



**Carmarthen West,  
Carmarthen**

**Archaeology and  
Heritage Assessment**

Prepared by:  
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Partnership Ltd**

On behalf of:  
**Lovell Partnerships Ltd**

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## Executive Summary

- S1 This Archaeology and Heritage Assessment has been prepared to inform a full application for planning permission for a proposed residential development within allocated land, on the western edge of Carmarthen (hereafter referred to as ‘the Proposed Development’). The assessment has established the historic environment baseline and identified which designated and/or non-designated historic assets would be affected by the approval and implementation of the Proposed Development, directly and/or indirectly.
- S2 It concludes that, in terms of both designated historic assets, and historic assets of special local interest that no asset would experience a loss of significance and therefore no asset would be harmed by the approval and implementation of the Proposed Development. As such, no mitigation or compensation measures are necessary or desirable.
- S3 In terms of buried remains, this assessment has identified that the Site has low potential for archaeological remains of greater than a limited, local, significance, supported by the geophysical survey conducted in support of the proposed development. There is a moderate potential for Iron Age, Roman, and medieval archaeological remains relating to agricultural practices to be within the Site. Such remains would have a local level of archaeological interest. There is a high potential for post medieval and modern archaeological remains relating to agricultural practices to be within the Site. These remains have a negligible level of archaeological interest. There is a low potential for Neolithic and Bronze Age remains, with the geophysical survey showing no evidence for similar archaeological features known to be present south of the Site.
- S4 Due to the low potential for remains of greater than a local level of significance, as supported by a site-specific geophysical survey, there is limited value in further archaeological works being undertaken.
- S5 There is, therefore, no reason why the Proposed Development could not come forward and be delivered in line with current planning policies for the conservation and management of the historic environment. Hence, there is no reason in terms of historic environment impact(s) why the detailed planning application should not be treated favourably when it is submitted for determination by Carmarthenshire County Council in due course.

## Crynodeb Gweithredol

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- C1. Mae'r Asesiad Archaeoleg a Threftadaeth hwn wedi'i baratoi i lywio cais llawn am ganiatâd cynllunio ar gyfer datblygiad preswyl arfaethedig o fewn tir a neilltuwyd, ar ymyl orllewinol Caerfyrddin (y cyfeirir ato o hyn ymlaen fel "y Ddatblygiad Arfaethedig"). Mae'r asesiad wedi sefydlu'r llinell sylfaen amgylchedd hanesyddol ac wedi nodi pa asedau hanesyddol dynodedig a/neu heb eu dynodi fyddai'n cael eu heffeithio gan gymeradwyo a gweithredu'r Datblygiad Arfaethedig, yn uniongyrchol a/neu'n anuniongyrchol.
- C2. Mae'n dod i'r casgliad, o ran asedau hanesyddol dynodedig, ac asedau hanesyddol o ddiddordeb lleol arbennig, na fyddai unrhyw ased yn colli arwyddocâd ac felly na fyddai unrhyw ased yn cael ei niweidio gan gymeradwyo a gweithredu'r Datblygiad Arfaethedig. Felly, nid oes angen unrhyw fesurau lliniaru na digolledu.
- C3. O ran gweddillion claddedig, mae'r asesiad hwn wedi nodi bod gan y Safle botensial isel ar gyfer gweddillion archaeolegol o arwyddocâd lleol, mwy na chyfyngedig, a gefnogir gan yr arolwg geoffisegol a gynhaliwyd i gefnogi'r datblygiad arfaethedig. Mae potensial cymedrol ar gyfer gweddillion archaeolegol o'r Oes Haearn, y Rhufeiniaid, a'r Oesoedd Canol sy'n ymwneud ag arferion amaethyddol o fewn y Safle. Byddai gan olion o'r fath lefel leol o ddiddordeb archaeolegol. Mae potensial uchel ar gyfer gweddillion archaeolegol ôl-ganoloesol a modern sy'n ymwneud ag arferion amaethyddol o fewn y Safle. Mae gan yr olion hyn lefel ddibwys o ddiddordeb archaeolegol. Mae potensial isel ar gyfer gweddillion o'r Oes Neolithig a'r Oes Efydd, gyda'r arolwg geoffisegol yn dangos unrhyw dystiolaeth o nodweddion archaeolegol tebyg y gwyddys eu bod yn bresennol i'r de o'r Safle.
- C4. Oherwydd y potensial isel am olion o arwyddocâd sy'n fwy na lefel leol, fel y'i cefnogir gan arolwg geoffisegol safle-benodol, mae gwerth cyfyngedig mewn gwneud gwaith archaeolegol pellach.
- C5. Felly, nid oes unrhyw reswm pam na allai'r Datblygiad Arfaethedig ddod ymlaen a'i gyflawni yn unol â pholisïau cynllunio cyfredol ar gyfer cadwraeth a rheoli'r amgylchedd hanesyddol. Felly, nid oes unrhyw reswm o ran effaith(au) yr amgylchedd hanesyddol pam na ddylid trin y cais cynllunio manwl yn ffafriol pan gaiff ei gyflwyno i Gyngor Sir Caerfyrddin benderfynu arno maes o law.

