish church. Pre-Conquest foundation, early C14 alterations to chancel, north and south aisles built with clerestorey, south aisle refenestrated C15 and tower added c1400, north aisle refenestrated early C16, extensive restoration of 1885 including reroofing, reseating, reflooring and many windows renewed by R. Medley Fulford of Exeter. Random rubble local stone, Hatherleigh stone dressings, slate roofs, coped verges, decorative ridge tiles. Three bay chancel, 4-bay nave with north and south aisles and clerestorey, west tower, south porch. 4-stage tower with angle buttresses to second stage, no parapet, small, plain pyramid finials, 2-light louvred bell openings, clock, stairlight on south front, 2-light window above C19 trefoil-headed doorway approached by external flight of stairs in south-east corner, no west door or west window.

Robert Buckley Monument - Chest tomb. Dated 1701. Red sandstone squared and coursed, slate slab. Chamfered plinth, cyma recta moulded cornice. Slate slab inscribed around the perimeter in latin to Robert Beckley, rector, died 19 October 1701. Poem in english in centre extolling his virtues.

The Villa - House. Early C19. Rendered over rubble and brick, pyramid slate roof, stacks rising from eaves on returns, roughcast left, rebuilt brick right. Plan: double pile house abutting cottage to north. 2 storeys, 3 bays, 16-pane sash windows, central flat roofed porch with console brackets and monolithic granite piers with residual capitals. Right return fronting road

similar window first floor right and below on ground floor in shallow slate roofed projection. The sturdy granite columns look as if designed to carry something much heavier than the flimsy porch canopy, which is probably not coeval.

3.108. The three listed buildings 'Church of St Swithin' (NA09), 'Robert Beckley Monument' (NA10) and 'The Villa' (NA13) all lie within the village of Pyworthy in close proximity to one another and therefore share a setting comprising its urban development.

3.109. The walkover survey (**Appendix 3D**) identified that the listed buildings NA10 and NA13 were not visible from within the Application Site but the tower of the Church of St Swithin (NA09) was confirmed to be visible from most of the site (see **Figure 3: Appendix 3D**). Views to and from the tower of the church are possible, although views with the main body and setting of the church are restricted by intervening field boundaries and vegetation, as well as the urban environs around the Church of St Swithin itself. The church and its associated graveyard and church grounds share a social history with its containing parish and the village of Pyworthy, indicating that the church is sensitive to any visual impacts which occur upon this setting or interfere with its relationship with the surrounding parish and village. Indirect impacts upon NA10 and NA13 are anticipated to be **Negligible** while indirect impacts upon NA09 are anticipated to be **Minor**.

Historic Environment Record

3.110. There is a total of thirty non-designated archaeological sites were identified within the 1km study zone, including twenty-seven polygon features and three-point features within the record. These sites can be used to evaluate the potential for archaeological remains within the Application Site. However, although twenty-seven HER sites lie within the calculated ZTV, many typically lack standing remains (for example cropmark sites, findspots, historical records or event records) or are not considered to be sensitive to possible visual impacts (for example quarries, field walls, drainage ditches or milestones).

3.111. Indirect effects upon HER sites such as the above, or those that are well-screened by vegetation or buildings, are anticipated to be **Negligible**. However, where indirect effects are anticipated to be higher than this, these monuments are presented in the table below. The full list of indirect effects assessed for each site is included within **Appendix 3B: Table 2**.

Table 3-6: Indirect Effects upon Selected Non-designated Heritage Assets

Asset	Description from Devon and Darmoor HER	Sensitivity to Impact	Magnitude of Impact	Indirect Effect
Field System and Plough Marks, Crinacott Farm (NB01)	"Archaeological monitoring was carried out during the excavation of cable trenches, in three areas within the site considered to be of archaeological potential following geophysical survey. Although no features or archaeological deposits were identified during the watching brief, given the small areas observed and the minimal impact of the development overall, there remains the potential for archaeological material to be present within the site."	Negligible	Negligible	Negligible
Field Boundary (NB02)	*"The groundworks exposed a single ENE to WSW aligned probable ditch (F103) that was located towards the northern extent of the monitored area. The position and alignment of ditch F103 corresponds with the location of a former field boundary depicted on the 1885 First-Edition Ordnance Survey Map of the site. This boundary is not depicted on the 1838 Pyworthy parish tithe map suggesting that the feature was mid-19th century in origin."*	Negligible	Negligible	Negligible
West Yeomadon Farm (NB03)	*"Farmstead shown with buildings mainly along the west side of a long narrow yard.* *West Yeomadon marked. Comparison with the Tithe Map shows the farmstead to have changed comparatively little.* *Several of the historic buildings appear to survive"*	Negligible	Negligible	Negligible
Trelana Farm (NB04)	*"Farmstead marked as 'Lana' on the Tithe Map, comprising a number of large and small buildings around a broadly rectangular shaped yard with extensions to the west and north-east towards the entrance at the northern end.* *'Lana' marked. Comparison with the Tithe Map shows the basic layout of the farmstead to have changed little, although several additional buildings are shown including a horse engine house."*	Negligible	Negligible	Negligible
Field Boundary south of Trelana (NB05)	*"The visible earthworks do not correspond with any boundary depicted on the Tithe Map for Pyworthy.* *A bank and ditch are identifiable as earthworks.* *A bank and ditch are identifiable as earthworks.* *A bank up to 7m wide and 95m long is identifiable as a subtle earthwork crossing the*	Negligible	Negligible	Negligible

	south-facing combe slopes to the south of Trelana farm, Pyworthy, on visualisations derived from lidar data captured in 2005 and 2013. A ditch is identifiable flanking the north-east side of the bank."			
Strip Field Boundaries south of Trelana (NB06)	*"The earthworks do not correspond with any curvilinear features shown in this location. Parallel and curvilinear banks are visible as earthworks. The closely spaced earthworks do not correspond with any curvilinear features shown in this location on the mid-19th century Parish Tithe Map, or on later available historic maps, but are closely in keeping with the surrounding historic field pattern, which is characterised as medieval enclosures based on strip fields. The earthworks are therefore interpreted as possible relict strip field boundaries of medieval origin which had passed out of use by the mid-19th century."*	Negligible	Negligible	Negligible
Agricultural Activity, land at Derril Water (NB07)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water. The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement. The identified anomaly groups in this instance are related to ploughing and possibly former ridge and furrow."*	Negligible	Negligible	Negligible
Field Boundary east of Monks Farm (NB08)	*"A curvilinear ditch, circa 11m wide and northeast to southwest aligned, is visible as an earthwork on visualisations derived from lidar data captured in 2004 and 2013. The earthwork does not correspond with any curvilinear features shown in this location on the mid-19th century Parish Tithe Map, or on later available historic maps, but is in keeping with the surrounding historic field pattern, which is characterised as medieval enclosures based on strip fields.*	Low	Low	Minor

	It is interpreted as a relict field boundary of potential medieval date which had passed out of use by the mid-19th century."			
Agricultural Activity, land at Derril Water (NB09)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water.* *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement. The identified anomaly groups in this instance are related to ploughing and possibly former ridge and furrow."*	Negligible	Negligible	Negligible
Pits, land at Derril Water (NB10)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water.* *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement. The identified anomaly groups in this instance are related to pits or in some cases could be tree throws."*	Negligible	Negligible	Negligible
Agricultural Activity, land at Derril Water (NB11)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water. The Devon Historic Landscape Character (HLC) describes the site as a mix of 'medieval enclosures based on strip fields', 'post-medieval enclosures', and 'modern enclosures'. Prehistoric activity in the*	Negligible	Negligible	Negligible

	landscape is suggested by earthwork mounds interpreted as possible Bronze Age barrows; though much of the evidence reflects historic medieval and post-medieval field-systems."			
Pits, land at Derril Water (NB12)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water.* *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement. The identified anomaly groups in this instance are related to pits sat in alignment approximately northwest to southeast."*	Negligible	Negligible	Negligible
Pits, land at Derril Water (NB13)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water.* *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement. The identified anomaly groups in this instance are related to pits or in some cases could be tree throws."*	Negligible	Negligible	Negligible
Field Systems, land at Derril Water (NB14)	*"The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement. The identified anomaly groups in this instance consist of slightly curvilinear anomalies with the data showing they are indicative of cut and*	Negligible	Negligible	Negligible

	infilled features such as a ditch with associated banks. The orientation of the anomalies do not match the existing field boundaries suggesting that they may form part of an earlier field system. The slightly curving nature of the features suggest medieval origins."			
Archaeological Features, land at Derril Water (NB15)	*"The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement. The identified anomaly groups in this instance consist of linear anomalies indicative of cut and infilled features such as ditches. The features are aligned along the lines of elements of the existing field-system and may belong to an earlier phase. The possible ditches are also located in close proximity to the prehistoric settlement so could be associated."*	Negligible	Negligible	Negligible
Archaeological Features, land at Derril Water (NB16)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water.* *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement."*	Negligible	Negligible	Negligible
Settlement, land at Derril Water (NB17)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water. The Devon Historic Landscape Character (HLC) describes the site as a mix of 'medieval enclosures based on strip fields', 'post-medieval enclosures', and 'modern enclosures'. Prehistoric activity in the landscape is suggested by earthwork mounds interpreted as possible Bronze Age barrows;*	Low	Low	Minor

	though much of the evidence reflects historic medieval and post-medieval field-systems. *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement. These identified two anomaly groups consist of penannular to circular features indicative of a ring ditch or drip-gullies typical of prehistoric settlement. The western feature appears to survive as near complete, with a possible entrance towards the south-east; whilst the eastern feature survives as only the south western quadrant."*			
Pits, land at Derril Water (NB18)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water.* *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement. The identified anomaly groups in this instance comprise discrete ovoid features indicative of cut and infilled features such as pits, or in the case of weaker responses, tree-throws. The majority of the anomalies are located within historic field systems (MDV132721) and may be associated internal features."*	Negligible	Negligible	Negligible
Quarries, land at Derril Water (NB19)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but*	Negligible	Negligible	Negligible

	also included features indicative of prehistoric and possible medieval settlement."			
Settlement, land at Derril Water (NB20)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water.* *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlemen."*	Negligible	Negligible	Negligible
Settlement, land at Derril Water (NB21)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water.* *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement."*	Negligible	Negligible	Negligible
Pit or Tree Throw, land at Derril Water (NB22)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water.* *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement."*	Negligible	Negligible	Negligible
Pits, land at Derril Water (NB23)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of*	Negligible	Negligible	Negligible

	Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water. *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement."*			
Field Drainage or Walls, land at Derril Water (NB24)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water.* *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement."*	Negligible	Negligible	Negligible
Settlement, land at Derril Water (NB25)	*"A geophysical survey was undertaken on land at Derrill Water, Pyworthy, Torridge, Devon. The site is located to the south-west of Pyworthy, across fields surrounding Monks Farm and Trelana, a 19th century farmstead, on south-east and east facing slopes to the west of Derrill Water.* *The geophysical survey (to date) identified 95 groups of anomalies. These were predominantly linear anomalies likely associated with phases of historic boundaries, land drainage, and agricultural activity, but also included features indicative of prehistoric and possible medieval settlement."*	Negligible	Negligible	Negligible
London and South-Western Railway (NB26)	*"Thomas, D. St. J., 1981, A Regional History of Railways of Great Britain, 104-5 (Monograph). SDV168.* *The Holsworthy Branch of the London & South Western Railway. The line from Meldon Junction was authorised in 1873 and opened to Holsworthy on 20/1/1879. Holsworthy acted as the railhead until 10/801898 when the line to Bude was opened. The Holsworthy viaduct was*	Negligible	Negligible	Negligible

	the main engineering work of the London & South Western Railway (the first of such size in concrete).”			
Trelana Methodist Chapel (NB27)	*“Ordnance Survey, 1880-1899, First Edition Ordnance 25 inch map (Cartographic). SDV336179.* *"Methodist Chapel (Wesleyan)" shown.* *Ordnance Survey, 1907, 61NE (Cartographic). SDV335842.* *"Methodist chapel (Wesleyan)" shown.* *Ordnance Survey, 1963, Ordnance Survey 6 inch map (Cartographic). SDV166087.* *Shown but not marked.”*	Negligible	Negligible	Negligible
The Coach House, Adjoining the Old Rectory to the West (NB28)	*“Coach house and stables, now dwelling. Circa 1836, restored and converted c1980. Random rubble local stone, brick dressings, slate roofs, C20 brick stack centre left on main elevation. L-plan linked at east corner to the Old Rectory (q.v) by doorway in short section of wall. Two storeys, 3 bays, first floor 2-light casments with pointed arch lights, similar ground floor left and 3-light left inserted into former doorway opening, inserted 5-light into former double doorway, both with segmental heads, C20 plank door end bay right. Left return: 2 storeys, 3 bays, pointed arch window in gable end right large C20 fixed light windows in wing set below eaves, square headed opening end bay left, two pointed arch french windows, central segmental headed opening.”*	Negligible	Negligible	Negligible
The Old Rectory and Walls Enclosing Garden (NB29)	*“The Old Rectory and walls enclosing garden to North-East GV Rectory, now dwelling, with walls enclosing former kitchen garden. 1836, minor alterations c1900. Random rubble with brick dressings, hipped slate roof with boarded eaves, large brick stack at junction with service wing, the latter lower, independently roofed with hipped slate roof of steeper pitch. Plan: main block facing road, one room on either side of wide hall with top lit stair well, double pile service wing. Main elevation: 2 storeys, 3 bays, pilaster quoins, projecting central bay and full height segmental headed recesses to outer bays, all 16-pane sash windows, central Doric porch, wooden columns resting on granite and*	Negligible	Negligible	Negligible

	brick blocks, pilaster doorcase, handsome double doors of 6 panels each.			
Pyworthy Manor (NB30)	*"Pyworthy was held according to the Domesday Book by Judhael of Totnes"*	Negligible	Negligible	Negligible

Cumulative Indirect Effects

3.112. Cumulative visual impacts have been assessed in detail within **Technical Appendix 1: Landscape and Visual Impact Assessment**. The assessment states:

"The potential for cumulative views of the Proposed Development with the approved planning references was found to be limited, as many potential views are hindered by distance, localised variations in the topography and screening by natural and built elements across the local landscape.

Combined views of the cumulative projects listed below with the Proposed Development may be possible from residential. However, they will be viewed at distance and will not be perceived as one development. Here, the addition of the Proposed Development will result in Low Change cumulative views.

Current views for Residential Receptors, Road and Path Users beyond 1km are unlikely due to the Proposed Development being screened by landform, and natural and built elements across the local landscape.

Therefore, the addition of the Proposed Development will result in No Change cumulative views."

Table 3-7: Cumulative Indirect Effects

Planning Reference	Description	Proximity	Planning Status
1/0883/2012/FULM	Proposed PV solar farm with associated infrastructure	0.00km east	Permitted 17/01/2013
1/0249/2021/FULM	Proposed 42MW photovoltaic (PV) solar farm, all ancillary grid infrastructure and associated works	0.01km north	Permitted 10/11/2021
1/1318/2007/FUL	Erection of single vertical axis wind turbine (12 metres high)	0.25km south	Permitted 21/12/2007

1/0754/2015/FULM	Installation and operation of a solar farm and associated infrastructure	0.32km southeast	Permitted 30/09/2015
1/1107/2008/FUL	Erection of single vertical axis wind turbine	0.90km south	Permitted 21/01/2009
1/0756/2015/FULM	Installation and operation of a solar farm and associated infrastructure	1.23km northwest	Permitted 04/12/2015
1/0502/2015/FULM	Erection of wind turbine max hub height 37.5m, rotor diameter 39 m. Max tip height 57m	1.55km northwest	Permitted 04/09/2015
1/0127/2024/FUL	Construction of a containerised Battery Energy Storage System with the ability to store and export up to 25 MW of electricity	1.74km southwest	Application is being considered
1/0766/2013/FUL	Erection of a wind turbine measuring 30m to hub and 45m to blade tip	2.12km west	Permitted 07/02/2014
1/0657/2013FUL	Erection of a wind turbine, measuring 50m to hub and with a rotor radius of 27m, with an overall height of 77 metres, with ancillary equipment	2.35km southwest	Permitted 02/10/2014
1/0978/2012/FULM	Installation of a solar farm and associated infrastructure - 14.8ha 11.2MW	2.56km northeast	Permitted 05/02/2013
PA13/05242	Erection of a single wind turbine of max 37m to tip, along with associated infrastructure	2.59km southeast	Permitted 12/06/2013
1/0218/2011/FULM	Proposed Solar PV Farm and associated infrastructure	2.73km northeast	Permitted 23/06/2021
1/0833/2012/FULM	Proposed PV solar farm with associated infrastructure	2.79km northwest	Permitted 04/07/2013
1/0595/2012/FUL	Erection of single 500kw turbine (60.7m to blade tip) and associated infrastructure	3.97km north	Permitted 08/11/2012

1/0812/2012/FUL	Erection of a single wind turbine (77m to blade tip) together with associated works and access	4.16km east	Permitted 07/02/2013

Summary of Indirect Effects

3.113. There were eight Scheduled Monuments identified within the 5km study zone that lie inside the calculated ZTV of the Proposed Development. Of these assets, **Minor to Negligible** indirect effects are anticipated for The Bowl Barrows NA02, NA03 and NA04, while **Negligible** effects are anticipated for the 'Bowl barrow 70m east of Beechwood Bungalow' (NA01), 'Bowl barrow on Affaland Moor 840m south west of Leworthy' (NA05), 'Bowl barrow on Affaland Moor 780m north west of Forda Mill' (NA06), 'Bowl barrow 470m north east of Dux' (NA07) and 'Three bowl barrows 240m south east of Highermoor' (NA08).

3.114. There were no Grade I Listed Buildings identified within the 5km study zone that lie inside the calculated ZTV of the Proposed Development. As such, these resources are not considered to be at risk of significant indirect effects.

3.115. There was one Grade II* Listed Building identified within the 5km study zone that lies inside the calculated ZTV of the Proposed Development. Indirect effects upon the Church of St Swithin (NA09) are anticipated to be **Minor to Negligible**.

3.116. There were five Grade II Listed Buildings identified within the 5km study zone that lie inside the calculated ZTV of the Proposed Development. Of these assets, indirect effects upon the 'Robert Beckley Monument' (NA10), 'The Villa' (NA13) are anticipated to be **Low** due to their shared setting with The Church of St Swithin (NA09), where as the 'Boundary Stone' (NA11), 'The Coach House, Adjoining the Old Rectory to the West' (NA12), and 'The Old Rectory and Walls Enclosing Garden' (NA14) are anticipated to be **Negligible**.

3.117. There were of 30 non-designated archaeological sites were identified within the 1km study zone, including 27 polygon features and three point features within the record. Of these non-designated archaeological sites, indirect effects upon Field Boundary east of Monks Farm (NB08) and Settlement, land at Derril Water (NB17) are anticipated to be **Low**, and the remaining non-designated assets are anticipated to be **Negligible.**

3.118. There were no Historic Parks and Gardens, World Heritage Sites or Historic Battlefields identified in their respective study zones. As such, these resources are not considered to be at risk of significant indirect effects.

3.119. As the Landscape and Visual Impact Assessment concluded that no notable cumulative landscape or visual effects will occur as a result of the Proposed Development, no cumulative visual impacts are expected to occur on any of the surrounding heritage assets previously identified.

MITIGATION MEASURES

Direct Effects upon Recorded Assets

3.120. As no designated or non-designated heritage assets were identified within the Application Site, no direct effects will occur on these resources as a result of the Proposed Development. As such, no mitigation measures are deemed to be necessary in relation to direct effects upon recorded heritage assets.