## Section 1 Introduction

- 1.1 This report has been prepared by The Environmental Dimension Partnership Ltd (EDP), for Lovell Partnerships Ltd (hereafter referred to as ‘the client’) and sets out the results of an Archaeology and Heritage Assessment (AHA) for land at the Carmarthen West, Carmarthen (hereafter referred to as ‘the Site’). This document has been prepared to inform a full application for planning permission for a proposed residential development within allocated land, on the western edge of Carmarthen (hereafter referred to as ‘the Proposed Development’).
- 1.2 The aim of this assessment is to: establish the historic environment baseline within the Site and Study Area (**Section 4**); to identify which designated and non-designated historic assets have the potential for development within the Site to cause change to their significance; and finally to determine the potential for archaeological remains to occur within the Site, their likely significance, and the effect of the Proposed Development on them.
- 1.3 The second aim of this assessment is to consider the available historical and archaeological resources for the Site, and to establish, as far as possible, the nature and significance of any known or potential archaeological features, deposits or remains within the Site.
- 1.4 These aims are undertaken in accordance with Welsh Government guidance set out in *Planning Policy Wales* (PPW 12, Welsh Government (2024a)), *Technical Advice Note 24* (TAN 24, Welsh Government (2017)) and relevant local planning policy for the conservation and management of the historic environment. Once established, the nature and magnitude of any impacts on them resulting from the proposals is determined.
- 1.5 The report employs Welsh Government guidance in PPW 12 and TAN 24 as well as best practice guidance from Cadw detailed in the following documents:
- Heritage Impact Assessment in Wales (Cadw 2017a);
  - Setting of Historic Assets in Wales (Cadw 2017b); and
  - Managing Conservation Areas in Wales (Cadw 2017c).
- 1.6 These three documents have been used to investigate the archaeological and heritage issues at the Site and to provide a robust evidence base which will aid the determination of the planning application.
- 1.7 In accordance with best practice guidance, utilised desktop sources have been augmented through the completion of a site walkover in November 2025, photographs of which are included in **Appendix EDP 1**.

## **SITE LOCATION AND DESCRIPTION**

- 1.8 The Site is located west of the developed area of Carmarthen, directly west of Ffordd Pendre and north of a band of residential development which bounds the northern side of the A40. The Site is c.3.4 hectares (ha) in extent, as shown on **Plan EDP 1**. The rough centre of the Site is located at National Grid Reference (NGR) SN 38587 19712.
- 1.9 The Site is roughly trapezoidal in shape, and is comprised of an undeveloped agricultural field. It is bound to the east by Ffordd Pendre, to the south by residential development, and to the west and north by agricultural fields. Further afield to the east is Carmarthen, to the south is the small hamlet of Llanllwch, beyond which is a wide agricultural landscape, and to the west and north is also a wide agricultural landscape (**Plan EDP 1**).

## **TOPOGRAPHY AND GEOLOGY**

- 1.10 The British Geological Survey (BGS) records the underlying bedrock geology of the Site as Tetragraptus beds mudstone. This sedimentary bedrock formed between 477.7 and 465.5 million years ago during the Ordovician period. Overlying the bedrock are Devensian sand and gravel glaciofluvial deposits. These superficial sedimentary deposits formed between 116 and 11.8 thousand years ago during the Quaternary period (BGS, 2025).
- 1.11 In general, the Site is level, although a slight slope is present, with an elevation of c.33m above Ordnance Datum (aOD) in the north of the Site, and an elevation of c.30.5m aOD in the south. Gentle east-west aligned undulations are present approximately every 50m - 60m across the Site. These do not appear to be man-made and are assumed to be a result of the underlying geology, likely as a result of glacial activity.

## **PROPOSED DEVELOPMENT**

- 1.12 The Proposed Development is a full application for a residential development consisting of 84 new homes, comprising 42 affordable and 42 open market units, across 8.4 acres (3.4 ha) of greenfield land. The homes will offer a mix of one, two, three, and four-bedroom properties.
- 1.13 The Proposed Development will feature comprehensive access and internal highway infrastructure, as well as dedicated active travel routes. It includes extensive green infrastructure designed to enhance open space and deliver biodiversity net gain, along with designated play areas and robust drainage infrastructure, including Sustainable Drainage Systems (SuDS). Approximately one hectare of the Site will be dedicated to open spaces, amenity footpaths, attenuation, existing and proposed planting, play areas, and social gathering spaces.
- 1.14 The Proposed Development is detailed in a number of drawings and supporting documents, with copies of the envisaged Site plan reproduced here in this report in **Appendix EDP 2**.

## Section 2 Legislation and Planning Guidance

- 2.1 This section sets out relevant legislation and planning policy, governing the conservation and management of the historic environment.

### LEGISLATION AND CASE LAW

- 2.2 *The Historic Environment (Wales) Act 2023* came into force on 04 November 2024, in addition to a suite of regulations which are necessary to support it and now sets out the primary legislation for the historic environment for Wales.

### Listed Buildings

- 2.3 *The Historic Environment (Wales) Act 2023* (the 2023 Act) replicates the s16 statutory duty for Listed Building Consent (LBC) in the (English) *Planning (Listed Buildings and Conservation Areas) Act 1990*, but not the s66(1) statutory duty, where planning permission is concerned, and instead this is replicated in an amendment to the (UK) *Town and Country Planning Act 1990*.
- 2.4 Under *Part XV Miscellaneous and General Provisions, (as an Application of the Act in Special Cases)* at paragraph 314A (1) the following is stated, as an application of the Act that only applies in Wales:

*“Wales: Duties Relating to Listed Buildings and Features of Architectural or Historic Interest*

1. *In considering whether to grant planning permission for development which affects a listed building or its setting, the Welsh Ministers or a local planning authority in Wales must have special regard to the desirability of preserving –*
    - a. *The listed building,*
    - b. *The setting of the building, or*
    - c. *Any features of special architectural or historic interest the building possesses.”*
- 2.5 In replicating the s66(1) statutory duty, the wording at paragraph 314A (1) has been extensively tested through case law, although this doesn't directly apply to the 2023 Act.
- 2.6 In this respect, the meaning of the 'special regard' duty has previously been tested in the court of appeal in terms of the *Planning (Listed Buildings and Conservation Areas) Act (1990)*.
- 2.7 This process confirmed that “*considerable importance and weight*” should be afforded by the decision maker to the desirability of preserving a listed building along with its setting. The relevant judgement is referenced as *Barnwell Manor Wind Energy Ltd v East Northants District Council, English Heritage and National Trust (2014) EWCA civ 137*.

2.8 However, it must be recognised that section 66(1) of the 1990 Act did not identify that the local authority or the secretary of state *must* preserve a listed building or its setting; and neither did it indicate that a development which does not preserve them is unacceptable or should therefore be refused. The statutory duty in the Town and Country Planning Act clearly adopts the same approach insofar as development and the setting of listed buildings is concerned.

2.9 This point is made very clearly in paragraph 54 of the judgement regarding *Forest of Dean DC v Secretary of State for Communities and Local Government* (2013), which identifies that:

*“...Section 66 (1) did not oblige the inspector to reject the proposal because he found it would cause some harm to the setting of the listed buildings. The duty is directed to ‘the desirability of preserving’ the setting of listed buildings. One sees there the basic purpose of the ‘special regard’ duty. It does not rule out acceptable change. It gives the decision-maker an extra task to perform, which is to judge whether the change proposed is acceptable. But it does not prescribe the outcome. It does not dictate the refusal of planning permission if the Proposed Development is found likely to alter or even to harm the setting of a listed building.”*

2.10 In other words, it is up to the decision maker (such as a local authority) to assess whether the proposal which is before them would result in “acceptable change” a concept that should be applicable regardless of which form of legislation is referred to.

### **Archaeology**

2.11 The *Ancient Monuments and Archaeological Areas Act 1979* addresses the designation and management of Scheduled Monuments, providing for the maintenance of a schedule of monuments (and archaeological remains) which are protected.

2.12 The designation of archaeological and historic sites as Scheduled Monuments applies only to those that are deemed to be of national importance and is generally adopted only if it represents the best means of protection.

2.13 The 1979 Act does not address the concept of ‘setting’, just their physical remains, and, therefore, for Scheduled Monuments the protection of ‘setting’ is a matter of policy in the same way it is for a conservation area.

2.14 In Wales, the written consent of the Welsh Minister is required for development that would impact upon a Scheduled Monument, and applications for Scheduled Monument Consent are submitted to Cadw, the Welsh Government’s Historic Environment Service.

### **National Planning Policy**

2.15 The Welsh Government published *Future Wales: The National Plan 2040* on 24 February 2021 (Welsh Government, 2021), which highlights in the foreword from the Minister for Housing and Local Government that it forms a “*framework for planning the change and development our country will need over the next two decades*”.

2.16 In terms of the Welsh Government’s objectives, the sixth ‘Future Wales Outcomes’ on page 55 states that:

*“Development plans will have a forward thinking, positive attitude towards enabling economic development, investment and innovation. Increased prosperity and productivity will be pursued across all parts of Wales, building on current activity and promoting a culture of innovation, social partnership, entrepreneurialism and skills-development in sustainable industries and sectors. The culture, heritage and environment of Wales will play a positive, modern role in the economy by attracting the interest and expenditure of tourists and providing a distinctive and trusted brand for Welsh businesses.”*

2.17 National planning guidance, concerning the treatment of the historic environment across Wales, is detailed in Section 6.1 of Chapter 6 Distinctive and Natural Places of PPW 12, which was published on 07 February 2024.

2.18 As it predates it, It is noteworthy that PPW 12 does not currently reference the *Historic Environment (Wales) Act 2023* instead referencing legislation that has been repealed. It is anticipated that a new edition of PPW will be issued that references the Act in due course.