Archaeological Potential

3.121. The general potential for the proposed development to impact prehistoric or Romano-British remains is considered to be low, while the potential to impact medieval and post-medieval remains is considered to be moderate to low. Any remains encountered within the Application Site have the potential to be of high to moderate importance, due to it being located within a landscape of prehistoric bowl barrows and in close proximity to a probable medieval settlement site.

3.122. In addition to this general potential, the geophysical survey has helped to narrow down the areas of this potential across the Application Site and is subject of additional forthcoming evaluation by archaeological trial trenching (see Appendix 3E) whilst preserving the possible prehistoric and medieval settlement in-situ and avoided in the development design. Subsequent discussions with the council archaeologist Steve Reed during March 2024 indicated that a 3% sample evaluation as supporting information for the planning application.

3.123. All fieldwork and mitigation is undertaken with the discussion and approval of programme of Devon County Council and their Historic Environment Team.

Indirect Effects

3.124. Indirect effects upon the surrounding heritage assets have been assessed as overall Minor Adverse in the worst case. Therefore, no specific mitigation is considered to be required for the reduction of any visual impacts.

SUMMARY

3.125. Neo Environmental Ltd has been appointed by Renewables Energy System (RES) to undertake a Cultural Heritage Impact Assessment for the proposed Battery Energy Storage System Development on land approx. 1.3km southwest of Pyworthy Torrige District, Devon, England, EX22 6LA. The assessment has been produced to evaluate the potential direct and indirect impacts that the proposal may have upon cultural heritage assets and archaeological remains.

3.126. There are no designated or non-designated archaeology and heritage assets present within the Application Site (**Figures 3.1 & 3.2: Appendix 3A**). The nearest designated sites are the grade II listed 'Old Rectory and Walls Enclosing Garden to North East' (NA14 and 'The Coach House adjoining the Old Rectory to the West' (NA12, located c. 660m to the east-northeast of the proposed site boundary. The nearest monument record appears to be an area containing a possible field system and plough marks (MDV103619) identified from a 2013 geophysical survey undertaken within the field adjacent to the east of the proposed development site. Archaeological monitoring was subsequently undertaken here during the excavation of cable trenches in 2013, but no features or archaeological deposits were identified. The feature is now occupied by a commercial solar farm.

3.127. In consideration of the proximity of the proposed development site to the archaeology identified on the other side of the Derril Water, land here is likely to have a **moderate potential for sub-surface remains from the medieval and post-medieval periods,** while it has a **low potential for sub-surface remains from the prehistoric and Romano-British periods**. Any remains encountered within the Application Site have the potential to be of **high to moderate importance**, due to it being located within a landscape of prehistoric bowl barrows and in close proximity to a probable medieval settlement site.

3.128. The results of the previously undertaken geophysical survey, which identified features of archaeological potential, will be targeted during a test trenching evaluation which is due to start imminently. The results of the test trenching will be shared directly with the Historic Environment Team at Devon County Council. Residual direct effects upon hitherto-unknown archaeology as a result of the Proposed Development are therefore anticipated to be **Negligible, on the assumption that the programme of archaeological test trenching is undertaken and any appropriate mitigation measures are implemented following this**.

3.129. Indirect effects upon the surrounding heritage assets have been assessed as overall 'Minor Adverse' in the worst case. Therefore, **no specific mitigation is considered to be required for the reduction of any visual impacts**, with tree-lined hedgebanks and the natural ridgeline of the local topography ensuring that visual impacts upon heritage assets will be kept minimal throughout the operational phase of the development. Residual indirect effects are therefore considered to be unchanged at Minor Adverse in the worst case.

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- Figure 3.2 – Non-designated Heritage Assets
- Figure 3.3 – Tithe Apportionment Map (1838)
- Figure 3.4 – OS 1885 Map
- Figure 3.5 – OS 1906 Map
- Figure 3.6 – Lidar Data

Appendix 3B – Tables of Heritage Assets

Appendix 3C – Aerial Photography

Appendix 3D – Geophysical Survey Report and Walkover Survey Report

Appendix 3E – Written Scheme of Investigation (WSI) for Archaeological Investigation

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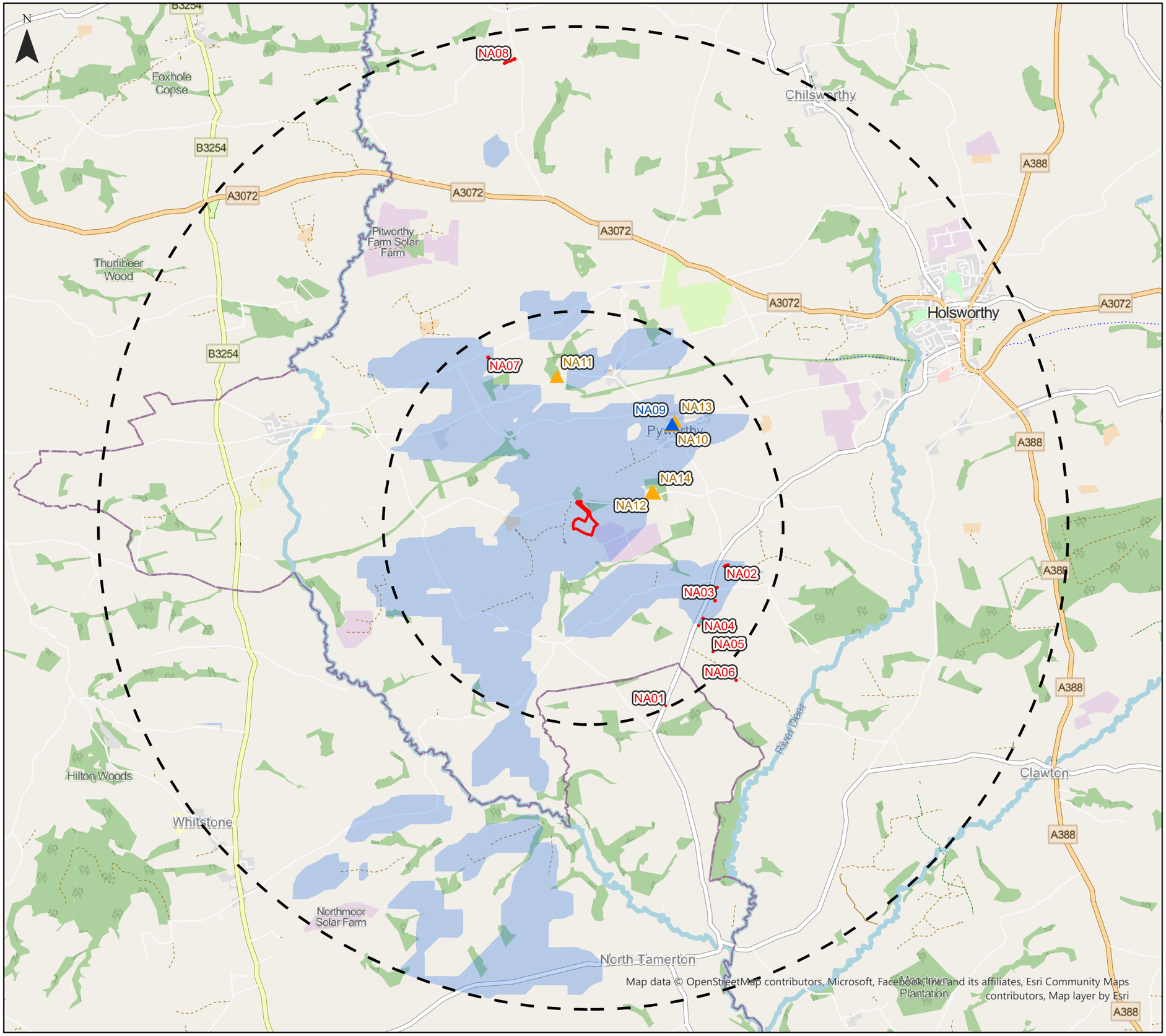
Appendix 3A – Figures

Stoneworthy BESS
Designated Heritage Assets
Figure 3.1



Key

- Development Boundary
- 5km Study Area
- 2km Study Area
- Scheduled Monuments (5km)
- Grade II Listed Buildings (2km)
- Grade II* Listed Buildings (2km)
- Zone of Theoretical Visibility

Neo Office Address:
Lakeview, 600 Lakeside Drive, Central Park Square. Warrington, WA1 1RW

Date: 28/05/2024
Drawn By: Michael Briggs
Scale (A3): 1:40,000
Drawing No: NEO01389/001I/B

ENVIRONMENTAL

Stoneworthy BESS
Non-designated Heritage Assets
Figure 3.2

Key

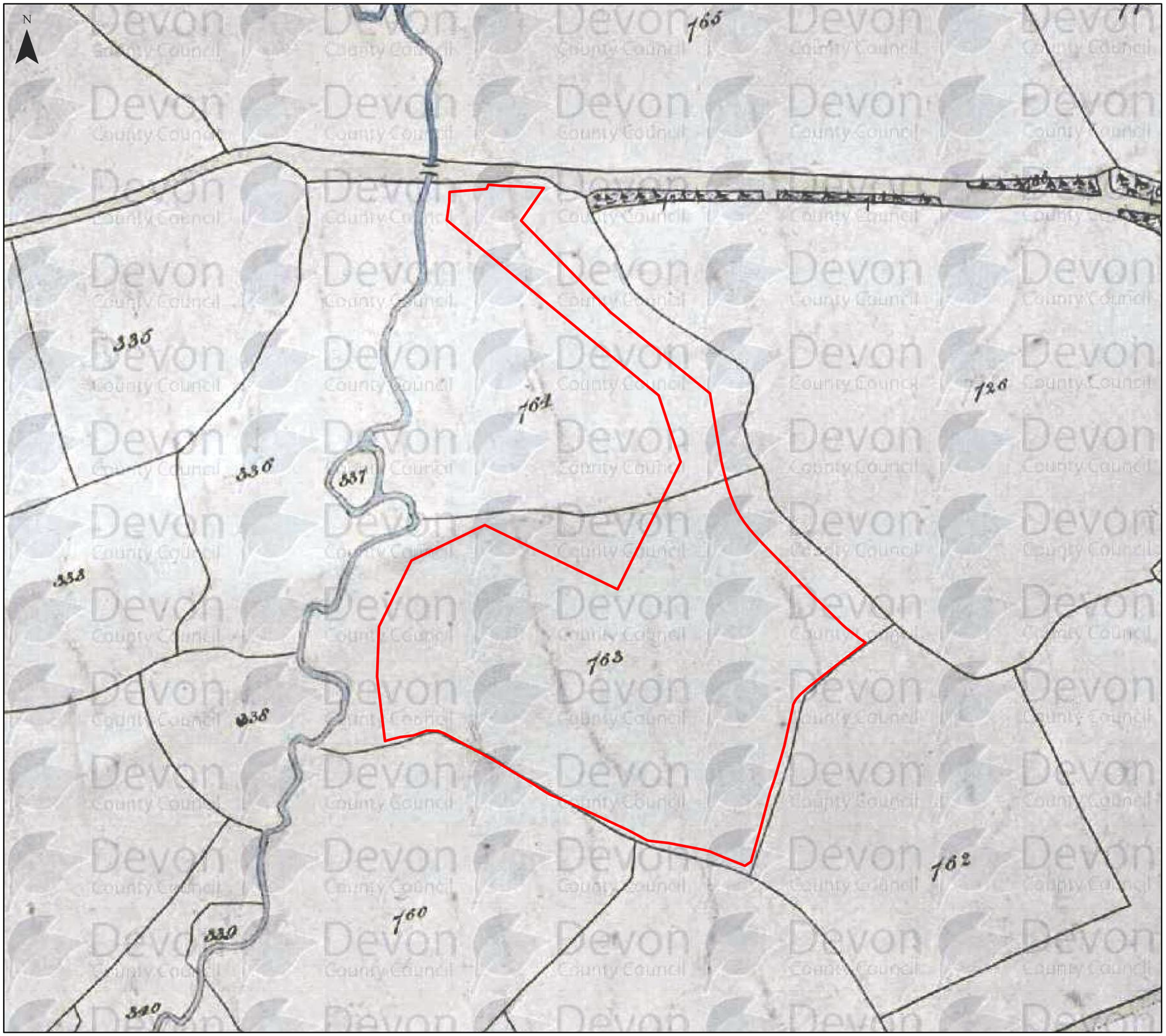
- Development Boundary
- 1km Study Area
- Devon Historic Environment Record
- Zone of Theoretical Visibility

Neo Office Address:
Lakeview, 600 Lakeside Drive, Central Park Square. Warrington, WA1 1RW

Date: 28/05/2024
Drawn By: Michael Briggs
Scale (A3): 1:8,750
Drawing No: NEO01389/002I/C

neo ENVIRONMENTAL

Stoneworthy BESS
Tithe Apportionment Map
Figure 3.3



0 50 100 200 Metres

Key

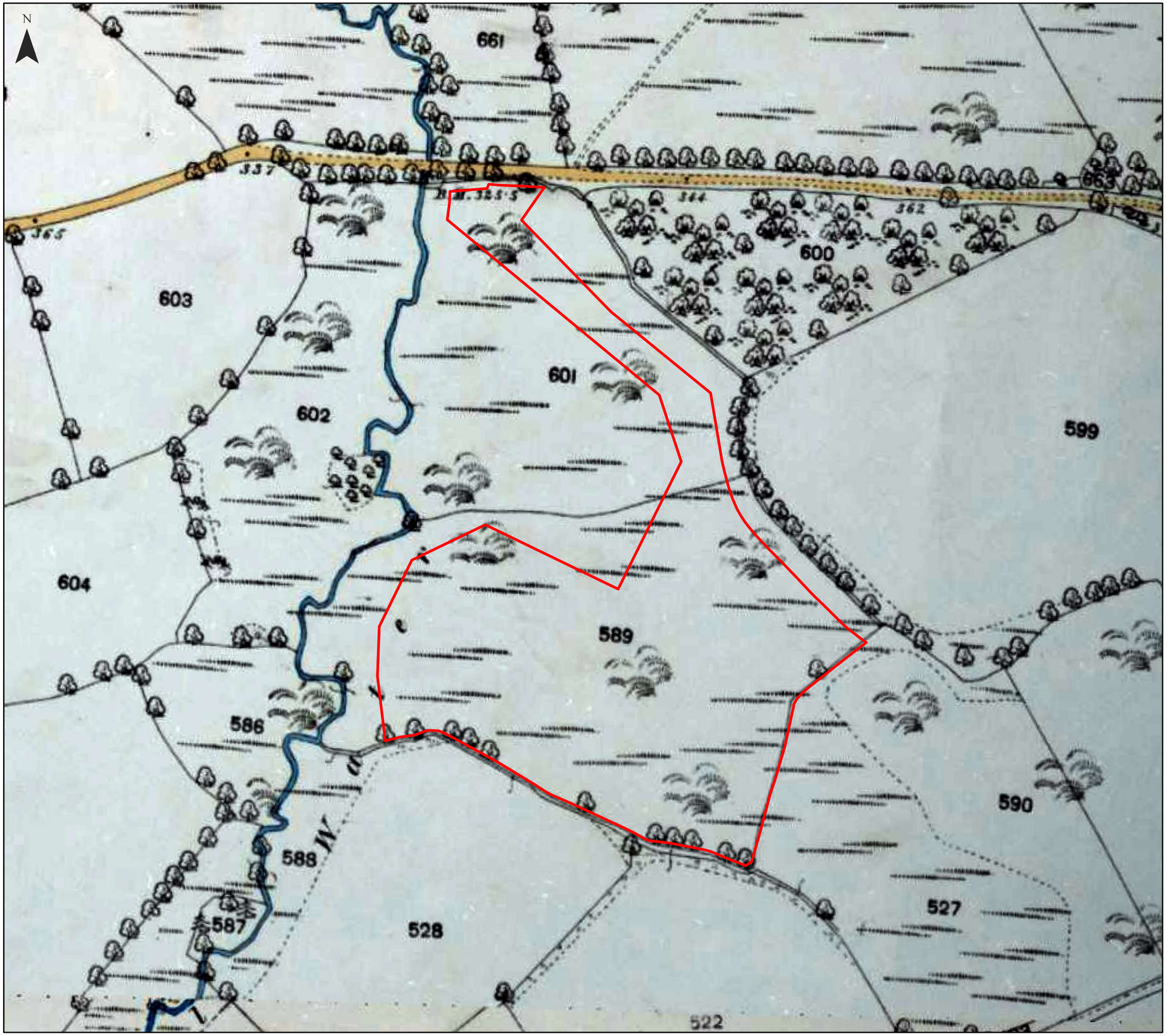
Development Boundary

Neo Office Address:
Lakeview, 600 Lakeside Drive, Central Park Square. Warrington, WA1 1RW

Date: 28/05/2024
Drawn By: Michael Briggs
Scale (A3): 1:2,000
Drawing No: NEO01389/011I/B

ENVIRONMENTAL

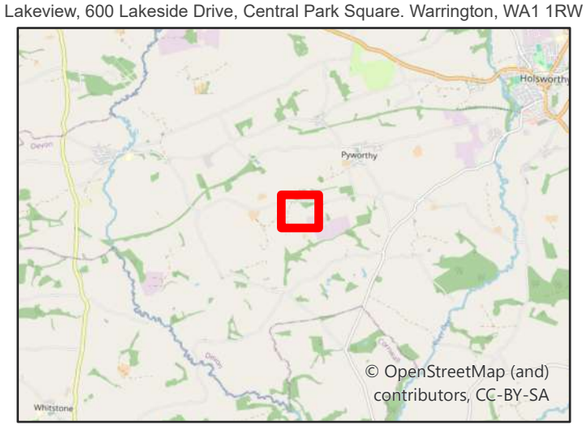
Stoneworthy BESS
OS 1885 Map
Figure 3.4



Key

Development Boundary

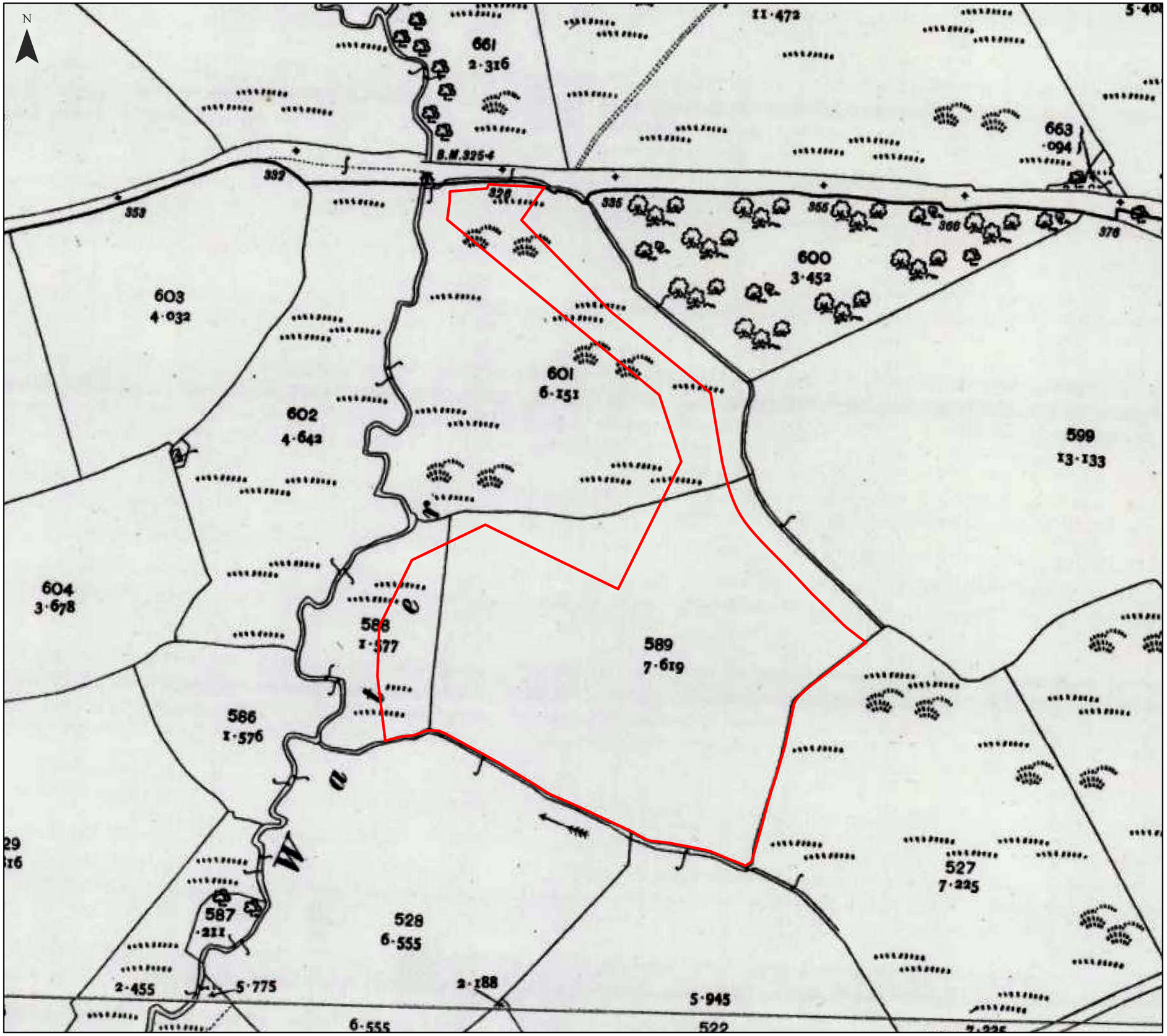
Neo Office Address:
Lakeview, 600 Lakeside Drive, Central Park Square. Warrington, WA1 1RW