2.19 However, Schedule 14 of the 2023 Act makes provision for the transition between the legislation that has been repealed and the new Act and its associated regulations. As such, the transitional provisions anticipate such situations, so that repealed provisions can be interpreted and implemented correctly under the new legislation.

2.20 At paragraph 6.1.2, it identifies the historic environment as comprising individual historic features, such as archaeological sites, historic buildings and historic parks, gardens, townscapes and landscapes, collectively known as ‘historic assets’.

2.21 At paragraph 6.1.6, the Welsh Government’s specific objectives for the historic environment are outlined. Of these, the following is/are of relevance to the current assessment:

- Conserve archaeological remains, both for their own sake and for their role in education, leisure and the economy;
- Safeguard the character of historic buildings and manage change so that their special architectural and historic interest is preserved; and
- Preserve or enhance the character or appearance of conservation areas, whilst the same time helping them remain vibrant and prosperous.

2.22 At paragraph 6.1.7, it is observed that:

*“It is important that the planning system looks to protect, conserve and enhance the significance of historic assets. This will include consideration of the setting of an historic asset which might extend beyond its curtilage. Any change that impacts on an historic asset or its setting should be managed in a sensitive and sustainable way.”*

2.23 As such, with regard to decision making, it is stated (at paragraph 6.1.9) that: “Any decisions made through the planning system must fully consider the impact on the historic

*environment and on the significance and heritage values of individual historic assets and their contribution to the character of place”.*

### **Listed Buildings**

- 2.24 Regarding listed buildings, PPW 12 states, at paragraph 6.1.10, that: *“There should be a general presumption in favour of the preservation of a listed building and its setting, which might extend beyond its curtilage”.* It adds that: *“for any development proposal affecting a listed building or its setting, the primary material consideration is the statutory requirement to have special regard to the desirability of preserving the building, or its setting, or any features of special architectural or historic interest which it possesses”.*

### **Archaeological Remains**

- 2.25 Moving on to the treatment of archaeological remains through the planning process, PPW 12 states at paragraph 6.1.23 that: *“the conservation of archaeological remains and their settings is a material consideration in determining planning applications, whether those remains are a scheduled monument or not”.*

- 2.26 It then adds at paragraph 6.1.24 that:

*“Where nationally important archaeological remains are likely to be affected by proposed development, there should be a presumption in favour of their physical protection in situ. It will only be in exceptional circumstances that planning permission will be granted if development would result in a direct adverse impact on a scheduled monument (or an archaeological site shown to be of national importance).”*

- 2.27 At paragraph 6.1.25 it states that: *“In cases involving less significant archaeological remains, planning authorities will need to weigh the relative importance of the archaeological remains and their settings against other factors, including the need for the proposed development”.*

- 2.28 Paragraph 6.1.26 recommends that:

*“Where archaeological remains are known to exist or there is a potential for them to survive, an application should be accompanied by sufficient information, through desk-based assessment and/or field evaluation, to allow a full understanding of the impact of the proposal on the significance of the remains. The needs of archaeology and development may be reconciled, and potential conflict very much reduced, through early discussion and assessment.”*

- 2.29 In situations where planning approval would result in archaeological remains being destroyed by development, paragraph 6.1.27 of PPW 12 states the following regarding the relevant planning authority’s obligations:

*“If the planning authority is minded to approve an application and where archaeological remains are affected by proposals that alter or destroy them, the planning authority must be satisfied that the developer has secured appropriate and satisfactory provision for their recording and investigation, followed by the analysis and publication of the results and the deposition of the resulting archive in an approved repository. On occasions, unforeseen*

*archaeological remains may still be discovered during the course of a development. A written scheme of investigation should consider how to react to such circumstances or it can be covered through an appropriate condition for a watching brief.*

*Where remains discovered are deemed to be of national importance, the Welsh Ministers have the power to schedule the site and in such circumstances scheduled monument consent must be required before works can continue.”*

**Technical Advice Note 24 (TAN24)**

2.30 Additional heritage guidance in Wales is set out in *Technical Advice Note 24: The Historic Environment* (TAN 24) (Welsh Government, 2017).

2.31 As with PPW 12, TAN 24 predates *The Historic Environment (Wales) Act 2023* instead referencing legislation that has been repealed. It is anticipated that a new edition of TAN 24 will be issued that references the Act in due course. As such, the transitional provisions in Section 14 of the Act allow for the repealed provisions to be interpreted and implemented correctly under the new legislation.

2.32 TAN 24 sets out that it provides “*guidance on how the planning system considers the historic environment during development plan preparation and decision making on planning applications*”.

2.33 It clarifies the policies and distinctions made in PPW 12 (2024). A definition for a ‘historic asset’ is given as:

*“An identifiable component of the historic environment. It may consist or be a combination of an archaeological site, a historic building or area, historic park and garden or a parcel of historic landscape. Nationally important historic assets will normally be designated.”*

2.34 Effects through changes within the setting of a designated historic asset are covered in TAN 24 at paragraphs 1.23 to 1.29. These paragraphs define the setting of an historic asset as comprising:

*“...the surroundings in which it is understood, experienced, and appreciated embracing present and past relationships to the surrounding landscape. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral. Setting is not a historic asset in its own right but has value derived from how different elements may contribute to the significance of a historic asset”.*

2.35 TAN 24 also identifies factors to consider when assessing effects on the setting of historic assets. Paragraph 1.26 states it is:

*“...for the applicant to provide the local planning authority with sufficient information to allow the assessment of their proposals in respect of scheduled monuments, listed buildings, conservation areas, registered historic parks and gardens, World Heritage Sites, or other sites of national importance and their settings.”*

2.36 Paragraph 1.29 goes on to state that:

*“The local planning authority will need to make its own assessment of the impact within the setting of a historic asset, having considered the responses received from consultees as part of this process. A judgement has to be made by the consenting authority, on a case-by-case basis, over whether a Proposed Development may be damaging to the setting of the historic asset, or may enhance or have a neutral impact on the setting by the removal of existing inappropriate development or land use.”*

2.37 Section 4 of TAN 24 is concerned with archaeological remains and is thus also relevant to the current assessment. Key points of advice, derived from the guidance, regarding archaeological remains and the development process, which are relevant to the current application, are as follows:

- *“The importance of pre-application discussion is stressed in order to reconcile the needs of archaeology and development between the applicant, the local planning authority, their archaeological advisors and, in cases where scheduled monuments may be affected, Cadw;*
- *Applicants are encouraged to make an enquiry with the body with responsibility for the relevant historic environment record and seek advice from the local planning authority’s archaeological advisor at an early stage in considering their development proposal;*
- *Where archaeological remains are known to exist, or considered likely to exist, and a study has not already been undertaken by the applicant, the local planning authority should ask an applicant to undertake a desk-based archaeological assessment and, where appropriate, an archaeological evaluation. These should be done by a qualified and competent expert to the appropriate standard. The reports of these investigations will form part of the planning application. Applicants should show they have modified their development proposals to minimise any negative impact on the identified archaeological remains, and how they intend to mitigate any remaining negative impacts; and*
- *The case for the preservation of archaeological remains that are not considered to meet the criteria for national importance (see Annex A.2), must be assessed on the individual merits of each case. The local planning authority must take into account relevant policies and material considerations, and will need to weigh the significance of the remains against the benefits of and need for the proposed development.”*

2.38 Regarding the preservation, recording and understanding of archaeological evidence, the guidance contains the following points of advice:

- *“Measures can be taken to minimise the impact of a development proposal on identified archaeological remains and allow their preservation in situ;*
- *Having considered all policies and other material considerations and the need for the development, the local planning authority may decide that the significance of the archaeological remains is not sufficient to justify their physical preservation. In these*

*cases, the local planning authority must satisfy itself that the necessary and proportionate arrangements for the excavation and recording of these archaeological remains are secured, and the results of this archaeological work are properly analysed and published; and*

- *Any programme of archaeological excavation and recording should precede the start of work on the development, unless there are exceptional circumstances which prevent this from occurring.”*

2.39 Regarding unexpected archaeological discoveries, the guidance states the following:

*“Where unexpected archaeological discoveries are considered to be of national importance, the Welsh Ministers have the power to schedule the site (see Annex A). In the event of scheduling, the developer must seek separate scheduled monument consent before work can continue. It is also open to the local planning authority and the Welsh Ministers to revoke or modify a planning permission under these circumstances, in which case there is provision for the compensation of the developer for loss of value and expenditure incurred.”*

#### **Local Planning Policy**

2.40 The Site is located within the administrative jurisdiction of Carmarthenshire County Council. Although a new Local Development Plan (LDP) is currently under review, it has not yet been made. As such the Site and Proposed Development are subject to policies, aims and goals outlined by the Carmarthenshire Local Development Plan 2006 – 2021 (adopted December 2014). Of relevance to this assessment is policy EQ1, which is reproduced as follows:

#### **Policy EQ1 Protection of Buildings, Landscapes and Features of Historic Importance**

*“Proposals for development affecting landscapes, townscapes buildings and sites or features of historic or archaeological interest which by virtue of their historic importance, character or significance within a group of features make an important contribution to the local character and the interests of the area will only be permitted where it preserves or enhances the built and historic environment.”*

2.41 The policy detailed above has been considered in the production of this assessment and regarding potential impacts arising as part of the Proposed Development.