Date: 28/05/2024
Drawn By: Michael Briggs
Scale (A3): 1:2,000
Drawing No: NEO01389/012I/B

neo ENVIRONMENTAL

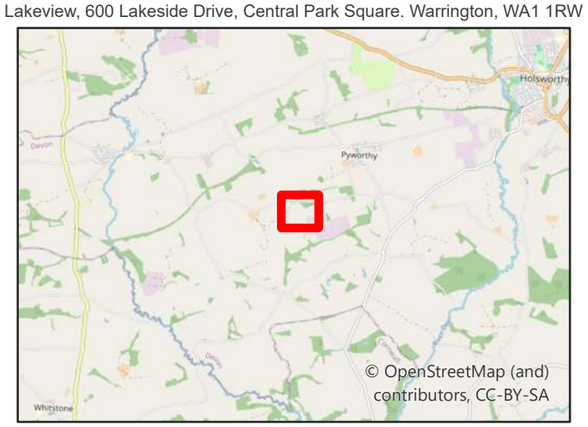
Stoneworthy BESS
OS 1906 Map
Figure 3.5



Key

Development Boundary

Neo Office Address:
Lakeview, 600 Lakeside Drive, Central Park Square. Warrington, WA1 1RW



Date: 28/05/2024
Drawn By: Michael Briggs
Scale (A3): 1:2,000
Drawing No: NEO01389/013I/B

ENVIRONMENTAL

Stoneworthy BESS
Lidar Data (1m DTM, 2022)
Figure 3.6

N

Key

Development Boundary

0 50 100 200 Metres

Neo Office Address:
Lakeview, 600 Lakeside Drive, Central Park Square. Warrington, WA1 1RW

Date: 28/05/2024
Drawn By: Michael Briggs
Scale (A3): 1:2,000
Drawing No: NEO01389/014I/B

neo ENVIRONMENTAL

Appendix 3B – Table of Heritage Assets

Table 1: Designated Heritage Assets within the 5km/2km Study Areas

Neo Ref.	Database No.	Name	Distance (km)	Potential Indirect Impact
Scheduled Monuments (5km)				
NA01	1004362	Bowl barrow 70m east of Beechwood Bungalow	1.96	Negligible
NA02	1017972	Two bowl barrows 430m northwest of Leworthy	1.43	Minor to Negligible
NA03	1017973	Two bowl barrows 450m and 500m west of Leworthy	1.43	Minor to Negligible
NA04	1017974	Two bowl barrows 690m and 760m southwest of Leworthy	1.46	Minor to Negligible
NA05	1017975	Bowl barrow on Affaland Moor 840m southwest of Leworthy	1.76	Negligible
NA06	1017976	Bowl barrow on Affaland Moor 780m northwest of Forda Mill	2.1	Negligible
NA07	1020082	Bowl barrow 470m northeast of Dux	1.79	Negligible
NA08	1020608	Three bowl barrows 240m southeast of Highermoor	4.7	Negligible
Historic Parks and Gardens (5km)				
None				
World Heritage Sites (5km)				
None				
Registered Battlefields (5km)				
None				
Grade I Listed Buildings (2km)				
None				
Grade II* Listed Buildings (2km)				
NA09	1164560	Church of St Swithin	1.3	Low
Grade II Listed Buildings (2km)				
NA10	1104953	Robert Beckley Monument	1.3	Low
NA11	1164526	Boundary Stone	1.35	Negligible
NA12	1164551	The Coach House, Adjoining the Old Rectory to the West	0.75	Negligible
NA13	1164571	The Villa	1.35	Low
NA14	1326622	The Old Rectory and Walls Enclosing Garden	0.75	Negligible
Conservation Areas (2km)				
None				

Table 2: Non-designated Heritage Assets within the 1km Study Area

Neo Ref.	Database No.	Name	Distance (km)	Potential Indirect Impact
Historic Environment Record - Polygons (1km)				
NB01	MDV103619	Field System and Plough Marks, Crinacott Farm, Pyworthy	0.03	Negligible
NB02	MDV118604	Field Boundary, land west of Parsonage Street	0.5	Negligible
NB03	MDV122036	West Yeomadon Farm	1	Negligible
NB04	MDV122042	Trelana Farm	0.68	Negligible
NB05	MDV129545	Field Boundary south of Trelana	0.5	Negligible
NB06	MDV129682	Strip Field Boundaries south of Trelana	0.5	Negligible
NB07	MDV132380	Agricultural Activity, land at Derril Water	0.75	Negligible
NB08	MDV129718	Field Boundary east of Monks Farm	0.4	Minor
NB09	MDV132380	Agricultural Activity, land at Derril Water	0.87	Negligible
NB10	MDV132381	Pits, land at Derril Water	0.96	Negligible
NB11	MDV132383	Agricultural Activity, land at Derril Water	0.8	Negligible
NB12	MDV132385	Pits, land at Derril Water	0.89	Negligible
NB13	MDV132386	Pits, land at Derril Water	0.4	Negligible
NB14	MDV132661	Field Systems, land at Derril Water	0.36	Negligible
NB15	MDV132663	Archaeological Features, land at Derril Water	0.35	Negligible
NB16	MDV132669	Archaeological Features, land at Derril Water	0.4	Negligible
NB17	MDV132674	Settlement, land at Derril Water	0.35	Minor
NB18	MDV132760	Pits, land at Derril Water	0.46	Negligible
NB19	MDV132762	Quarries, land at Derril Water	0.42	Negligible
NB20	MDV132772	Settlement, land at Derril Water	0.74	Negligible
NB21	MDV132804	Settlement, land at Derril Water	0.63	Negligible
NB22	MDV132805	Pit or Tree Throw, land at Derril Water	0.67	Negligible
NB23	MDV132809	Pits, land at Derril Water	0.86	Negligible
NB24	MDV132811	Field Drainage or Walls, land at Derril Water	0.19	Negligible
NB25	MDV132812	Settlement, land at Derril Water	0.55	Negligible
NB26	MDV22543	London and South-Western Railway	0.992	Negligible

NB27	MDV36254	Trelana Methodist Chapel	0.45	**Negligible**
Historic Environment Record - Points (1km)				
NB28	MDV101763	The Coach House, Adjoining the Old Rectory to the West	0.7	**Negligible**
NB29	MDV101776	The Old Rectory and Walls Enclosing Garden	0.7	**Negligible**
NB30	MDV37925	Pyworthy Manor	1	**Negligible**

Appendix 3C – Aerial Photographs

Aerial Photograph 1 – RAF 1946-1949, showing full extent of Application Site[1]

[1] Devon County Council Environment Viewer (1946-1949) *Devon County Council*. Last accessed 26/04/24 at https://map.devon.gov.uk/portal/apps/webappviewer/index.html?id=71fe583c7004410ca8cdc62e0e9b2577

Appendix 3D – Geophysical Survey Report and Walkover Survey Report

LAND WEST OF CRINACOTT FARM
PYWORTHY
TORRIDGE
DEVON

Results of a Geophysical Survey

South West Archaeology Ltd. report no. 240228b

ARCHAEOLOGICAL SERVICES & HISTORIC BUILDING RECORDING
SOUTHWEST ARCHAEOLOGY

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01769 573555
01872 223164

LAND WEST OF CRINACOTT FARM, PYWORTHY, TORRIDGE, DEVON

RESULTS OF A GEOPHYSICAL SURVEY

By P. Webb
Report Version: Final
Draft issued: 28th February 2024
Finalised: 23rd May 2024

Work undertaken by SWARCH for Neo-environmental (the Client)

SUMMARY

This report presents the results of a walkover and geophysical survey carried out by South West Archaeology Ltd. (SWARCH) on land west of Crinacott Farm, Pyworthy, Torridge, Devon as part of a planning submission for a proposed solar farm development on the site. The site is located to the south-west of Pyworthy, across fields to the west of Crinacott Farm, on the west and south-west facing slopes to the east of Derrill Water. The Devon HLC describes the site as Modern Enclosures surrounded by areas of medieval enclosure bases on strip-fields. Prehistoric activity in the landscape is suggested by possible Bronze Age barrows; though much of the evidence on the Devon County HER reflects historic medieval and post-medieval field-systems.

The site comprises an area of c.17ha (c.13ha surveyed) covering six fields of pastoral land (fields F1-F3) and woodland (F4-F6). The geophysical survey identified 21 groups of anomalies across the site. These were predominantly linear ditch and/or bank features associated with phases of the existing and historic field-system, possible prehistoric or Romano-British settlement, medieval settlement, land drains and agricultural practices. Anomalies associated with modern utilities, metallic debris and ground disturbance were also identified.

The majority of the features represent undated phases of field-system and land under-drainage, tentatively suggested as being largely medieval and post-medieval in date with possible prehistoric elements. Much of the site shows only limited activity, though the density of possible features surrounding Crinacott Farm is suggestive of a shrunken settlement, presumably of medieval date, though the tentative presence of a possible ring-ditch/drip-gully may indicate additional prehistoric settlement, though it is expected that it more likely medieval.

The results of the geophysical survey would suggest that the archaeological potential for much of the site is low. Many of the identified features are likely to relate to historic phases of field-system, some reflecting historic boundaries depicted on cartographic sources from the mid-19th century, along with drainage features likely to date to a similar period. The eastern corner of field F1, however, has a much higher potential, the density of features suggesting a possible shrunken medieval settlement associated with Crinacott Farm; other features in the area are tentatively suggestive of possible prehistoric settlement.

Any development of the site is likely to encounter and destroy the buried archaeological resource (should it be present), and further mitigation through, in the first instance, targeted evaluation trenching would validate and clarify the results of the geophysical survey, particularly in reference to the eastern corner of field F1.

February 2024

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ACKNOWLEDGEMENTS

THE CLIENT & LANDOWNER FOR ACCESS

PROJECT CREDITS

DIRECTOR: DR. SAMUEL WALLS, MCIFA
FIELDWORK: ALASTAIR NOCK, PHOEBE SCRIVENER, PETER WEBB
REPORT: PETER WEBB
EDITING: DR. SAMUEL WALLS, MCIFA
GRAPHICS: PETER WEBB

1.0 INTRODUCTION

LOCATION: CRINACOTT FARM, HOPWORTHY
PARISH: PYWORTHY
DISTRICT: TORRIDGE
COUNTY: DEVON
NGR: CENTRED ON SS 30334 01680
PLANNING NO.: PREAPPLICATION
OASIS REF. NO.: SOUTHWES1-523243
SWARCH REF. PH24

1.1 PROJECT BACKGROUND

South West Archaeology Ltd. (SWARCH) was commissioned by a Neo-environmental (the Client) to undertake a walkover and geophysical survey on land west of Crinacott Farm, Pyworthy, Torridge, Devon as part of a planning submission for the development of a proposed solar farm. This work was undertaken in accordance with best practice and CIfA guidlines.

1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The site is located to the north and west of Crinacott Farm, *c.*1km south of Hopworthy and *c.*1km south-west of Pyworthy. The site comprises three agricultural (pastoral) fields covering an area of *c.*17ha within a wider agricultural landscape, with the remnants of 19th century plantation scattered throughout. The land slopes down to the west towards Derril Water at a height of between *c.*100m and *c.*115m AOD (Figure 1).

The soils of this area are recorded as the well-drained fine loamy soils over slate or slate rubble of the Denbigh 2 Association (SSEW 1983), which overlie the mudstone, siltstone and sandstones of the Bude Formation where it borders the mudstone and siltstone of the Crackington Formation; with superficial sand and gravel river terrace deposits in the valley bottom (BGS 2024).

1.3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

The manor of Pyworthy, in the deanery of Holsworthy and hundred of Black Torrington, predates Domesday, when it was known as *Paorde* and was held by Alfred, and subsequently by Iudichael (Williams & Martin 2002). The manor has since belonged to several families, including those of Fitzjohn, Boniface and Arscot (Lysons 1822).

Historic mapping shows a relative continuity in the field-system surrounding the since the mid-19th century, with only a relatively few boundary removals in the following period. The 1838 tithe map and accompanying apportionment indicates that the site was split between the ownership of John Vowler Esq. as part of *Crinnacott* (occupied by William Sangwin) and Elizabeth Coham as part of *Lana* (occupied by Robert Wickett), with all of the land under arable cultivation.

The site lies within an area recorded on the Devon Historic Landscape Characterisation (HLC) as *Modern Enclosure: created out of probable medieval enclosures with sinuous medieval boundaries surviving in places*; the surrounding fields including *Medieval Enclosures based on strip fields: probably first enclosed with hedge-banks during the later middle ages, the curving form of the hedge-banks suggesting that earlier it may have been farmed as open strip-fields.*

The Devon Historic Environment Record (HER) indicates that the site is situated within a prehistoric funerary landscape, with numerous barrows situated on high ground to the north and east; though

only a small number of assets are recorded in the immediate vicinity, including: a possible Bronze Age barrow, medieval fields boundaries, pre-1900 Methodist Chapel and 19th century Rectory.

The HER indicates that whilst only a small amount of archaeological work has been carried out in the immediate area, it covers a large area. Desk-based assessment, geophysical survey (Urmaston 2013) and watching briefs (Brennon 2013; Cooke 2017) have been carried out across the land immediately to the north and east of Crinacott Farm ahead of the installation of a solar farm identifying historic field boundaries; the land to the west surrounding Trelana being subject to walkover survey (Balmond 2020), geophysical survey (Webb 2021) and evaluation trenching (Steinmetzer 2023) identifying prehistoric activity dating to the Neolithic period, Iron Age and Romano-British settlement and medieval settlement and field-systems.

1.4 METHODOLOGY

The geophysical (gradiometer) survey was undertaken in accordance with current best practice and CIfA guidance; and follows the guidance outlined in *Geophysical Survey in Archaeological Field Evaluation* (English Heritage 2008b); *Standard and Guidance for Archaeological Geophysical Survey* (CIfA 2014b); *EAC Guidelines for the use of geophysics in Archaeology: Questions to Ask and Points to Consider* (Europae Archaeologiae Consilium/European Archaeological Council 2016).

'Archaeological geophysical survey is a non-intrusive and non-destructive technique used to determine the presence or absence of anomalies likely to be caused by archaeological features, structures or deposits, as far as reasonably possible, within a specified area or site on land, in the inter-tidal zone or underwater. Geophysical survey determines the presence of anomalies of archaeological potential through measurement of one or more (Standard and Guidance for Archaeological Geophysical Survey 2014).

The results of the survey will, as far as possible, inform on the presence or absence, character, extent and in some cases, apparent relative phasing of buried archaeology to inform a strategy to mitigate any threat to the archaeological resource.

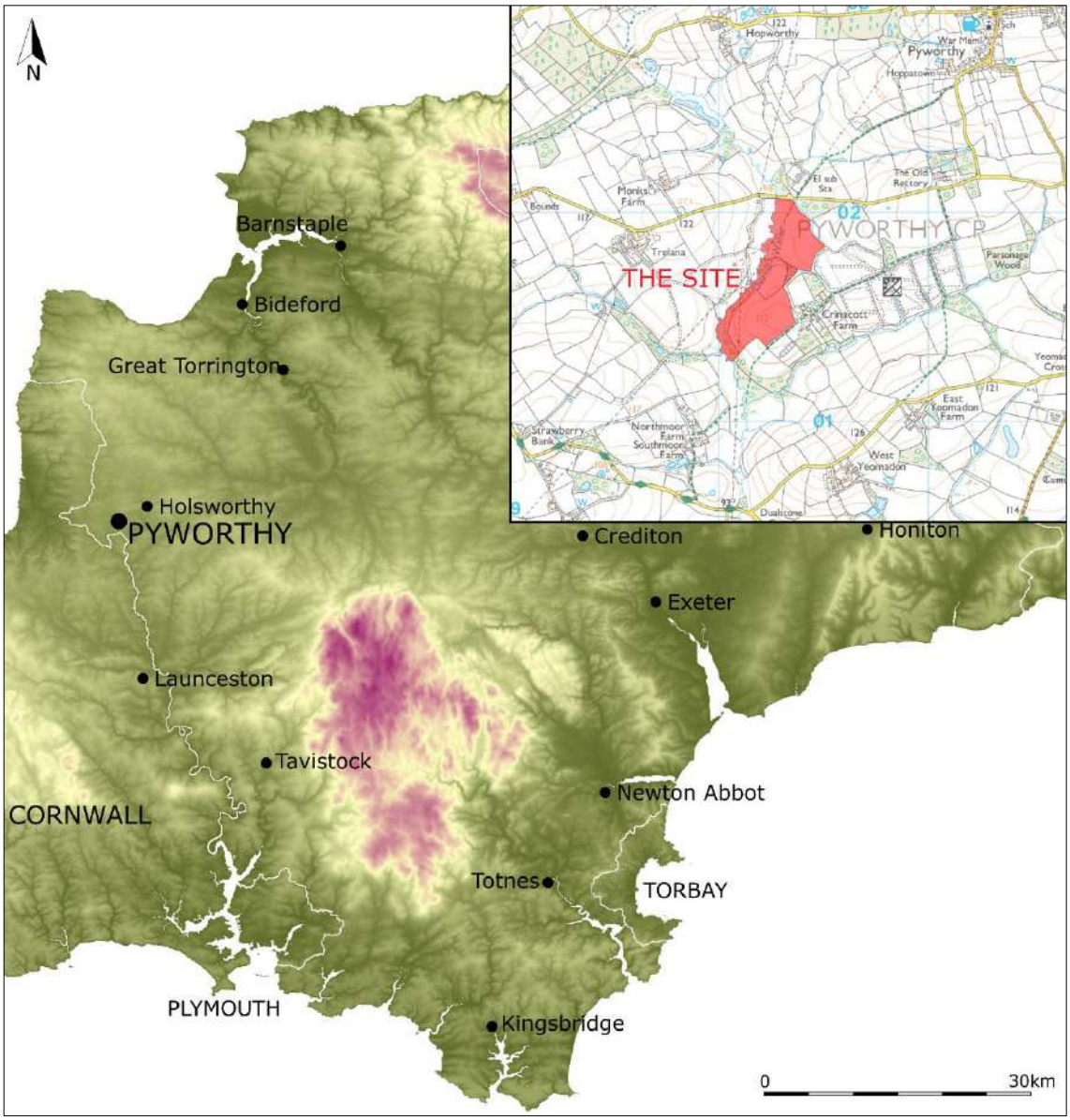


FIGURE 1: SITE LOCATION.