## Section 3 Methodology

### ARCHAEOLOGICAL ASSESSMENT METHODOLOGY

- 3.1 This AHA has been produced in accordance with the *Standard and Guidance for Historic Environment Desk-based Assessment* issued by the Chartered Institute for Archaeologists (CIfA, 2020), as well as guidance documents outlined in Paragraph 1.5 above. These guidelines provide a national standard for the completion of desk-based assessments.
- 3.2 A Written Scheme of Investigation (WSI) outlining the methodology for this document was prepared and sent to Heneb on 11 November 2025. The assessment principally involved consultation of readily available archaeological and historical information from documentary and cartographic sources. The major repositories of relevant information comprised:
- Cadw's national database for designated historic assets – for recorded designated historic assets within the Site and surrounding area;
  - The Trust for Welsh Archaeology (Heneb) Historic Environment Record (HER) October 2025 commercial dataset – for recorded non-designated historic assets as well as archaeological sites, monuments, findspots and previous archaeological events (investigation/mitigation) within the Site and surrounding area (Enquiry No. 1773);
  - The National Monuments Record of Wales – for recorded non-designated historic assets as well as any other archaeological sites, monuments and/or findspots;
  - Historic maps and satellite imagery held by National Library of Scotland, EnviroCheck and Google Earth and other relevant sources – for the establishment of land use history within the Site and surrounding area;
  - Maps and documents held by Gwent Archives, where relevant – for the establishment of land use history within the Site and surrounding area;
  - A site-specific geophysical survey, conducted by SUMO Surveys in December 2025 (**Appendix EDP 3**); and
  - Aerial photographs which are held by the Central Register of Aerial Photography for Wales (CRAPW) at Cardiff – for identification of previously unrecorded earthworks, cropmarks and/or archaeological features within the Site.
- 3.3 The information gathered from the repositories and sources identified above was checked and augmented through the completion of a site walkover undertaken in November 2025. The walkovers considered the nature and significance of known and/or potential archaeological assets within the Site, identified visible historic features and assessed possible factors that may affect the survival or condition of known or potential archaeological assets.

- 3.4 This report provides a synthesis of relevant information for the Site derived from a search area extending up to 1km from its boundary, (the Study Area), to allow for additional contextual information on its archaeological interest or potential to be gathered and then understood.
- 3.5 Throughout the report, where referenced and relevant, designated historic assets are referenced by their Cadw reference number, non-designated historic assets and previous archaeological events are referenced by their Preferred Reference Number. The distribution of designated historic assets, non-designated historic assets and previous archaeological events are presented in **Plans EDP 2 to 4**.

### **ASSESSMENT OF SIGNIFICANCE**

- 3.6 The assessment of significance of known/recorded archaeological remains within the Site makes reference (where relevant) to the four 'heritage values' identified by Cadw within its Conservation Principles document (Cadw, 2011). These are:
- The asset's *evidential value*, which is defined as those elements of the historic asset that can provide evidence about past human activity, including its physical remains or historic fabric;
  - The asset's *historical value*, which is defined as those elements of an asset which might illustrate a particular aspect of past life or might be associated with a notable family, person, event or movement;
  - The asset's *aesthetic value*, which is defined as deriving from the way in which people draw sensory and intellectual stimulation from the historic asset; and
  - The asset's *communal value*, which is defined as deriving from the meanings that a historic asset has for the people who relate to it, or for whom it figures in their collective experience or memory.

### **SETTING OF HISTORIC ASSETS**

- 3.7 In addition to the potential for direct impacts on the fabric of an asset, when assessing the impact of proposals on historic assets, it is important to ascertain whether change within their 'setting' would lead to a loss of 'significance'. This assessment of potential indirect effects (in terms of 'setting') is made according to Cadw's guidance *Setting of Historic Assets in Wales*, which was published in May 2017.
- 3.8 In simple terms, the guidance states that setting:

*"... includes the surroundings in which it is understood, experienced and appreciated, embracing present and past relationships to the surrounding landscape". It must be recognised from the outset that 'setting' is not a historic asset and cannot itself be harmed. The guidance states that the importance of setting "lies in what it contributes to the significance of a historic asset."*

- 3.9 As such, when assessing the indirect impact of proposals on historic assets, it is not a question of whether their setting would be affected, but rather a question of whether change within the asset's 'setting' would lead to a loss of 'significance'.
- 3.10 Set within this context, where the objective is to determine the potential for development to have an indirect effect on historic assets beyond the boundary of a development site, it is necessary to first define the significance of the asset in question – and the contribution made to that significance by its 'setting', in order to establish whether there would be a loss, and therefore harm.
- 3.11 The guidance identifies that change within a historic asset's setting need not necessarily cause 'harm' and that it can be positive or in fact neutral.
- 3.12 Cadw's guidance (Cadw, 2017b) sets out a four-stage approach to the identification and assessment of setting effects, i.e.:
- **Stage 1:** Identify the historic assets which might be affected;
  - **Stage 2:** Define and analyse the setting, to understand how it contributes to the asset's heritage significance;
  - **Stage 3:** Evaluate the potential impact of development; and
  - **Stage 4:** Consider options to mitigate or improve that potential impact.
- 3.13 Therefore, the key issue to be determined is whether, and to what extent, the Proposed Development would affect the contribution that setting makes to the heritage significance of the asset under consideration, as per **Stage 2** of the Cadw guidance.
- 3.14 Based on the height of the Proposed Development and the nature and topography of the Site and surrounding area, a 1km Study Area was considered appropriate for determining potential impacts to historic assets.
- 3.15 In light of the above, the assessment of potential setting effects, employed in the preparation of this report, focused on the completion of the heritage walkover survey, which concentrated on the following main areas:
- Identifying those historic assets that could potentially be affected by the Proposed Development and the manner (if any) in which they would be affected;
  - Defining the contribution made to their significance by their setting;
  - Assessing whether the Site forms a part of their setting, and therefore whether it contributes to their significance or to an ability to appreciate it; and
  - Assessing the potential effects of development on their setting and whether that would result in harm to their significance or to an ability to appreciate it.

- 3.16 As far as identifying the historic assets potentially affected by the Proposed Development is concerned, due and appropriate consideration has been given to the following factors, which are considered to influence the potential for the setting of historic assets to be materially affected by the Proposed Development: (1) the proximity to the Site; (2) the influence of the local topography and the built and vegetated environment; and (3) consideration of the character and setting of surrounding historic assets.
- 3.17 The report then draws conclusions regarding the potential for development within the Site to affect the significance of the heritage assets.
- 3.18 This report has therefore been prepared in a robust manner, applying current best practice professional guidance and giving due regard to the methodology set out above.

### **LIDAR DATA**

- 3.19 Airborne LiDAR data (Light Detection and Ranging) was utilised as a source of primary data for the current assessment. LiDAR scanning records height data and has applications in the recording of archaeological earthworks.
- 3.20 A Digital Terrain Model (DTM) for the Site was acquired from the Environment Agency Data available online (Environment Agency, 2025). Resolution of the data is at one data point for each 1m<sup>2</sup>, a high resolution which, for archaeological prospection, is appropriate for the identification of archaeological earthworks.
- 3.21 The DTM was processed using the Relief Visualisation Toolbox (version 2.2 1. ZRC SAZU, 2019). This software allows for a range of visualisation techniques to be applied to the data. Different techniques have varying degrees of successful application, depending on the nature of the environment where the data was collected. As such, the whole suite of visualisations was produced and then the individual images appraised as to their usefulness in the current context. A hillshade image was selected as the most useful imagery for the assessment in identifying potential archaeological monuments in the Site and near surroundings (**Plan EDP 6**) as well as guiding the walkover survey.

## Section 4 Baseline Information

### INTRODUCTION

- 4.1 The following section details and contextualises known heritage assets, within the Site and Study Area and draws on available data to understand and assess the archaeological interest and/or potential of the Site. References shown in **bold** are the relevant Heneb HER record numbers or Cadw designated heritage asset numbers. Where other sources have been used, they are referenced in the text.

### DESIGNATED HISTORIC ASSETS

- 4.2 The following addresses Stages 1 and 2 of the four-stage approach to setting assessment described in the Cadw guidance (Cadw, 2017b). For the purposes of the report at this stage, this will identify those assets to be assessed, with an assessment of setting and contribution to the significance of relevant assets. An impact assessment (i.e. Stage 3) is completed within **Section 5** of this report in relation to the Proposed Development, as relevant.
- 4.3 The designated historic assets in the wider area have been assessed to identify those that have the potential to experience change to their setting, such that could result in harm to their significance. The locations of designated heritage assets are shown on **Plan EDP 2**.
- 4.4 Within the 1km Study Area, there are fifteen Grade II listed buildings one Grade II\* listed building, and one scheduled monument recorded on Cadw's national database for designated historic assets as well as Pontgarreg & St Davids Hospital Conservation Area, c.425m east of the Site. The listed buildings are as follows:
- Block W of former laundry **82144** (Grade II, c.720m north-east of the Site);
  - Former Laundry at St. David's Hospital **82154** (Grade II, c.795m north-east of the Site);
  - Chapel at St. David's Hospital **9457** (Grade II, c.850m north-east of the Site);
  - St. David's Hospital main building **9456** (Grade II, c.890m north-east of the Site);
  - Gatepiers to S of St. David's Hospital **82157** (Grade II, c.905m north-east of the Site);
  - Barn to SW of Pontgarreg Grange **9584** (Grade II, c.560m east of the Site);
  - Pontgarreg Cottage **9582** (Grade II, c.600m east of the Site);
  - Arch and Gate to Pontgarreg Cottage **9583** (Grade II, c.595m east of the Site);
  - Nantfelin **9580** (Grade II, c.665m east of the Site);
  - Front Garden Walls to Nantfelin **9581** (Grade II, c.660m east of the Site);

- Peterwell **9579** (Grade II, c.690m east of the Site);
- Millbank Hall **9502** (Grade II, c.790m east of the Site);
- Boksburg Hall **82145** (Grade II, c.735m south of the Site);
- Lychgate to Church of St. Mary **82165** (Grade II, c.760m south of the Site);
- Former National School **82155** (Grade II, c.770m south of the Site); and
- Church of St. Mary **82155** (Grade II\*, c.785m south of the Site).