2.0 GEOPHYSICAL SURVEY

2.1 INTRODUCTION

The site comprises an area of *c.*16.7ha across six fields (F1-F6), though only three (F1-F3) were subject to magnetometry (gradiometer) survey (*c.*12.9ha surveyed); F4-F6 containing woodland and being un-surveyable. 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 in February 2024 by A. Nock, P. Scrivener and P. Webb and the survey data processed by P. Webb. Supporting photographic evidence from the site inspection can be found in Appendix 1; detailed survey data in Appendix 2; and additional graphic images of the survey data and numbered grid locations can be found in Appendix 3.

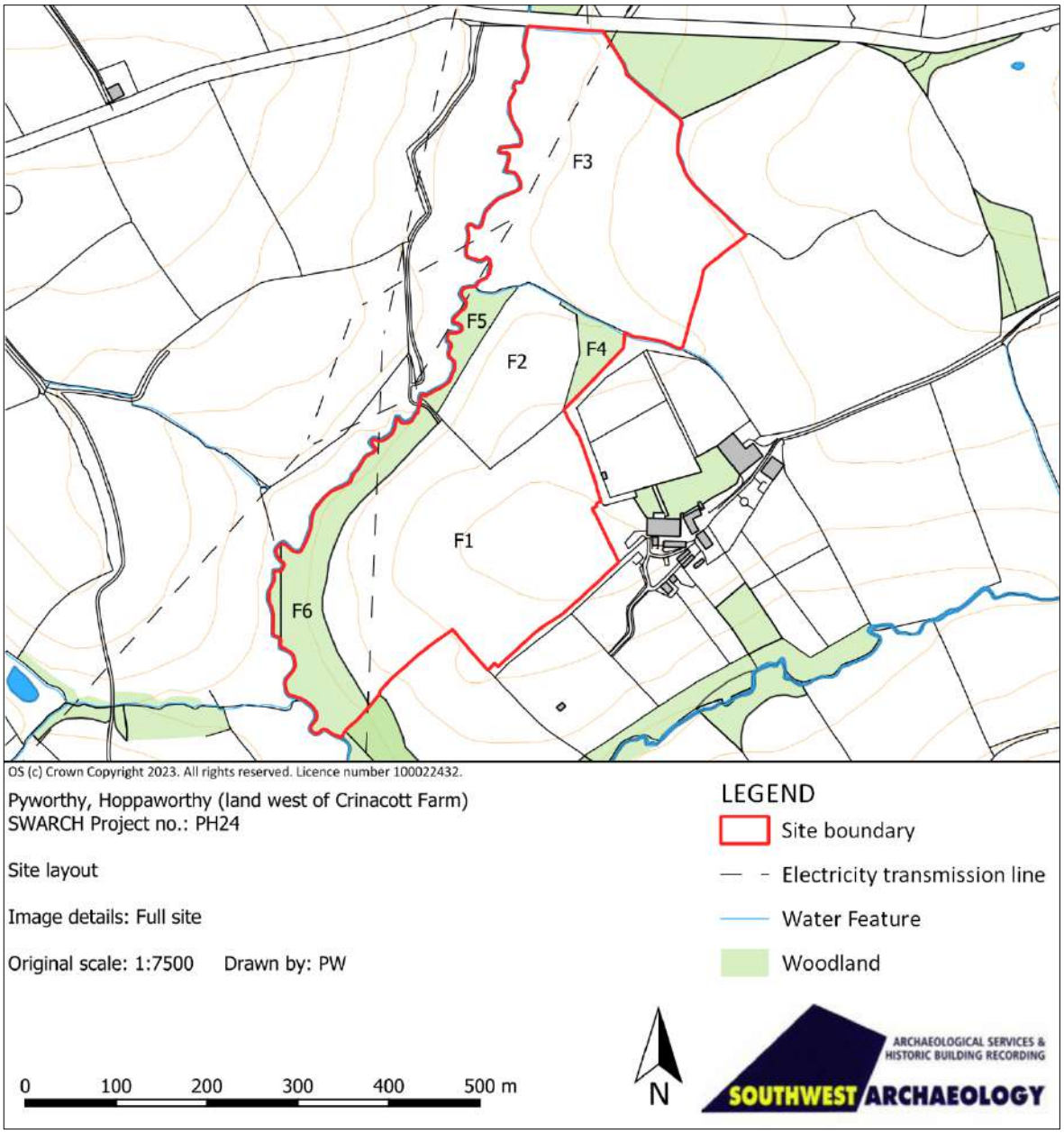


FIGURE 2: SITE PLAN SHOWING FIELD LAYOUT.

2.2 SITE INSPECTION (WALKOVER)

The survey area comprises six fields (F1-F6) forming an irregular parcel of land orientated broadly north-east to south-west to the west of Crinacott Farm. At the time of survey fields F1-F3 were under arable (pastoral) cultivation and fields F4-F6 comprised light woodland. All fields were heavily waterlogged for the duration of the survey. The topography of the site varies, from relatively flat to the west (F5-F6), to moderate-gradual slopes (sloping down to the west) across the remainder of the site. The site is bordered to the north by an unnamed road; to the east, south and west by agricultural land; with an existing solar farm to the east. The site is bounded to all sides by tree-lined hedgebanks with internal post and wire fencing.

The fields are large and open, and views outwards (and inwards) are possible from much of site. Views outwards are largely to the east and north-east, with Pyworthy Church Tower visible from much of the site (see Figure 3), but these views are largely across the existing solar arrays and buildings of Crinacott Farm. The ridgeline to the north limits views in this direction, whilst views south are limited. Views to the west, especially from within Field 3 are possible, but this boundary is more wooded and the views are dominated by the prominent pylons and power lines and the distant wind turbines.

Overhead cables cross the entire site (running variously between approximately north to south and north-east to south-west); their associated pylons present within the survey area.

A large earthwork mound is present towards the northern end of field F1, with hollows suggesting a former quarry pit and/or associated spoil mounds (visible on satellite imagery from the early 21st century). There were no other earthworks noted.

A memorial tablet is located by a mature tree on the north-western boundary (northern kink) of Field 3, this is in memory of Tony who died in 1996.

FIGURE 3: VIEW OUT ACROSS THE SITE IN FIELD 3, FROM THE SOUTH-WEST, PYWORTHY CHURCH TOWER IS INDICATED.

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*. A technical summary of the survey method, and data details and processing can be seen in Appendix 2.

2.4 RESULTS

Table 1 with the accompanying Figures 4-5 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 3.

TABLE 1: INTERPRETATION OF GRADIOMETER SURVEY DATA.

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
Field F1				
1	Weak positive, probable	Linear	Historic boundary – (double) ditch (& bank)	Indicative of cut and infilled features such as ditches, likely with flanking central banked/compacted material typical of traditional hedgebank construction. Orientated approximately north-east to south-west. Depicted on historic mapping. Responses of between +0.83nT and +6.11nT.
2	Moderate positive & negative, probable	Linear	Historic boundary – double ditch & bank	Indicative of cut and infilled features such as ditches flanking central banked/compacted material typical of traditional hedgebank construction. Orientated between approximately north-east to south-west and north-west to south-east. Depicted on historic mapping. Responses of between -18.42nT to -0.41nT and +0.02nT to +19.27nT.
3	Weak positive & negative, probable	Linear	Historic boundary – double ditch & bank	Indicative of cut and infilled features such as ditches flanking central banked/compacted material typical of traditional hedgebank construction. Orientated between approximately north to south and north-north-west to south-south-east. Depicted on historic mapping. Responses of between -7.15nT to -0.93nT and +0.13nT to +11.54nT.
4	Weak positive & negative, probable	Linear	Double ditch & bank	Indicative of cut and infilled features such as ditches flanking central banked/compacted material typical of traditional hedgebank construction. Orientated between approximately north-east to south-west and north-west to south-east. Responses of between -8.69nT to -0.16nT and +0.46nT to +11.87nT.
5	Weak to moderate positive & negative, probable	Linear	Double ditch & bank	Indicative of cut and infilled features such as ditches flanking central banked/compacted material typical of traditional hedgebank construction. Orientated approximately north-east to south-west. Responses of between -16.35nT to -0.11nT and +0.22nT to +10.85nT.
6	Weak positive & negative, probable	Linear	Ditch & bank	Indicative of cut and infilled features such as ditches with associated banked/compacted material. Orientated between approximately north-east to south-west and north-west to south-east. Responses of between -6.68nT to -0.21nT and +0.02nT to +7.78nT.
7	Weak positive, probable	Linear	Ditch	Indicative of cut and infilled features such as ditches. Orientated between approximately north-east to south-west and north-west to south-east. Responses of between +0.26nT and +9.64nT.
8	Weak positive,	Curvilinear	Ditch or ring-	Indictive of a cut and infilled feature such as a ditch. Possible

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
	probable		ditch/drip-gully	penannular form may indicate a ring-ditch or drip-gully associated with possible prehistoric settlement. Responses of between +0.10nT and +8.82nT.
9	Weak positive, possible	Linear	Ditch	Indicative of cut and infilled features such as ditches. Orientated between approximately north to south and north-east to south-west. Responses of between +0.11nT and +5.44nT.
10	Weak positive, probable	Linear	Ditch	Indicative of cut and infilled features such as ditches. Orientated approximately north-east to south-west. Responses of between +0.37nT and +9.56nT.
11	Weak positive, possible	Linear	Ditch or drainage feature	Indicative of cut and infilled features such as ditches. Orientated between approximately north-east to south-west and north-west to south-east. Responses of between +0.47nT and +10.07nT.
12	Moderate positive & negative, probable	Linear	Drainage features	Indicative of stone/ceramic features such as drains within cut and infilled trenches. Orientated between approximately north-east to south-west and north-west to south-east. Responses of between -0.14nT to -16.74nT and +0.12nT to +25.53nT.
13	Very strong bipolar (mixed response), probable	Discrete irregular	Quarry pit or spoil mound	Indicative of disturbed ground and disturbance caused by debris. Visible on satellite imagery. Responses of between -145.1nT to -0.16nT and +0.05nT to +129.04nT.
14	Very weak positive, possible	Linear	Agricultural activity or ditch	Indicative of cut and infilled features such as ditches. Weaker responses may indicate deeper cut agricultural features. Orientated between approximately north-east to south-west and north-west to south-east. Responses of between +0.02nT and +4.47nT.
15	Moderate positive, possible	Discrete	Pit or disturbed ground	Indicative of a discrete cut and infilled feature such as pit. Surrounding disturbance may indicate possible association as a modern pit or ground disturbance. Responses of between +0.69nT and +16.95nT.
	Weak positive & negative	Linear	Agricultural activity	Linear striations covering the field with regularity. Aligned between approximately north-east to south-west and north-west to south-east. Weak positive and negative responses suggest shallow ploughing. Responses of between -4.30nT and +7.72nT.
	Strong dipolar (mixed response)	Discrete	Ferrous anomaly	Indicative of metallic objects. Responses of between -103.64nT and +100.64nT.
	Strong bipolar (mixed response)	Irregular	Modern disturbance	Indicative of disturbed ground and disturbance caused by proximity to metallic fences and debris. Responses of between -104.50nT and +69.19nT.
Field F2				
16	Weak positive, possible	Curvilinear	Ditch	Indicative of a cut and infilled feature such as a ditch. Orientated approximately north-west to south-east. Responses of between +0.37nT and +9.41nT.
17	Very strong positive with associated negative (mixed response), probable	Linear	Modern utility	Indicative of buried modern utilities. Orientated between approximately north to south and north-west to south-east. Responses of between -102.41nT to -0.57nT and +0.38nT to +90.11nT.
	Weak positive & negative	Linear	Agricultural activity	Linear striations covering the field with regularity. Aligned between approximately north-east to south-west and north-west to south-east. Weak positive and negative responses suggest shallow ploughing. Responses of between -9.70nT and +14.14nT.
	Strong dipolar (mixed response)	Discrete	Ferrous anomaly	Indicative of metallic objects. Responses of between -101.31nT and +104.70nT.
	Strong bipolar (mixed response)	Irregular	Modern disturbance	Indicative of disturbed ground and disturbance caused by proximity to metallic fences and debris. Responses of between -106.21nT and +68.75nT.
Field F3				
18	Weak positive & negative, probable	Linear	Historic boundary – double ditch & bank	Indicative of cut and infilled features such as ditches flanking central banked/compacted material typical of traditional hedgebank construction. Orientated between approximately north-east to south-west and east to west. Depicted on historic mapping. Responses of between -3.19nT to -0.04nT and +0.12nT to +5.25nT.
19	Moderate positive & negative, probable	Linear	Historic boundary – double ditch & bank	Indicative of cut and infilled features such as ditches flanking central banked/compacted material typical of traditional hedgebank construction. Orientated approximately north to south. Depicted on historic mapping. Responses of between -13.47nT to -0.03nT and +0.15nT to +18.56nT.

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
20	Moderate positive & negative, probable	Linear	Drainage features	Indicative of stone/ceramic features such as drains within cut and infilled trenches. Orientated approximately west-north-west to east-south-east. Responses of between -16.27nT to -0.10nT and +0.16nT to +13.52nT.
21	Strong positive & negative, probable	Linear	Modern utility	Indicative of a buried modern utility. Orientated approximately east to west. Responses of between -17.07nT to -0.44nT and +0.02nT to +40.64nT.
	Weak positive & negative	Linear	Agricultural activity	Linear striations covering the field with regularity. Aligned approximately west-north-west to east-south-east. Weak positive and negative responses suggest shallow ploughing. Responses of between -6.16nT and +7.21nT.
	Strong dipolar (mixed response)	Discrete	Ferrous anomaly	Indicative of metallic objects. Responses of between -100.04nT and +98.42nT.
	Strong bipolar (mixed response)	Irregular	Modern disturbance	Indicative of disturbed ground and disturbance caused by proximity to metallic fences and debris. Responses of between -99.78nT and +102.55nT.

2.5 DISCUSSION

The survey identified 21 groups of anomalies across the site. These were predominantly linear ditch and/or bank features associated with phases of the existing and historic field-system, possible prehistoric or Romano-British settlement, medieval settlement, land drains and agricultural practices. Possible pits and/or tree-throws and anomalies associated with modern utilities, metallic debris and ground disturbance were also identified.

The general response variation across the site was between +/-5nt with occasional clear background geological variation up to +/-10nT. The response strength of the probable archaeological activity was moderate to low (typically between +/-15nT) though areas of stronger responses (up to *c.*+/-25nT) were present; the strength of the responses likely tempered by the waterlogged nature of the ground. The weaker nature of some of the anomalies may indicate that they are only likely to survive to a shallow depth.

The anomaly groups identified include: historic ditch and bank boundaries created during the 19th and 20th centuries and removed during the 20th/21st century; possible ditch and/or bank features associated with phases of the existing and historic field boundaries; further possible ditch and/or bank features associated with earlier phases of activity, including elements of possible medieval settlement and prehistoric settlement; as well as drainage features and modern utilities.

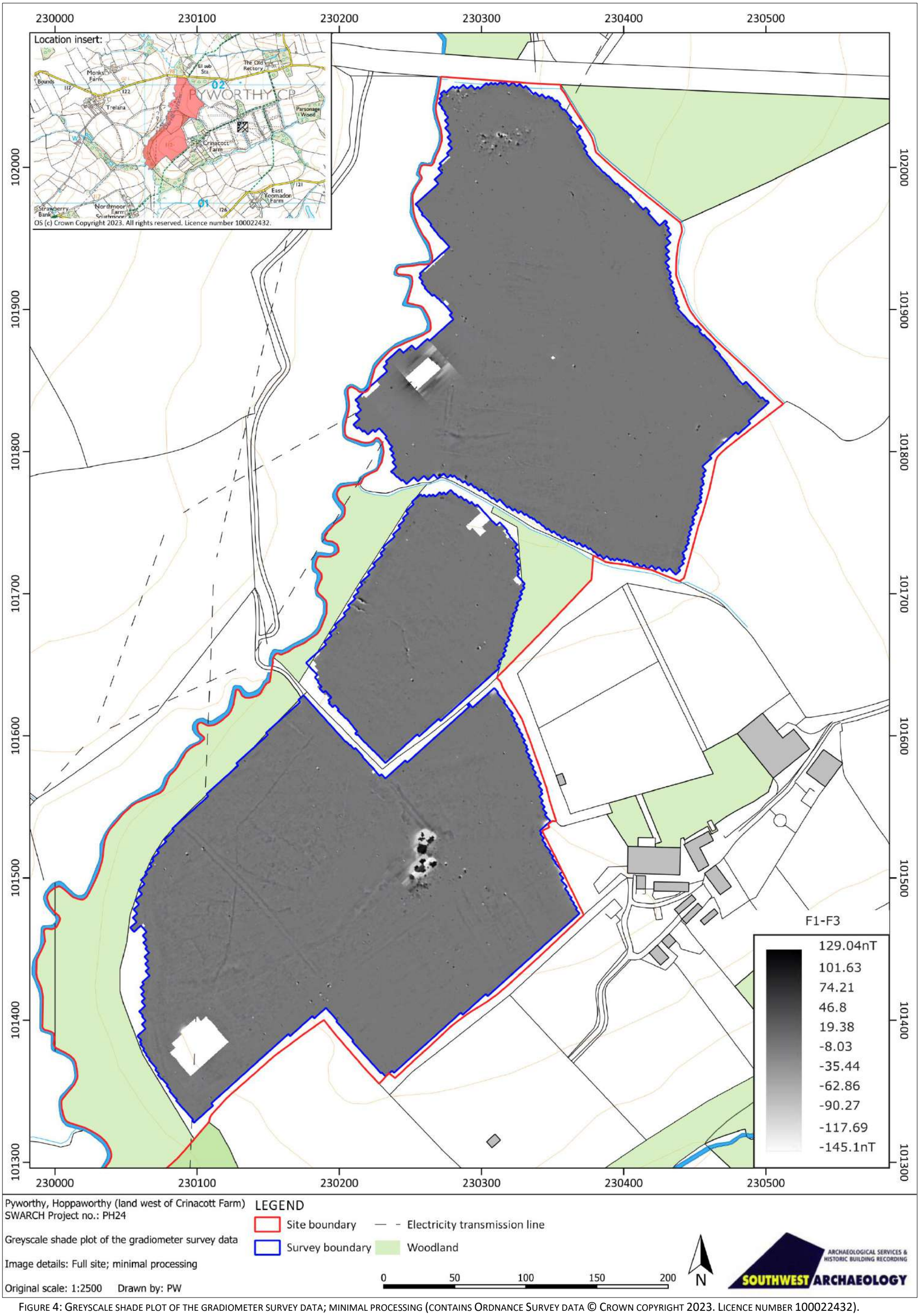
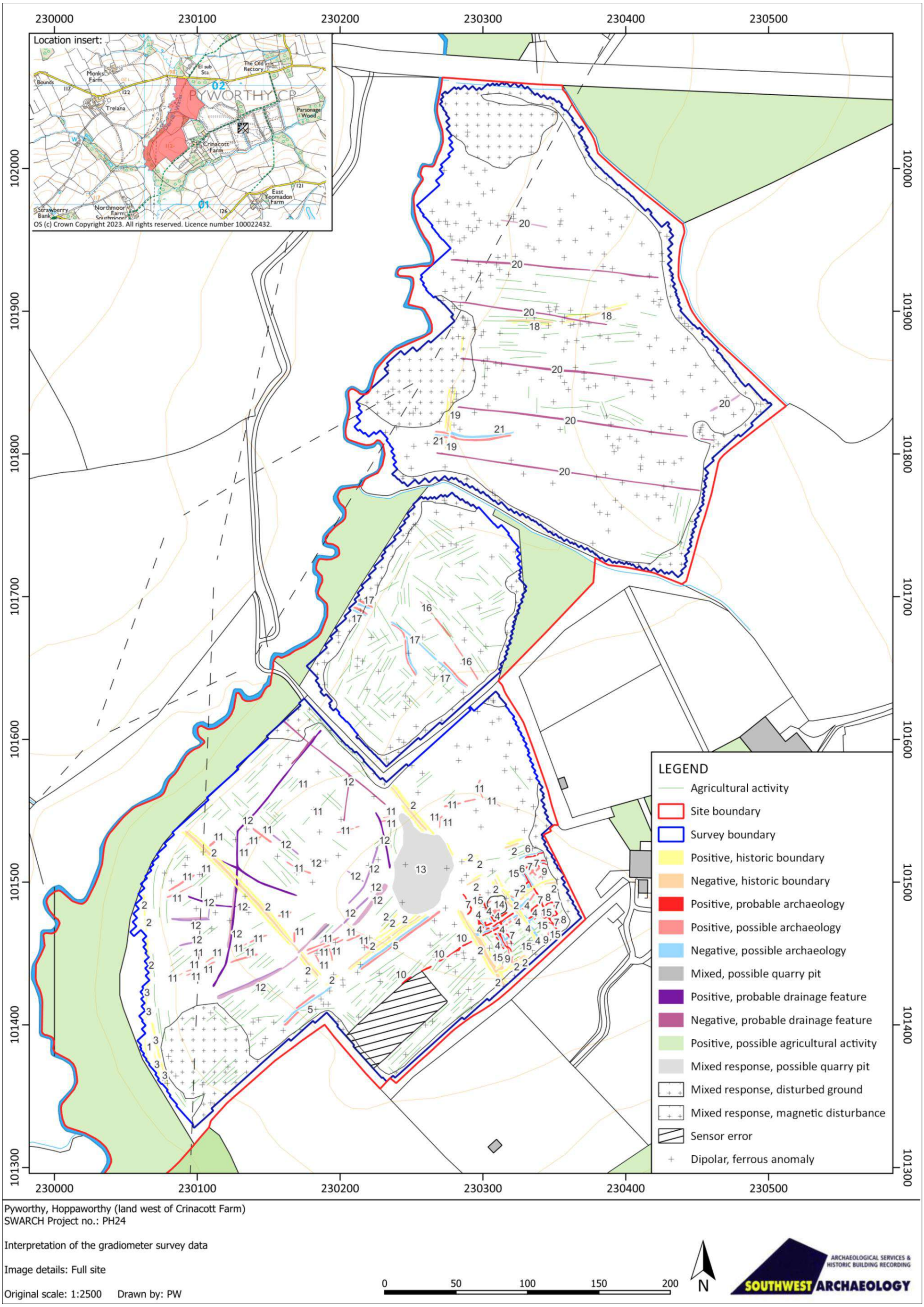


FIGURE 4: GREYSCALE SHADE PLOT OF THE GRADIOMETER SURVEY DATA; MINIMAL PROCESSING (CONTAINS ORDNANCE SURVEY DATA © CROWN COPYRIGHT 2023. LICENCE NUMBER 100022432).



Pyworthy, Hoppaworthy (land west of Crinacott Farm)
SWARCH Project no.: PH24

Interpretation of the gradiometer survey data

Image details: Full site

Original scale: 1:2500 Drawn by: PW

FIGURE 5: INTERPRETATION OF THE GRADIOMETER SURVEY DATA (CONTAINS ORDNANCE SURVEY DATA © CROWN COPYRIGHT 2023. LICENCE NUMBER 100022432).

2.6 ARCHAEOLOGICAL POTENTIAL AND IMPACT SUMMARY

Whilst none of the identified features can at this stage be dated, some can be confidently identified as historic field-boundaries. Several of the anomaly groups correspond with boundaries depicted on historic mapping, indicating that these features were in use from at least the middle of the 19th century and removed by the end of the century (Group 1) or during the later 20th century (Groups 2 and 18); whilst others are later in date, only appearing on historic mapping during the later 19th (Group 3) or early 20th centuries (Group 19) and removed by the end of the 20th century.

The historic field-pattern of the site is classified as *Modern Enclosures* and developed from probable medieval enclosures and strip-fields, the surviving boundaries of which are represented in the gently curving elements of the existing field-system. It is possible that some of the remaining ditch features (Groups 5, 10 and 16) may form part of these or earlier field-systems, having been removed by the mid-19th century, including as part of possible medieval settlement at Crinacott (Groups 4, 6-7). Further ditch and/or bank features appear on slightly offset alignments to those of the existing field boundaries (Group 9) and it is possible that these features formed part of a field-system pre-dating the existing one. This may have medieval origins, though the medieval landscape developed from field-systems created during the prehistoric period, and it is possible that some of these features evolved from these even earlier field-systems.

The density of features in the eastern corner of field F1, in the area immediately adjacent to Crinacott Farm (Groups 4 and 6-8) is striking and may represent the remains of a shrunken medieval settlement, now just the farm. Though the survey did not identify any anomalies that could be definitively identified as houses and farm buildings, it is possible that some remains survive. Other possible linear anomalies in this area (Group 15) may represent additional ditch features or deeper cut agricultural activity.

Within this same area a series of curvilinear anomalies which appear to describe a possible penannular feature (Group 8) suggestive of a ring-ditch or drip-gully of prehistoric date. Typically these may be considered Iron Age in date, though the identified anomalies may be associated with the later activity.

Further linear features across much of the site (Groups 12 and 20) appear set in a broadly herring-bone pattern typically suggestive of a post-medieval to modern drainage system; the negative nature of several of the anomalies suggests that they may be earlier stone drains. It is possible that some of the other ditch features, particularly some of the less clear examples (including Group 11) which follow the same or similar alignments may also form part of this systems.

The degree of preservation of the identified features appears to be moderate: whilst many of the anomaly responses appear only weak to moderate, this may be a reflection of the waterlogged ground conditions. Some features, however, are intermittent and barely discernible from the background geology and may only suffer partial survival to a shallow depth. Nevertheless it is possible that additional, even more ephemeral, features are masked by the background geology and modern disturbances.

The direct *effect* of any development would be the possible disturbance or destruction of archaeological features or deposits present within the footprint of the development; the *impact* of the development would depend on the presence and significance of archaeological features and deposits. Any disturbance or destruction would be permanent and irreversible.

The results of the geophysical survey would suggest that the archaeological potential for much of the site is *low*. Many of the identified features are likely to relate to historic phases of field-system, some reflecting historic boundaries depicted on cartographic sources from the mid-19th century, along with

drainage features likely to date to a similar period. The eastern corner of field F1, however, has a much *higher* potential, the density of features suggesting a possible shrunken medieval settlement associated with Crinacott Farm; other features in the area suggestive of possible prehistoric settlement.

Any development of the site is likely to encounter and destroy the buried archaeological resource (should it be present), and further mitigation through, in the first instance, targeted evaluation trenching would validate and clarify the results of the geophysical survey, particularly in reference to the eastern corner of field F1.

3.0 CONCLUSION

The site is located to the south-west of Pyworthy, across fields to the west of Crinacott Farm, on the west and south-west facing slopes to the east of Derrill Water. The Devon HLC describes the site as *Modern Enclosures* surrounded by areas of *medieval enclosure bases on strip-fields*. Prehistoric activity in the landscape is suggested by possible Bronze Age barrows; though much of the evidence reflects historic medieval and post-medieval field-systems.

The site comprises an area of *c.*17ha (*c.*13ha surveyed) covering six fields of pastoral land (fields F1-F3) and woodland (F4-F6). The geophysical survey identified 21 groups of anomalies across the site. These were predominantly linear ditch and/or bank features associated with phases of the existing and historic field-system, possible prehistoric or Romano-British settlement, medieval settlement, land drains and agricultural practices. Possible pits and/or tree-throws and anomalies associated with modern utilities, metallic debris and ground disturbance were also identified.

The anomaly groups identified include: historic ditch and bank boundaries created during the 19th and 20th centuries and removed during the 20th/21st century; possible ditch and/or bank features associated with phases of the existing and historic field boundaries; further possible ditch and/or bank features associated with earlier phases of activity, including elements of possible medieval settlement and potentially prehistoric settlement; as well as drainage features, modern utilities, pits and tree-throws.

The majority of the features represent undated phases of field-system and land under-drainage, tentatively suggested as being largely medieval and post-medieval in date with possible prehistoric elements. Much of the site shows only limited activity, though the density of possible features surrounding Crinacott Farm is suggestive of a shrunken settlement of possible medieval date, though the presence of a possible and tentatively interpreted ring-ditch/drip-gully may indicate additional prehistoric settlement.

The results of the geophysical survey would suggest that the archaeological potential for much of the site is *low*. Many of the identified features are likely to relate to historic phases of field-system, some reflecting historic boundaries depicted on cartographic sources from the mid-19th century, along with drainage features likely to date to a similar period. The eastern corner of field F1, however, has a much *higher* potential, the density of features suggesting a possible shrunken medieval settlement associated with Crinacott Farm; other features in the area are tentatively suggestive of possible prehistoric settlement.

Any development of the site is likely to encounter and destroy the buried archaeological resource (should it be present), and further mitigation through, in the first instance, targeted evaluation trenching would validate and clarify the results of the geophysical survey, particularly in reference to the eastern corner of field F1.

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APPENDIX 1: SUPPORTING PHOTOGRAPHIC EVIDENCE – SITE INSPECTION

1. F1, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE SOUTH-EAST (NO SCALE).

2. F1, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE NORTH (NO SCALE).

3. F1, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE EAST (NO SCALE).

4. F1, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE SOUTH-SOUTH-EAST (NO SCALE).

5. F1, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE SOUTH-WEST (NO SCALE).

6. F1, VIEW ALONG THE NORTHERN BOUNDARY; VIEWED FROM THE WEST (NO SCALE).

7. F1, VIEW ALONG THE NORTH-EASTERN BOUNDARY (SOUTH END); VIEWED FROM THE SOUTH-EAST (NO SCALE).

8. F1, VIEW ALONG THE SOUTH-EASTERN BOUNDARY; VIEWED FROM THE SOUTH (NO SCALE).

9. F1, VIEW ALONG THE SOUTH-WESTERN BOUNDARY; VIEWED FROM THE EAST-SOUTH-EAST (NO SCALE).

10. F1, VIEW ALONG THE WESTERN BOUNDARY; VIEWED FROM THE NORTH-NORTH-EAST (NO SCALE).

11. F1, DETAIL OF THE WESTERN BOUNDARY; VIEWED FROM THE EAST (NO SCALE).

12. F1, DETAIL OF THE WESTERN BOUNDARY; VIEWED FROM THE NORTH-NORTH-EAST (NO SCALE).

13. F1, DETAIL OF WATER TROUGH ALONG THE NORTHERN BOUNDARY; VIEWED FROM THE WEST (1M SCALE).

14. F2, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE NORTH-EAST (NO SCALE).

15. F2, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE SOUTH-SOUTH-WEST (NO SCALE).

16. F2, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE WEST-SOUTH-WEST (NO SCALE).

17. F2, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE NORTH (NO SCALE).

18. F2, VIEW ALONG THE NORTH-EASTERN BOUNDARY; VIEWED FROM THE EAST-SOUTH-EAST (NO SCALE).

19. F2, VIEW ALONG THE SOUTH-EASTERN BOUNDARY; VIEWED FROM THE SOUTH-WEST (NO SCALE).

20. F2, VIEW ALONG THE SOUTH-WESTERN BOUNDARY; VIEWED FROM THE SOUTH-EAST (NO SCALE).

21. F2, VIEW ALONG THE NORTH-WESTERN BOUNDARY; VIEWED FROM THE SOUTH-WEST (NO SCALE).

22. F3, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE EAST (NO SCALE).

23. F3, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE SOUTH-SOUTH-WEST (NO SCALE).

24. F3, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE SOUTH-EAST (NO SCALE).

25. F3, VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE NORTH-EAST (NO SCALE).

26. F3, VIEW ACROSS THE SURVEY AREA (SOUTH-WEST END); VIEWED FROM THE SOUTH (NO SCALE).

27. F3, VIEW ALONG THE NORTH-EASTERN BOUNDARY; VIEWED FROM THE SOUTH-EAST (NO SCALE).

28. F3, DETAIL OF THE NORTH-EASTERN BOUNDARY DITCH; VIEWED FROM THE NORTH-WEST (NO SCALE).

29. F3, VIEW ALONG THE SOUTH-EASTERN BOUNDARY (NORTH-EASTERN END); VIEWED FROM THE SOUTH-WEST (NO SCALE).

30. F3, VIEW ALONG THE SOUTH-EASTERN BOUNDARY (SOUTH-EASTERN END); VIEWED FROM THE SOUTH-WEST (NO SCALE).

31. F3, VIEW ALONG THE SOUTH-EASTERN BOUNDARY (SOUTHERN KINK); VIEWED FROM THE NORTH-WEST (NO SCALE).

32. F3, VIEW ALONG THE SOUTH-WESTERN BOUNDARY; VIEWED FROM THE SOUTH-EAST (NO SCALE).

33. F3, VIEW ALONG THE SOUTH-WESTERN BOUNDARY; VIEWED FROM THE NORTH-NORTH-EAST (NO SCALE).

34. F3, VIEW ALONG THE NORTH-WESTERN BOUNDARY; VIEWED FROM THE NORTH-EAST (NO SCALE).

35. F3, VIEW ALONG THE NORTH-WESTERN BOUNDARY (NORTHERN KINK); VIEWED FROM THE NORTH-WEST (NO SCALE).

36. F3, VIEW ALONG THE NORTH-WESTERN BOUNDARY (NORTH-EASTERN END); VIEWED FROM THE SOUTH-WEST (NO SCALE).

37. F3, DETAIL OF THE NORTH-WESTERN BOUNDARY DITCH; VIEWED FROM THE NORTH-EAST (NO SCALE).

39. F3, VIEW ACROSS THE SURVEY AREA SHOWING THE RAISED MOUND TOWARDS THE NORTHERN END OF THE FIELD; VIEWED FROM THE SOUTH-WEST (NO SCALE).

38. F3, VIEW OF THE RAISED MOUND TOWARDS THE NORTHERN END OF THE FIELD; VIEWED FROM THE SOUTH-SOUTH-WEST (NO SCALE).

40. F3, DETAIL OF THE POSSIBLE PIT WITHIN THE RAISED MOUND TOWARDS THE NORTHERN END OF THE AREA; VIEWED FROM THE SOUTH-WEST (1M SCALE).

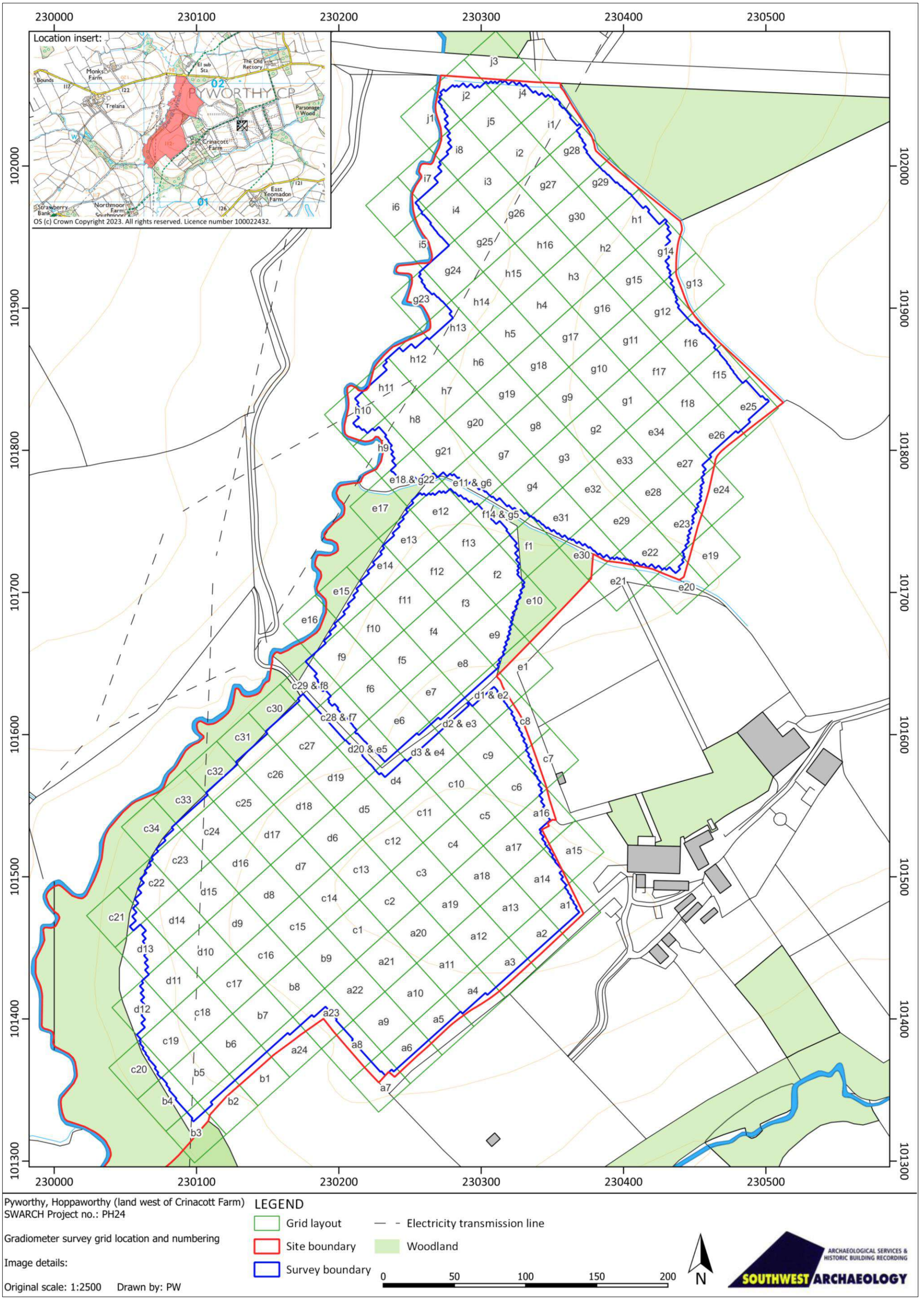
41. F3, DETAIL OF 1996(ISH) MEMORIAL STONE PLACED IN MEMORY OF 'TONY' ON THE NORTH-WESTERN BOUNDARY (NORTHERN KINK); VIEWED FROM THE SOUTH-WEST (NO SCALE).

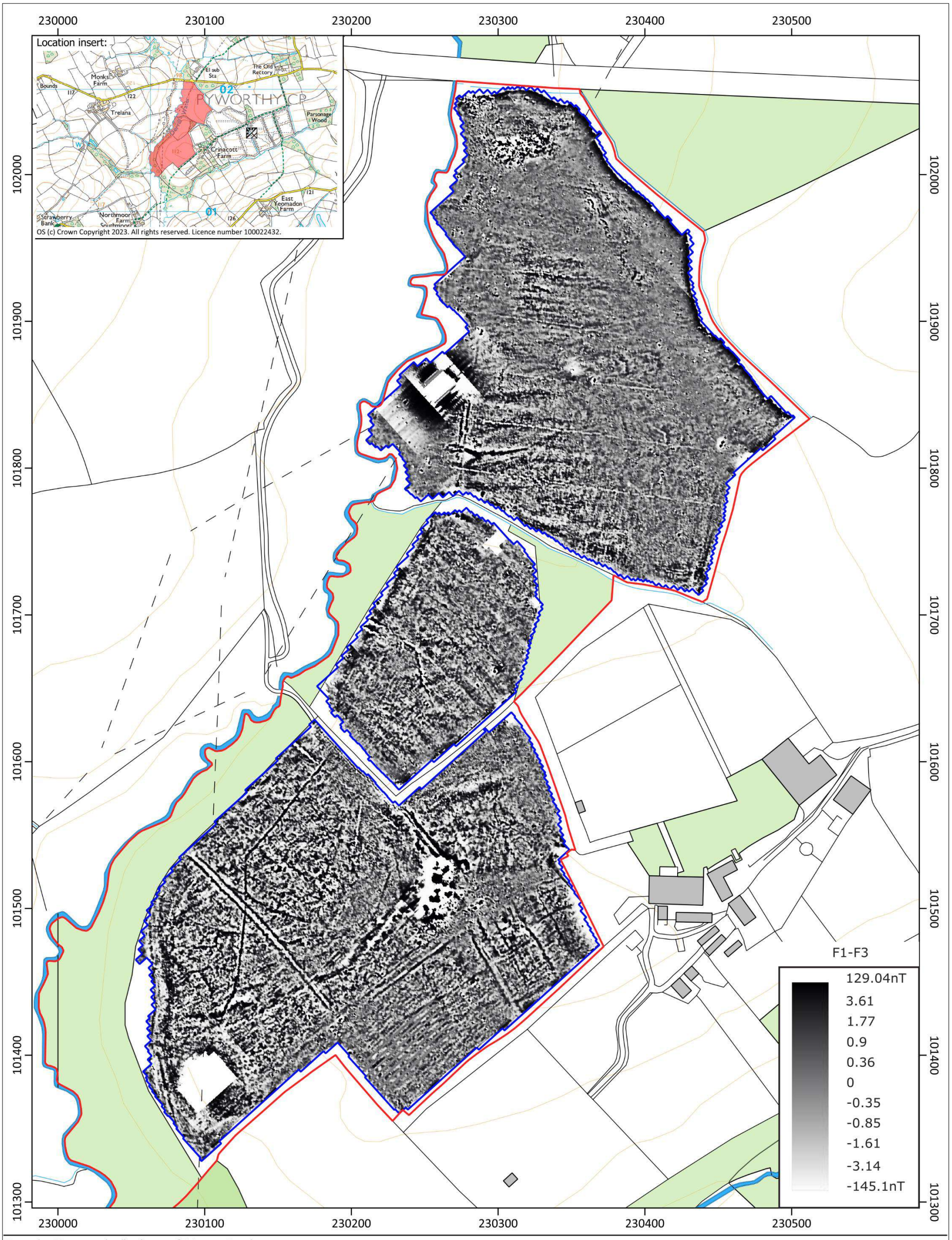
APPENDIX 2: METADATA FOR GEOPHYSICAL SURVEY PROCESSING

TECHNICAL SUMMARY OF MAGNETOMETRY SURVEY METHOD AND METADATA.

SWARCH Ref.	Site Name		Site Type	Period
PH24	Pyworthy, Hoppaworthy (Crinacott Farm), Torridge, Devon		-	-
Survey Type:	Magnetometry			
Equipment:	Twin sensor fluxgate gradiometer (Bartington Grad601)			
Software:	TerraSurveyor64 - Version 3.0.36.0			
Instrument Settings / Parameters:	Survey Mode: Range: Threshold: Sensors: Reject:	Grid Mode 100nT 2nT 2 50 Hz		
Collection parameters:	Sample Intervals: Traverse Intervals: Traverse Pattern: Traverse Direction: Adjustment frequency:	0.25m 1m Zigzag West / 270° 0.5-1ha		
Survey Size Metadata:	Individual Grid Size Composite Area: Area Surveyed:	30m x 30m 35.19ha / 690m x 510m 12.894ha		
Raw Response Metadata:	Max.: Min.: Standard Deviation: Mean: Median:	98.49nT -100.00nT 9.60nT 1.11nT 0.84nT		
Processed Response Metadata: pre-clipping	Max.: Min.: Standard Deviation: Mean: Median:	129.04nT -145.10nT 8.31nT -0.07nT 0.00nT		
Processes:	DeStripe all traverses, median Clip to +/-3 Standard Deviation De Stagger: Grids: a19.xgd a18.xgd By: 0 intervals, -25.00cm De Stagger: Grids: SubGrid (Area: Top 54, Left 240, Bottom 61, Right 359) By: 0 intervals, 25.00cm De Stagger: Grids: SubGrid (Area: Top 98, Left 240, Bottom 113, Right 359) By: 0 intervals, -25.00cm De Stagger: Grids: SubGrid (Area: Top 98, Left 240, Bottom 113, Right 359) By: 0 intervals, -25.00cm De Stagger: Grids: SubGrid (Area: Top 92, Left 240, Bottom 99, Right 359) By: 0 intervals, 25.00cm			

APPENDIX 3: ADDITIONAL GRAPHICAL IMAGES OF THE GRADIOMETER SURVEY





Pyworthy, Hoppaworthy (land west of Crinacott Farm)
SWARCH Project no.: PH24

Greyscale shade plot of the gradiometer survey data

Image details: Full site; clip to +/-3sd, bandweight equalized, gradiated shading
Original scale: 1:2500 Drawn by: PW

LEGEND

Site boundary

Survey boundary

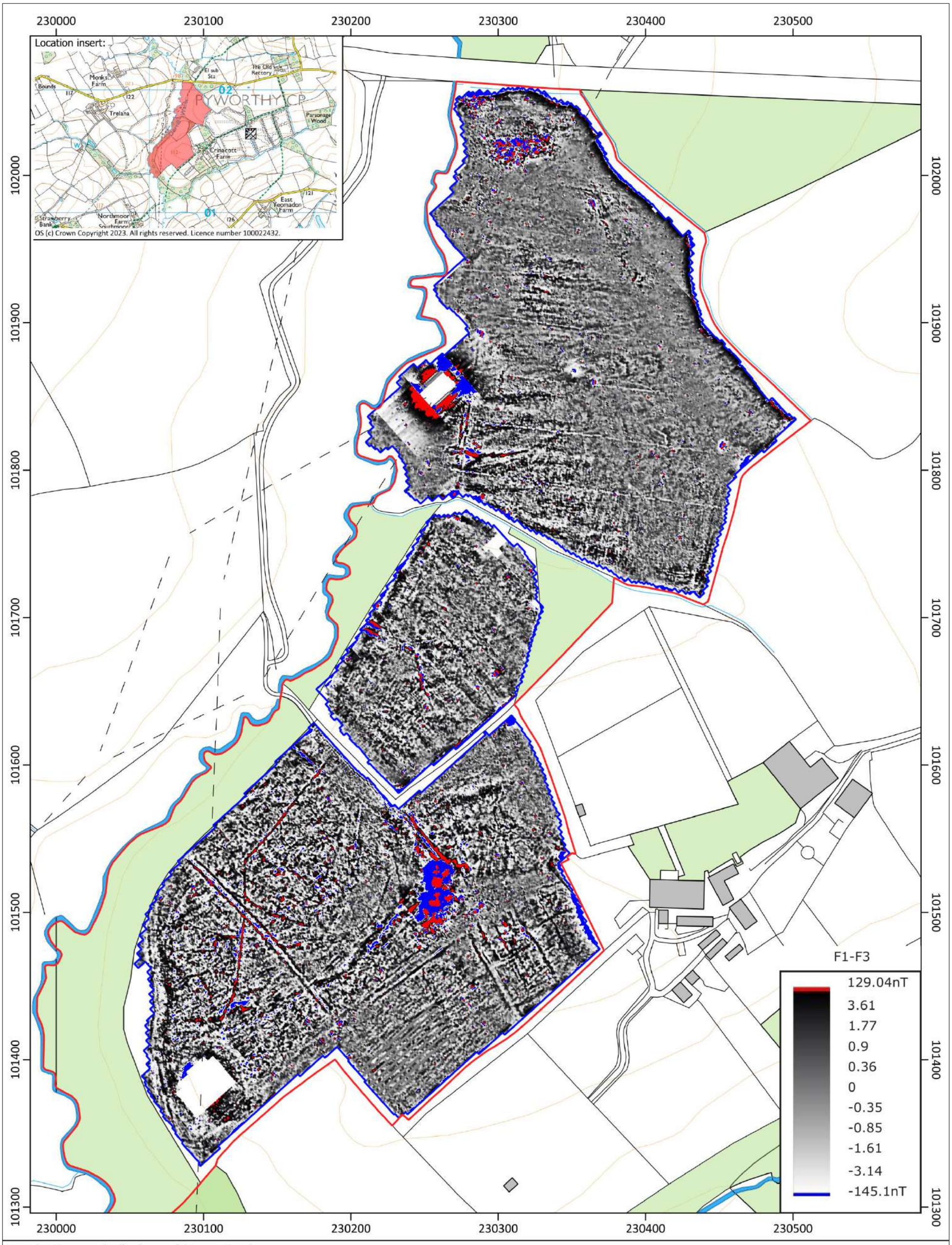
Electricity transmission line

Woodland

0 50 100 150 200

N

ARCHAEOLOGICAL SERVICES & HISTORIC BUILDING RECORDING
SOUTHWEST ARCHAEOLOGY


Location insert:
Monks Farm
Bounds
Trelana
El sub Sta
The Old Rectory
02
PYWORTHY CP
Parsonage Wood
Crinacott Farm
East Yeomadon Farm
01
Strawberry Bank
Northmoor Farm
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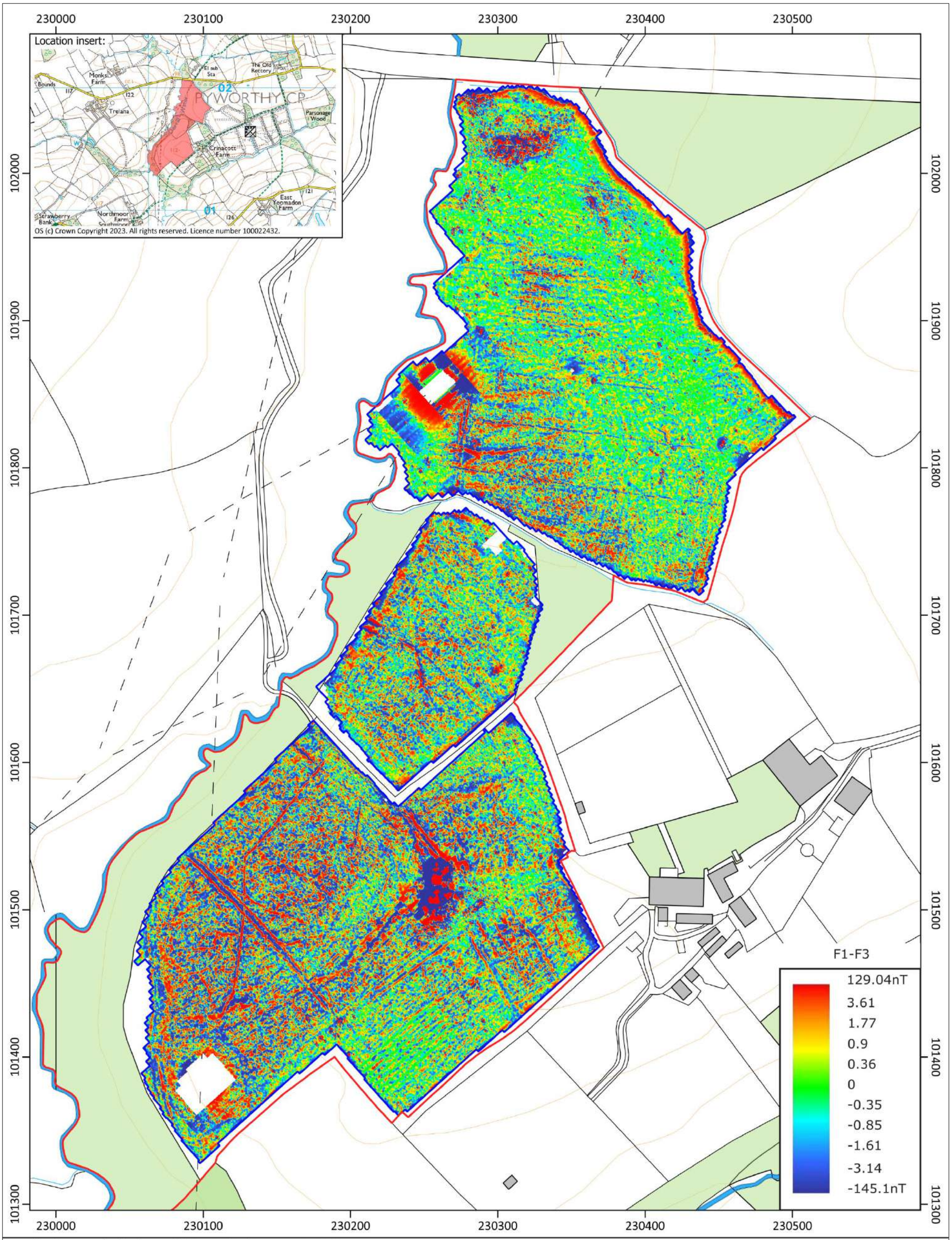
230000
230100
230200
230300
230400
230500
102000
101900
101800
101700
101600
101500
101400
101300
F1-F3
129.04nT
3.61
1.77
0.9
0.36
0
-0.35
-0.85
-1.61
-3.14
-145.1nT
Pyworthy, Hoppaworthy (land west of Crinacott Farm)
SWARCH Project no.: PH24
Red-grey-blue shade plot of the gradiometer survey data
Image details: Full site; clip to +/-3sd, bandweight equalized, gradiated shading
Original scale: 1:2500 Drawn by: PW
LEGEND
Site boundary
Survey boundary
Electricity transmission line
Woodland
0 50 100 150 200
N
ARCHAEOLOGICAL SERVICES & HISTORIC BUILDING RECORDING
SOUTHWEST ARCHAEOLOGY



Pyworthy, Hoppaworthy (land west of Crinacott Farm)
SWARCH Project no.: PH24

Red-green-blue shade plot of the gradiometer survey data

Image details: Full site; clip to +/-3sd, bandweight equalized, gradiated shading
Original scale: 1:2500 Drawn by: PW

LEGEND

Site boundary

Survey boundary

Electricity transmission line

Woodland

0 50 100 150 200

N

ARCHAEOLOGICAL SERVICES & HISTORIC BUILDING RECORDING
SOUTHWEST ARCHAEOLOGY

THE OLD DAIRY
HACCHE LANE BUSINESS PARK
PATHFIELDS BUSINESS PARK
SOUTH MOLTON
DEVON
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Appendix 3E – Written Scheme of Investigation (WSI) for Archaeological Investigation

LAND AT HOPPAWORTHY
PYWORTHY
TORRIDGE
DEVON

Written Scheme of Investigation

South West Archaeology Ltd WSI no. PH24WSIv2

ARCHAEOLOGICAL SERVICES & HISTORIC BUILDING RECORDING
SOUTHWEST ARCHAEOLOGY

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Land at Hoppaworthy, Pyworthy, Torridge, Devon
Written Scheme of Investigation

By Natalie Boyd
Checked by Dr. Samuel Walls MCIfA
Issued: 6th May 2024
Revised with updated trench plan: 8th May 2024

Produced by SWARCH for Neo-Environmental (the Client)

NON-TECHNICAL SUMMARY

This Written Scheme of Investigation (WSI) has been prepared by South West Archaeology Ltd. for Neo-Environmental (the Client). It details the methodology to be employed for a staged programme of archaeological investigation, commencing with evaluation trenching to be undertaken ahead of the proposed solar development of land at Hoppaworthy, Pyworthy, Torridge, Devon.

The site lies within an area recorded on the Devon Historic Landscape Characterisation (HLC) as Modern Enclosure: created out of probable medieval enclosures with sinuous medieval boundaries surviving in places; the surrounding fields including Medieval Enclosures based on strip fields: probably first enclosed with hedge-banks during the later middle ages, the curving form of the hedge-banks suggesting that earlier it may have been farmed as open strip-fields.

The Devon Historic Environment Record (HER) indicates that the site is situated within a prehistoric funerary landscape, with numerous barrows situated on high ground to the north and east; though only a small number of assets are recorded in the immediate vicinity, including: a possible Bronze Age barrow, medieval fields boundaries, pre-1900 Methodist Chapel and 19th century Rectory.

The HER indicates that whilst only a small amount of archaeological work has been carried out in the immediate area, it covers a large area. Desk-based assessment, geophysical survey (Urmaston 2013) and watching briefs (Brennon 2013; Cooke 2017) have been carried out across the land immediately to the north and east of Crinacott Farm ahead of the installation of a solar farm identifying historic field boundaries; the land to the west surrounding Trelana being subject to walkover survey (Balmond 2020), geophysical survey (Webb 2021) and evaluation trenching (Steinmetzer 2023) identifying prehistoric activity dating to the Neolithic period, Iron Age and Romano-British settlement and medieval settlement and field-systems.

The results of the geophysical survey carried out on the site by SWARCH in 2024 (Webb 2024) would suggest that the archaeological potential for much of the site is low. Many of the identified features are likely to relate to historic phases of field-system, some reflecting historic boundaries depicted on cartographic sources from the mid-19th century, along with drainage features likely to date to a similar period. The eastern corner of field F1, however, has a much higher potential, the density of features suggesting a possible shrunken medieval settlement associated with Crinacott Farm; other features in the area are tentatively suggestive of possible prehistoric settlement.

CONTENTS

FIGURES

1.0 INTRODUCTION

SITE NAME:	LAND AT HOPPAWORTHY
PARISH:	PYWORTHY
DISTRICT:	TORRIDGE
COUNTY:	DEVON
NGR:	CENTRED ON SS 30334 01680
PLANNING APPLICATION NO.	PRE-APPLICATION
OASIS NUMBER:	SOUTHWES1-523243
MUSEUM REF. NUMBER:	PENDING

1.1. PROJECT SCOPE

This document is the Written Scheme of Investigation (WSI) for Land at Hoppaworthy, Pyworthy, Torridge, Devon. It has been produced by South West Archaeology Ltd (SWARCH) for Neo-Environmental (the Client). It sets out the methodology for a staged programme of archaeological investigation, commencing with evaluation trenching and for related off-site analyses and reporting. The WSI and the schedule of work it proposes were drawn up in consultation with DCHET.

1.2. PLANNING CONTEXT

Works on this site are being undertaken ahead of a planning application for the development of the site to provide solar power.

1.3. PLANNING CONDITION(S)

In accordance with paragraph 205 of the *National Planning Policy Framework* (2023), and Policy EN4 of the Torridge Local Plan, consent may be granted, conditional upon a programme of archaeological work being undertaken. The recommended condition wording states:

No development shall take place until the developer has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation (WSI) which has been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out at all times in accordance with the approved scheme as agreed in writing by the Local Planning Authority.

Reason: To ensure, in accordance with Policy DM07 of the North Devon and Torridge Local Plan 2011 - 2031 and paragraph 211 of the National Planning Policy Framework (2023), that an appropriate record is made of archaeological evidence that may be affected by the development

1.4. PUBLIC AND ECONOMIC BENEFIT[1]

1.4.1. Social benefit can arise through learning and development, and community strength and local identity can be enhanced through contact with the historic environment.
1.4.2. Social benefit also arises from the net contribution to human knowledge (the *research dividend*) made by investigative works.
1.4.3. Economic benefit can arise from the regeneration of historic places, leading to the revitalisation of communities and neighbourhoods.
1.4.4. Economic benefit can also arise from beneficial publicity, particularly through via outreach, but also via public appreciation of the works and enhanced public understanding.

[1] CIfA 2015: *Professional Archaeology: a guide for clients*.

2.0 BACKGROUND INFORMATION

2.1. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The manor of Pyworthy, in the deanery of Holsworthy and hundred of Black Torrington, predates Domesday, when it was known as *Paorde* and was held by Alfred, and subsequently by Iudichael (Williams & Martin 2002). The manor has since belonged to several families, including those of Fitzjohn, Boniface and Arscot[2].

Historic mapping shows a relative continuity in the field-system surrounding the since the mid-19th century, with only a relatively few boundary removals in the following period. The 1838 tithe map and accompanying apportionment indicates that the site was split between the ownership of John Vowler Esq. as part of *Crinnacott* (occupied by William Sangwin) and Elizabeth Coham as part of *Lana* (occupied by Robert Wickett), with all of the land under arable cultivation.

The site lies within an area recorded on the Devon Historic Landscape Characterisation (HLC) as *Modern Enclosure: created out of probable medieval enclosures with sinuous medieval boundaries surviving in places*; the surrounding fields including *Medieval Enclosures based on strip fields: probably first enclosed with hedge-banks during the later middle ages, the curving form of the hedge-banks suggesting that earlier it may have been farmed as open strip-fields.*

The Devon Historic Environment Record (HER) indicates that the site is situated within a prehistoric funerary landscape, with numerous barrows situated on high ground to the north and east; though only a small number of assets are recorded in the immediate vicinity, including: a possible Bronze Age barrow, medieval fields boundaries, pre-1900 Methodist Chapel and 19th century Rectory.

The HER indicates that whilst only a small amount of archaeological work has been carried out in the immediate area, it covers a large area. Desk-based assessment, geophysical survey (Urmaston 2013) and watching briefs (Brennon 2013; Cooke 2017) have been carried out across the land immediately to the north and east of Crinacott Farm ahead of the installation of a solar farm identifying historic field boundaries; the land to the west surrounding Trelana being subject to walkover survey (Balmond 2020), geophysical survey (Webb 2021) and evaluation trenching (Steinmetzer 2023) identifying prehistoric activity dating to the Neolithic period, Iron Age and Romano-British settlement and medieval settlement and field-systems.

The results of the geophysical survey carried out on the site by SWARCH in 2024 (Webb 2024) would suggest that the archaeological potential for much of the site is low. Many of the identified features are likely to relate to historic phases of field-system, some reflecting historic boundaries depicted on cartographic sources from the mid-19th century, along with drainage features likely to date to a similar period. The eastern corner of field F1, however, has a much higher potential, the density of features suggesting a possible shrunken medieval settlement associated with Crinacott Farm; other features in the area are tentatively suggestive of possible prehistoric settlement.

The comments from DCHET read as follows:
I refer to the above pre-application enquiry. The area subject to this enquiry has been subject to a geophysical survey that has identified anomalies associated with the extant historic field system here. However, there are some anomalies that do not correspond to the historic pattern of fields here and may be associated with early settlement and agricultural activity in this landscape.

Similar features elsewhere in the county have been shown to be remains of prehistoric or Romano-British field systems. However, the information submitted in support of this application is not sufficient to enable an understanding of the significance of these heritage assets or of the impact of the proposed development upon these heritage assets. Given that the geophysical survey has identified anomalies indicative of archaeological features and that the significance of these heritage assets is as yet unknown the Historic Environment Team would advise that any future planning application is supported by the results of a programme of intrusive archaeological field evaluation.

[2] Lysons, 1822: *Magna Britannia, Vol 6: Devon.*

The requirement for any future planning application to be supported by sufficient heritage information is set out in the guidance for Policy DM07 in the North Devon and Torridge Local Plan (2018) and paragraphs 200 and 201 of the National Planning Policy Framework (2023). The additional information required to be provided by the applicant would be the results of a programme of intrusive field evaluation to test the anomalies identified as well as 'blanks' within the survey itself as with The results of these investigations will enable the presence and significance of any heritage assets within the proposed development area to be understood as well as the potential impact of the development upon them, and enable an informed and reasonable planning decision to be made by your Authority.

If an application is submitted without sufficient heritage information the Historic Environment Team may advise that any such application is refused by your Authority for the above reasons. I will be happy to discuss this further with you, the applicant or their agent. The historic Environment Team can also provide the applicant with advice on the scope of the works required, as well as contact details for archaeological contractors who would be able to undertake this work. Provision of detailed advice to nonhouseholder developers may incur a charge.

For further information on the historic environment and planning, and our charging schedule please refer the applicant to: http://new.devon.gov.uk/historicenvironment/development-management/.

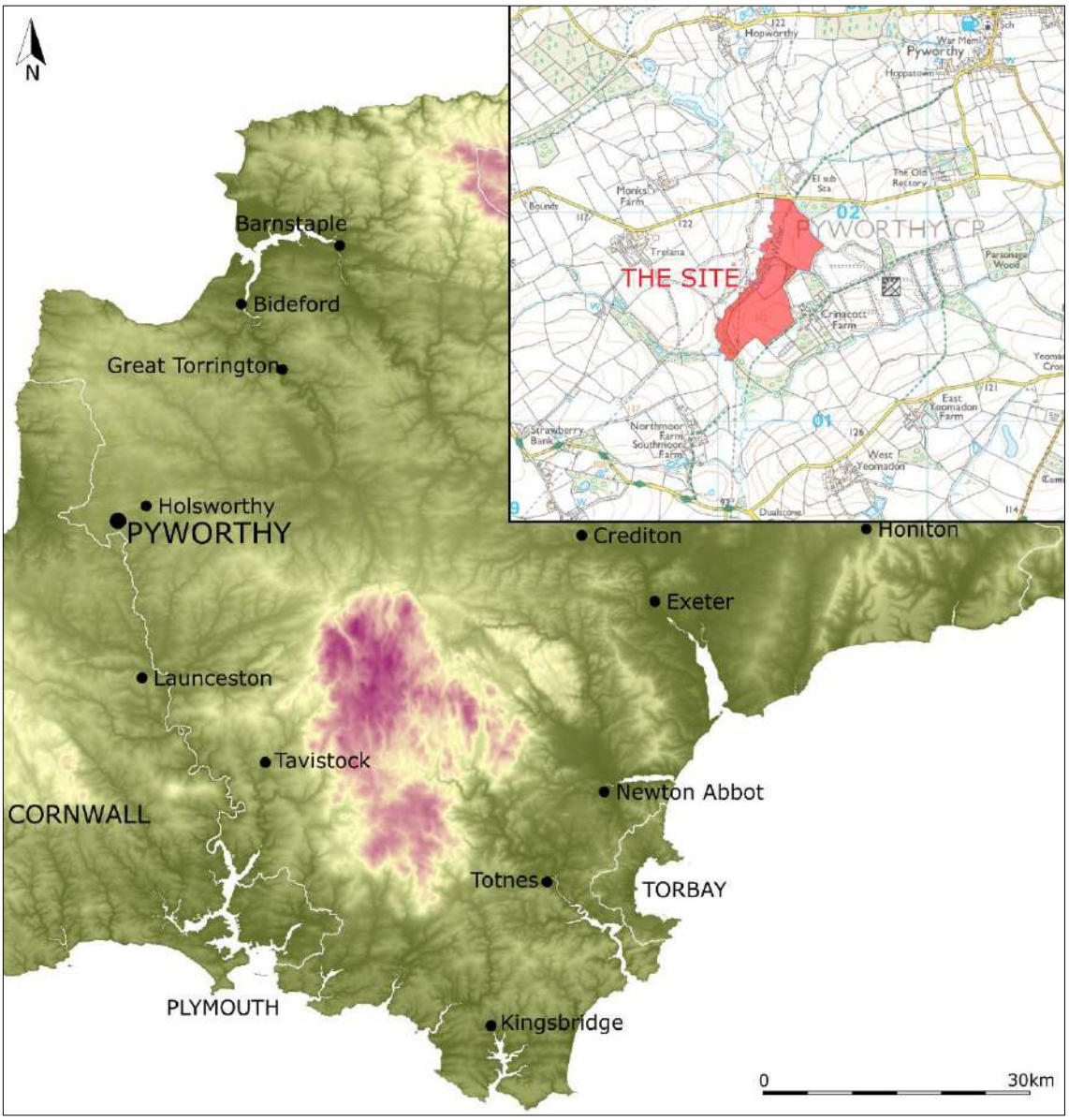

FIGURE 1: LOCATION MAP.

2.2. SITE LOCATION AND TOPOGRAPHY

The site is located to the north and west of Crinacott Farm, *c.*1km south of Hopworthy and *c.*1km south-west of Pyworthy. The site comprises three agricultural (pastoral) fields covering an area of *c.*17ha within a wider agricultural landscape, with the remnants of 19th century plantation scattered throughout. The land slopes down to the west towards Derril Water at a height of between *c.*100m and *c.*115m AOD. The soils of this area are recorded as the well-drained fine loamy soils over slate or slate rubble of the Denbigh 2 Association[3], which overlie the mudstone, siltstone and sandstones of the Bude Formation where it borders the mudstone and siltstone of the Crackington Formation; with superficial sand and gravel river terrace deposits in the valley bottom[4].

3.0 HEALTH & SAFETY AND ENVIRONMENTAL POLICIES

3.1. SWARCH H&S POLICIES

SWARCH is committed to the highest standards of health and safety awareness. Works will be carried out in accordance with the *Health and Safety at Work Act* 1974, the *Management of Health and Safety Regulations* 1992, and other relevant health and safety legislation, regulations and codes of practice. All SWARCH field staff hold current CSCS safety cards and EFAW or FAW qualifications. Specific RAMS and RA have been produced for this site and will be taken onto site with any SWARCH personnel.

3.2. SPECIFIC HEALTH & SAFETY MEASURES

3.2.1. The site archaeologist will undertake any site safety induction course provided by the Client.

3.2.2. These health and safety requirements will be observed at all times by any archaeological staff working on site, particularly when working around voids, unprotected falls, and damaged floors.

3.2.3. Appropriate PPE will be employed at all times. As a minimum: protective footwear and high-vis jacket, with hard hats as appropriate. Additional PPE (gloves, glasses etc.) will be worn as required.

3.2.4. If the structure appears unsafe, a dynamic risk assessment will be undertaken to determine how to proceed. If necessary, the archaeologist will leave the structure to enable additional safety measures to be implemented. The provision of these measures will be the responsibility of the Client.

3.3. ENVIRONMENTAL POLICIES

3.3.1. SWARCH is committed to the laws, regulations, and other policy mechanisms concerning environmental issues and sustainability. These issues include air and water pollution, solid waste management, biodiversity, ecosystem management, maintenance of biodiversity, the protection of natural resources, wildlife and endangered species, energy or regulation of toxic substances including pesticides and many types of industrial waste.

3.3.2. As a provider of archaeological services, SWARCH, its employees and subcontractors have a responsibility for the protection of archaeological heritage. In line with the CIfA *Environmental Protection Policy* para.1, SWARCH recognises that its responsibilities to the built heritage extend to the environment more generally, and that archaeological activities have the potential to affect the environment[5].

3.3.3. SWARCH will adhere to any reasonable environmental policies of the Client and, if applicable, will take steps to minimise environmental damage or pollution arising from fieldwork.

4.0 PROJECT AIMS AND TIMETABLE

4.1. PROGRAMME OF WORKS

[3] Soil Survey of England and Wales 1983: *Legend for the 1:250,000 Soil Map of England and Wales (a brief explanation of the constituent soil associations)*.
[4] British Geological Survey 2023: http://mapapps.bgs.ac.uk/geologyofbritain/home.html.
[5] CIfA 2016: *Policy Statements*.

4.1.1. Carry out evaluation trenching across the footprint of the proposed scheme;
4.1.2. If required, carry out further archaeological monitoring and recording;
4.1.3. Analyse and report on the results of the project as appropriate.

4.2. TIMETABLE

4.2.1. The fieldwork is likely to be carried out from week commencing 27th May 2024.

5.0 RESEARCH OBJECTIVES

5.1. RESEARCH OBJECTIVES

5.1.1. This project has the potential to feed into research aims as outlined in the regional archaeological framework document SWARF[6]. The specific research aims from SWARF relevant to this project are:
5.1.2. Research Aim 4: Encourage wide involvement in archaeological research and present modern accounts of the past to the public.

6.0 METHODOLOGY

6.1. ARCHAEOLOGICAL EVALUATION TRENCHING

6.1.1 Ten evaluation trenches (c.500m) will be excavated across the footprint of the proposed development (Fig. 2) to assess the survival of any archaeological features or deposits. This is informed by the results of the geophysical survey (Fig. 3). This work will be carried out in compliance with the relevant guidance[7][8][9]. The trench plan will be agreed with DCHET.

6.1.2 Wherever practicable topsoil stripping and all groundworks across the site will be undertaken by a 360° tracked mechanical excavator fitted with a toothless grading bucket. Any archaeological features exposed will be investigated and recorded by the site archaeologist.

6.1.3 Should it be required, likely as part of the conditions attached to any planning application, the extent and the nature of any further mitigation (area excavation/monitoring and recording) will be agreed with the DCHET and be based on the results of the evaluation trenching.

[6] Grove, J. & Croft, B. (eds.) 2012: *The Archaeology of South West England: South West Archaeological Research Framework; Research Strategy 2012-17*. Somerset County Council.
[7] CIfA 2023: *Standard for Archaeological Field Evaluation.*
[8] CIfA 2023: *Universal Guidance for Archaeological Field Evaluation.*
[9] DCHET 2022: https://www.devon.gov.uk/historicenvironment/development-management/specifications/archaeological-field-evaluation/

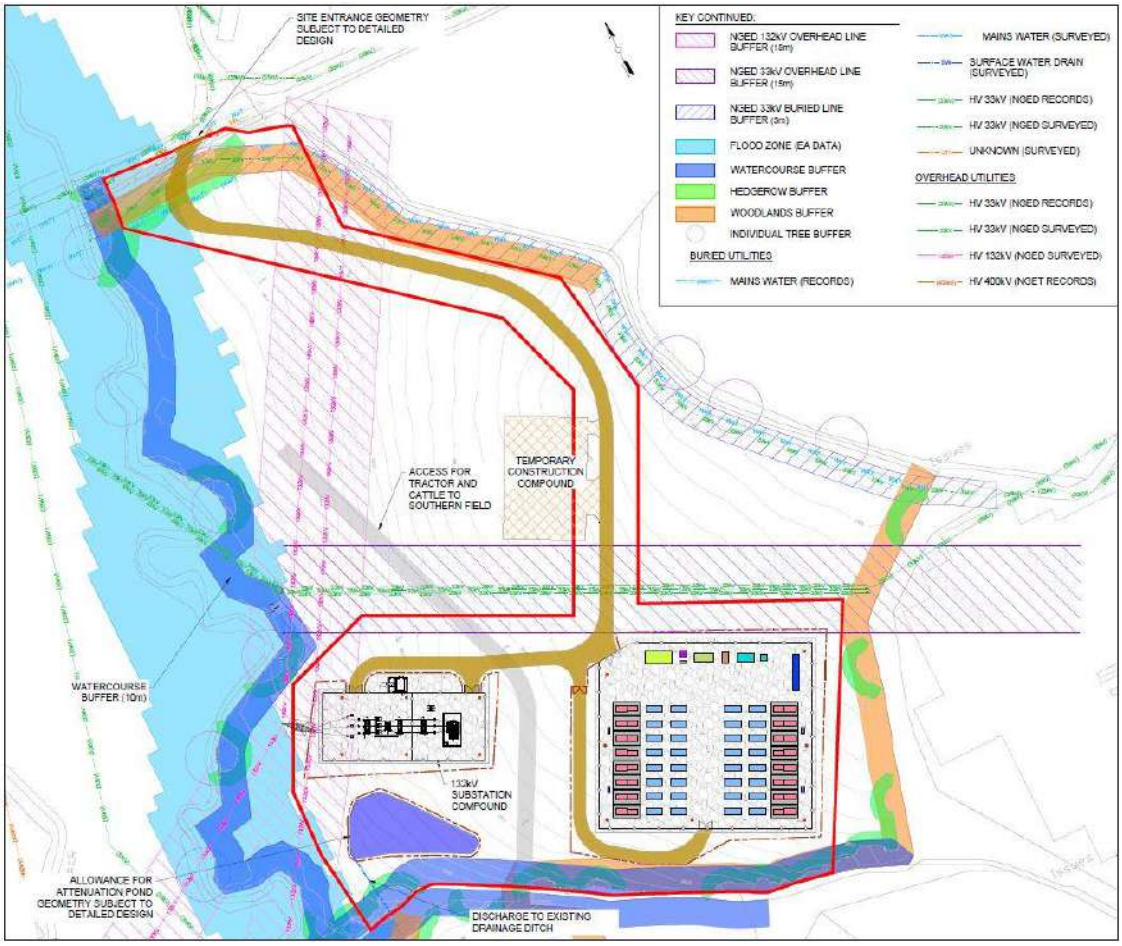

FIGURE 2: THE PROPOSED DEVELOPMENT LAYOUT; SUPPLIED BY THE CLIENT.

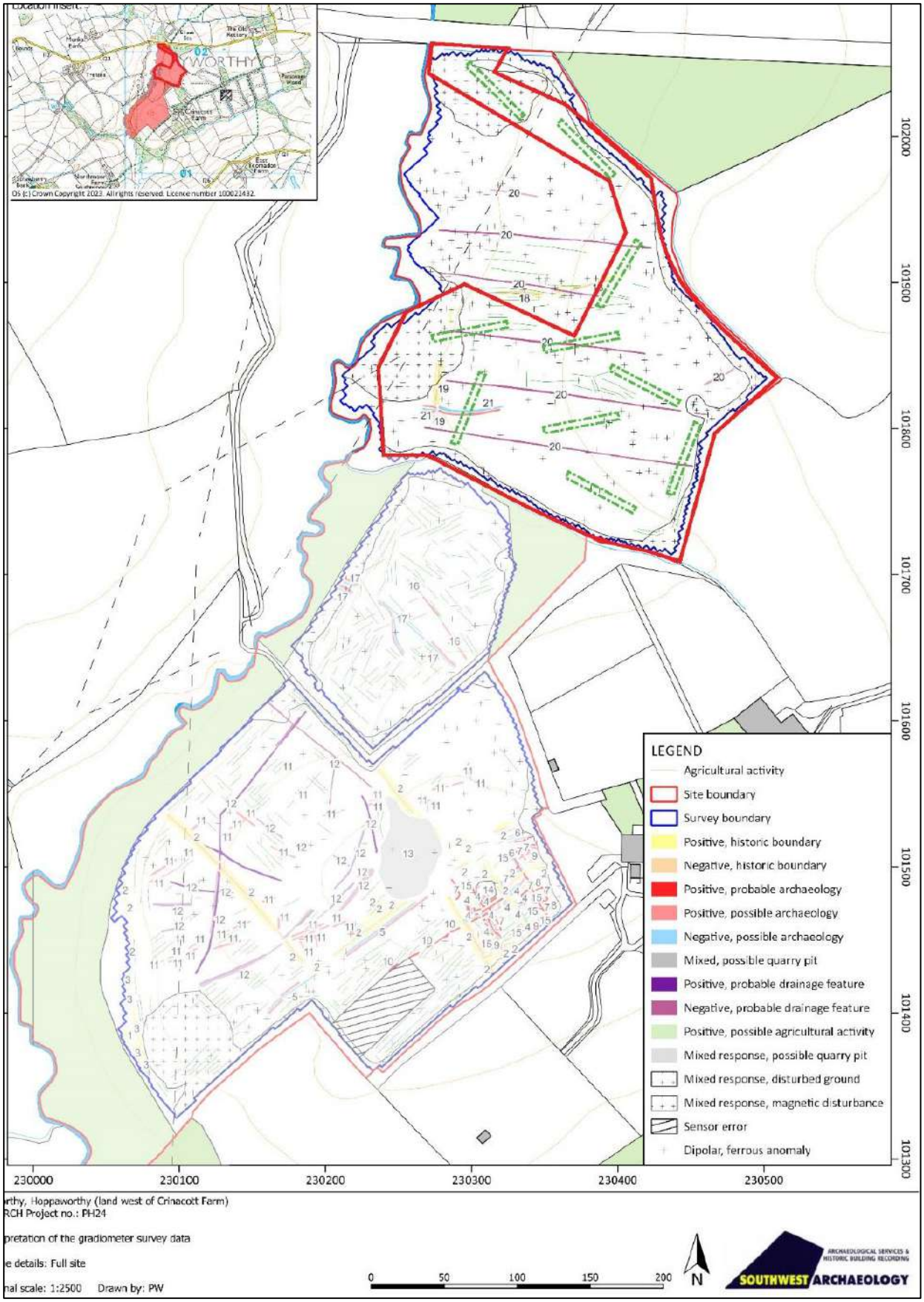

FIGURE 3: PROPOSED TRENCH PLAN, OVERLAIN ON THE GEOPHYSICAL SURVEY RESULTS.

6.2. METHODOLOGY

6.2.1 The Client will provide SWARCH with details of the location of existing services, groundworks

within the site area, and of the proposed construction programme.

6.2.2 All excavation of exposed archaeological features shall be carried out by stratigraphically by hand and recorded according to CIfA guidelines and best practice.

6.2.3 All archaeological features will be investigated and as a minimum:
i) discrete features will be fully excavated,
ii) and long linear features will be sample excavated along their length – with investigative excavations distributed along the exposed length of any such feature and to investigate terminals, junctions and relationships with other features.

6.2.4 Should the above proportions not yield sufficient information to allow the form and function of archaeological features/deposits to be determined, full excavation of such features/deposits may be required. Additional excavation may also be required for the taking of palaeo-environmental samples and recovery of artefacts. Any variation of the above will be undertaken in consultation with DCHET.

6.2.5 Spoil will be examined for the recovery of artefacts; a metal detector will be used to enhance the recovery of metal finds.

6.2.6 If articulated human remains are revealed, these will be left in-situ, covered and protected, and the Coroner notified. Removal will take place in line with the appropriate Ministry of Justice and environmental health regulations. A MoJ licence will be obtained prior to removal.

6.2.7 Any finds identified as treasure or potential treasure, including precious metals, groups of coins or Prehistoric metalwork, will be dealt with according to the Treasure Act 1996 Code of Practice (3rd Revision) (Dept for Culture Media and Sport) revised by the Treasure (Designation) (Amendment) Order 2023. Where removal cannot be effected on the same working day as the discovery, suitable security measures will be taken to protect the finds from theft.

6.3. AREA EXCAVATION

Targeted area excavations of areas of high archaeological significance or potential encountered in the evaluation trenching may be required. The topsoil strip will be undertaken by 360° tracked excavator with toothless grading bucket to the depth of *in situ* subsoil/weathered natural or archaeological deposits, whichever is highest in the stratigraphic sequence. In exceptional circumstances, where materials of a particularly compact nature are encountered, these may be removed with a toothed bucket subject to agreement with archaeological staff on site. Any archaeological features exposed will be hand-excavated and recorded by the site archaeologist. The work will be carried out in compliance with the relevant guidance[10][11][12][13][14] (see methodology 6.5, below).

6.4. MONITORING AND RECORDING

If required, all groundworks will be subject to archaeological monitoring and recording. Groundworks should be undertaken by a 360° tracked or wheeled JCB-type mechanical excavator fitted with a toothless grading bucket (where possible) under the supervision and control of the site archaeologist to the depth of formation, the surface of in situ subsoil/weathered natural or archaeological deposits whichever is highest in the stratigraphic sequence. Should archaeological deposits be exposed, machining will cease in that area to allow the site archaeologist to investigate the exposed deposits.

6.5. METHODOLOGY:

6.5.1 The archaeological work will be carried out in accordance with the Chartered Institute for Archaeologists Code, Regulations and Standards & Guidance for Archaeological Excavation[15][16],

[10] CIfA 2023: *Standard for Archaeological Excavation*.
[11] CIfA 2023: *Universal Guidance for Archaeological Excavation.*
[12] CIfA 2023: *Standard for Archaeological Field Evaluation.*
[13] CIfA 2023: *Universal Guidance for Archaeological Field Evaluation.*
[14] DCHET 2022: https://www.devon.gov.uk/historicenvironment/development-management/specifications/archaeological-excavation/
[15] CIfA 2023: *Standard for Archaeological Excavation*.
[16] CIfA 2023: *Universal Guidance for Archaeological Excavation.*

Archaeological Field Evaluation[17][18] and Archaeological Monitoring and Recording[19][20], as well as DCHET specifications 2022

6.5.2 Spoil will be examined for the recovery of artefacts, including the use of a metal detector.

6.5.3 All excavation of exposed archaeological features shall be carried out by hand, stratigraphically, and fully recorded by context to CIfA guidelines. All features shall be recorded in plan and section at scales of 1:10, 1:20 or 1:50. All scale drawings shall be undertaken at a scale appropriate to the complexity of the deposit/feature and to allow accurate depiction and interpretation. An adequate photographic record of the excavation will be prepared.

6.5.4 All archaeological features will be investigated and as a minimum:
i) discrete features will be fully excavated,
ii) and long linear features will be sample excavated along their length – with investigative excavations distributed along the exposed length of any such feature and to investigate terminals, junctions and relationships with other features.

6.5.5 Should the above excavation not yield sufficient information to allow the form and function of archaeological features/deposits to be determined, full excavation of such features/deposits may be required. Additional excavation may also be required for the taking of palaeoenvironmental samples and recovery of artefacts. Any variation of the above will be undertaken in consultation with DCHET.

6.5.6 Artefacts will be bagged and labelled on site. Unstratified post-1800 pottery may be discarded on site after a representative sample has been retained. Following post-excavation analysis and recording, further material may be discarded, subject to consultation with the appropriate specialists and the receiving Museum;

6.5.7 Should archaeological or palaeoenvironmental remains be exposed, the site archaeologist will investigate, record and sample such deposits.

6.5.8 The project will be organised so that specialist consultants who might be required to conserve or report on finds or advise or report on other aspects of the investigation (e.g. palaeoenvironmental analysis) can be called upon and undertake assessment and analysis of such deposits - if required. On-site sampling and post-excavation assessment and analysis will be undertaken in accordance with Historic England's guidance in *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation 2011*.

6.5.9 Human remains will be left *in-situ*, covered and protected. Removal will only take place under appropriate Ministry of Justice and environmental health regulations. Such removal will be in compliance with the relevant primary legislation.

6.5.10 Any finds identified as treasure or potential treasure, including precious metals, groups of coins or Prehistoric metalwork, will be dealt with according to the Treasure Act 1996 Code of Practice (3rd Revision) (Dept for Culture Media and Sport) revised by the Treasure (Designation) (Amendment) Order 2023. Where removal cannot be effected on the same working day as the discovery, suitable security measures will be taken to protect the finds from theft.

6.5.11 In the event of particularly significant discoveries, DCHET will be informed and a site meeting between the agent, DCHET and the client/applicant will be held to determine the appropriate response.

6.6. SAMPLING STRATEGY

6.6.1 Where suitable deposits are exposed then samples will be collected in preparation for scientific assessment/analysis/dating. Sampling will be undertaken in line with the relevant guidance[21]. It is envisaged that samples will either consist of bulk soil samples [sampling 100% or 40 litres, in labelled 5 litre plastic sample tubs] or vertical sediment columns [monolith tins].

6.6.2 Suitable deposits are taken to include contexts where sampling will recover material for dating or palaeo-economic evidence (e.g. sealed pits, basal deposits), or waterlogged/well-preserved

[17] CIfA 2023: *Standard for Archaeological Field Evaluation.*
[18] CIfA 2023: *Universal Guidance for Archaeological Field Evaluation.*
[19] CIfA 2023: *Standard for Archaeological Monitoring and Recording.*
[20] CIfA 2023: *Universal Guidance for Archaeological Monitoring and Recording.*
[21] English Heritage 2011: *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation*.

sediments with potential for palaeo-environmental remains.

6.6.3 Bulk samples will be stored in sealed containers until off-site processing by SWARCH personnel. The flot will be separated and the residue examined for small artefacts/ecofacts/hammerscale. The residue will be disposed of appropriately, and the flot/remnant forwarded for specialist analysis.

6.6.4 Monolith samples will be stored under controlled conditions before delivery to the appropriate specialist.

6.6.5 The project will be organised so that specialist consultants, and the regional Historic England science advisor, can be called upon during the works as necessary.

6.7. ARCHAEOLOGICAL RECORDING

6.7.1 Standardised single recording sheets will be employed.

6.7.2 Survey drawings in plan, section and profile at 1:10, 1:20, 1:50 and 1:100 will be prepared, as ap

6.7.3 propriate to the size and/or significance of archaeological features.

6.7.4 A photographic record of the excavation and will be prepared. This will include photographs illustrating the principal features and finds discovered, in detail and in context. The photographic record will also include working shots to illustrate more generally the nature of the archaeological operation mounted. All photographs of archaeological and architectural detail will feature an appropriately sized scale.

6.7.5 Survey and location of features (metal finds to sub-metre accuracy).

6.7.6 All stratified finds, except when clearly modern, will be retained, bagged and labelled on site. Unstratified post-1800 material may be discarded on site, but a representative sample will be retained.

6.7.7 Spoil will be examined for the recovery of artefacts; a metal detector may be used to enhance the recovery of metal finds.

6.7.8 All retained artefacts will be processed (washed, identified, weighed, counted) and assessed for their stratigraphic and research potential.

6.7.9 Any variation of the above shall be agreed in consultation with DCHET.

7.0 MONITORING

7.1.1 SWARCH will inform DCHET with at least two weeks' notice of when the fieldwork is scheduled to take place, unless otherwise agreed. If significant architectural features are exposed or observed, or if significant archaeological features or deposits are uncovered, SWARCH will immediately liaise with the Client and DCHET to determine the most satisfactory way to proceed and determine any variation of method.

7.1.2 Monitoring will continue until the deposition of the site archive and finds, and the satisfactory completion of an OASIS report.

8.0 REPORTING

8.1. ARCHIVE REPORT

8.1.1 The full report will include the following elements:

8.1.2 A report number, date and the OASIS record number;

8.1.3 A non-technical summary of the results

8.1.4 An introduction to the project and the background to the project;

8.1.5 A description and illustration of the site location;

8.1.6 A methodology of the works undertaken, and an evaluation of that methodology;

8.1.7 Plans and reports of all documentary and other research undertaken;

8.1.8 A location plan and overall site plan;

8.1.9 A plan showing the location of areas subject to archaeological recording;

8.1.10 Detailed plans of areas of the site in which archaeological features are recognised along with adequate OD spot height information. These will be at an appropriate scale to allow the nature of the features exposed to be shown and understood. Plans will show the site and features/deposits in relation to north. Archaeologically sterile areas will not be illustrated unless this can provide information on the development of the site stratigraphy or show palaeo-environmental deposits

that have influenced the site stratigraphy;

8.1.11 Section drawings of deposits and features, with OD heights, at scales appropriate to the stratigraphic detail to be shown and must show the orientation of the drawing in relation to north/south/east/west. Archaeologically sterile areas will not be illustrated unless they can provide information on the development of the site stratigraphy or show palaeo-environmental deposits that have influenced the site stratigraphy;

8.1.12 A description of any remains and deposits identified including an interpretation of their character and significance;

8.1.13 Analysis, as appropriate, of significant artefacts, environmental and scientific samples;

8.1.14 A summary table and descriptive text showing the features, classes and numbers of artefacts recovered and soil profiles with interpretation;

8.1.15 The photographic archive will be presented as an appendix to the main body of the report;

8.1.16 An interpretation of the results in the appropriate context;

8.1.17 A summary of the contents of the project archive and its location;

8.1.18 A bibliography;

8.1.19 The DCHET will receive the report within three months of completion of fieldwork, dependant on the provision of any specialist reports etc, the production of which may exceed this period. If a substantial delay is anticipated then an interim report will be produced and a revised submission date for the final report agreed with the DCHET.

8.2. PUBLICATION AND DISSEMINATION

8.2.1 Copies of the report(s) detailing the results of these investigations will be submitted to the OASIS (*Online Access to the Index of Archaeological Investigations*) database under reference Southwes1-523243 within 3 months of completion of fieldwork, unless longer as dictated by specialist reporting, etc.

8.2.2 It is not anticipated that the results of this work will merit formal dissemination. However, if significant archaeological remains are encountered these will be published within a suitable regional or period specific journal. If little of note is encountered a note may still be placed in the newsletter of the Devon Archaeological Society.

8.3. PUBLIC PARTICIPATION

8.3.1 The limitations of this programme of fieldwork renders it unsuitable for public participation; however there may be local interest in the results of the recording;

8.3.2 Where there is local interest, SWARCH personnel routinely give evening talks to local historical and/or archaeological societies.

9.0 ARCHIVE

9.1.1 On completion of the project an ordered and integrated site archive will be prepared in accordance with the appropriate guidelines[22];

9.1.2 The archive will normally consist of two elements: the digital archive and the physical archive;

9.1.3 Should a material (artefact) archive will be generated during the recording work it will be deposited with the Museum of Barnstaple and North Devon (MBND) in line with their accessioning and selection guidelines, using reference number PENDING;

9.1.4 Should a material archive be generated (comprising the retained artefacts/samples and the hardcopy paper record (if requested)) it will be cleaned (or otherwise treated), ordered, recorded, packed and boxed in accordance with the deposition standards and selection strategies of the MBND, and in a timely fashion. Should SWARCH be unable to attain a selection strategy from the Museum, specialists will be consulted to achieve an appropriate strategy in line with best practice;

9.1.5 The digital archive, including a copy of the final report, will be deposited with the Archaeology Data Service (ADS) in compliance with their standards and requirements and according to Historic England guidance for digital photography;

9.1.6 South West Archaeology Ltd. will retain copyright of the reports, documents and photographic images under the terms of the *Copyright, Designs and Patents Act 1988* with all rights reserved.

[22] Historic England 2015: *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide*

Licence is hereby granted to the ADS for the storage and dissemination of the digital archive;

9.1.7 SWARCH will, on behalf of the MBND, obtain a written agreement from the landowner to transfer title to all items in a material archive to the receiving museum;

9.1.8 If ownership of all or any finds is to remain with the landowner, provision and agreement must be made for the time-limited retention of the material and its full analysis and recording, by appropriate specialists;

9.1.9 If the MBND are to retain the hardcopy paper archive it will be deposited under the same accession number as any material archive. Should the RAMM decline the hardcopy paper archive, that archive will be offered to other appropriate museum bodies, record offices or DCHET. If a suitable third party cannot be found, the hardcopy paper archive will be retained by SWARCH for 3 years and then destroyed;

9.1.10 The archive will be completed within 3 months of the completion of the final report;

9.1.11 SWARCH will notify the DCHET when the digital archive is deposited with the ADS, and when any physical archive is deposited with the MBND.

10.0 PERSONNEL

10.1. SWARCH PERSONNEL

10.1.1 The project will be managed by Samuel Walls BA MA PhD MCIfA (Director at SWARCH 2013-present with 15 years of experience in the commercial sector);

10.1.2 The archaeological fieldwork will be undertaken by SWARCH personnel with appropriate expertise and experience, or supervised by SWARCH personnel with appropriate expertise and experience: Brynmor Morris BA MA PhD MCIfA (Director at SWARCH 2013-present with 16 years commercial experience); Joe Bampton BA MA MCIfA (15 years commercial experience); Peter Webb BA MA[2] (16 years commercial experience).

10.1.3 Where necessary, appropriate specialist advice will be obtained.

10.2. SPECIALISTS

Bone	Hayley Foster MA, PhD
Building Recording	Emily Wapshott, BA, MA, MSc
Conservation	Laura Ratcliffe BSc
Curatorial	Alison Mills
Environmental Sample Processing	SWARCH personnel
Lithics	Peter Webb MA
Medieval Pottery	John Allan
Metal & Leatherwork	Quita Mould MA
Metal Detectorists	Taw and Torridge Metal Detecting Club
Plant Macro-Fossils	Wendy Carruthers
Pollen Analysis	Ralph Fyfe PhD
Post Medieval Pottery	Bryn Morris PhD
Prehistoric Pottery	Imogen Wood PhD
Roman Pottery	Imogen Wood PhD
Wood Identification	Dana Challinor PhD

10.3. TRAINING AND CPD

10.3.1 Where appropriate, SWARCH will seek to provide training opportunities to SWARCH personnel during the archaeological fieldwork and post-excavation process. Training would be undertaken in order to enhance recording and recovery, and maximise the research gain.

10.3.2 SWARCH training plans (PDP) and CPD logs will be updated during the project, as appropriate to need and demand.

11.0 INSURANCES AND QUALITY CONTROL

11.1.1 SWARCH carry Professional Indemnity Insurance cover up to £5 million, Public Liability up to £5 million and Employers Liability up to £10 million.

11.1.2 SWARCH is a Registered Organisation (RO) with the Chartered Institute for Archaeologists (CIfA).

11.1.3 SWARCH is committed to the highest standard of professional ethics and technical standards, and adheres to CIfA and Historic England guidelines in the conduct of our work.

11.1.4 The work undertaken will be carried out by professional archaeologists overseen by supervisors of ACIfA-level competence. The works and products will be overseen and checked by professional archaeologists with MCIfA-level competence.

12.0 CONFLICT WITH OTHER CONDITIONS AND STATUTORY RESTRAINTS

12.1.1 It remains the responsibility of the Client - in consultation with SWARCH, the applicant or agent - to ensure that the required archaeological works do not conflict with any other conditions that have been imposed upon the consent granted and should also consider any biodiversity issues as covered by the NERC Act 2006. In particular, such conflicts may arise where archaeological investigations/excavations have the potential to have an impact upon protected species and/or natural habitats e.g. SSSIs, National Nature Reserves, Special Protection Areas, Special Areas of Conservation, Ramsar sites, County Wildlife Sites etc.

ARCHAEOLOGICAL SERVICES & HISTORIC BUILDING RECORDING
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