4.5 The scheduled monument is the Trebersed Moated Site (**CM249**) (c.160m north-west of the Site).

### **Steps 1 and 2 of the Heritage Assessment**

- 4.6 The identification of designated assets that would be affected by development within the Site, in accordance with Step 1 Cadw guidance, was completed by using a combination of GIS and desk-based analysis that considered, amongst other factors, the surrounding topographic and environmental conditions, built form, vegetation cover and lines of sight within the context of their overall significance.
- 4.7 Initial analysis indicated that it was highly unlikely that any of the listed buildings would have the ability to be affected by the form of development proposed within the Site as they are separated by swathes of mature woodland, established field boundaries, undulating terrain, and distances of over 500m, as well as the built form of the settlements within which they are located.
- 4.8 There are three groupings of listed buildings; those in Llanllwch, to the south of the Site, which are separated by the A40, and the substantial developments in Llanllwch and Carmarthen. The Site visit confirmed that this development, screened any experience between the Site and the listed buildings. As such, the Site does not feature as part of their settings, and there no potential for the Proposed Development to affect the significance of these historic assets.
- 4.9 The second grouping of buildings are those to the east of the Site, along St Clear's Road, at the south-western extent of the Conservation Area. These were confirmed by the Site visit to be fully screened from view by a rise in the terrain between them and the Site, as well as by modern residential development. As such, there no potential for the Proposed Development to affect the significance of these historic assets.
- 4.10 The third group is to the north-east of the Site and includes the hospital buildings and associated features. The clock tower of St. David's Hospital main building was visible from the Site, as the tower was designed to be a highly visible landmark within its surroundings and, as such, it has an extremely wide setting, comparable to a church spire. The Site, however, cannot be experienced from ground level of the building. There are many locations across the surrounding landscape from where the clock tower can be experienced, and the very aspect of its visibility from the Site does not indicate harm as a result of The Proposed Development. The Proposed Development does not compete with the prominence of the

- tower, nor is it at odds with the swathes of modern residential development in the wider setting of St. David's Hospital main building. All of the other buildings in this group are screened from view of the Site through intervening terrain, vegetation, and modern hospital buildings, and there is no reciprocal experience from these buildings of the Site. Although the Site features as a very small part of the expansive setting of St. David's Hospital main building, no aspect which contributes to the significance of the hospital would be altered, and no intrusive element which could impact its significance would be introduced.
- 4.11 As such, the Proposed Development would not affect the significance of any listed buildings.
- 4.12 The Trebersed Moated Site (**CM249**) is located c.160m north-west of the Site. It was a medieval grange of the Priory of St John in Carmarthen. The centre of the Site is a raised rectangular platform measuring c 33m by 25m and standing c 1.5m above the surrounding land. There is the suggestion of a slight bank surrounding the platform on its east, south and west sides. The platform is enclosed by a relatively shallow ditch between 5-6m wide with a counterscarp bank on all four sides. This is broad to the north but quite narrowly defined to east, south and west. There is evidence of an entrance and causeway at the centre of the north side. As a scheduled monument, it is of national significance which is drawn primarily from inherent historical and evidential values within the remains of its upstanding earthworks.
- 4.13 The setting of the monument has changed significantly over time. Although many of the surrounding fields are broadly similar to how it was likely experienced in the medieval era, the expansive modern development of Carmarthen, as well as surrounding modern agricultural buildings, has eroded much of the secluded agricultural setting the grange would have once been set within.
- 4.14 The scheduled monument is not experienced from the Site (**Image EDP A1.7**). Furthermore, the Site does not form part of the experience of the moated site when experiencing the asset from the overlooking road to its north (**Image EDP A1.8**).
- 4.15 A ridge of high ground topped with a mature hedged field boundary blocks any intervisibility or reciprocal experience. It is unlikely that a residential development would be visible from the moated site or be part of any experience of it. However, there is some potential for the roofs of houses of the proposed developed to be experienced in conjunction with the scheduled monument in its wider setting. However, as already described, the wider setting of the monument has changed significantly since the medieval period and there are already experiences of modern residential development in the wider setting of the monument (**Image EDP A1.8**), including development currently underway (**Image EDP A1.9**). Thus, even if the Proposed Development was experienced, in part, in the wider setting of the Trebersed Moated Site, it would not be a new or unanticipated element of the moated site's setting and would have no bearing on the monument's significance. The Proposed Development would, therefore, not affect the significance of the scheduled monument.
- 4.16 The Pontgarreg & St Davids Hospital Conservation Area is separated from the Site by over 400m. It is formed of two discreet built-up areas; the hospital and associated buildings on the high ground in the north, and the lower-lying Pontgarreg settlement and historic buildings unrelated to the hospital in the south. These areas are separated by undeveloped agricultural fields that rise to the hospital which form part of the western boundary of the

conservation area. There is no Conservation Area Appraisal (CAA) for the conservation area, and it appears to have been designated due to the historic interest in the hospital complex, and the historic origins of Pontgarreg, which form its special historic and architectural interest. Modern buildings within both the hospital complex, and the Pontgarreg area undermine the special interest in the character of both areas, although the hospital complex has more unified architecture, and retains a greater proportion of its historic interest. The undeveloped areas of the conservation area do not appear to have any historic interest and are likely included as part of the traditional agricultural fringe of the village and hospital settings. There is little of significance derived from the conservation area from views to the west.

- 4.17 There is a reciprocal experience, as shown in **Image EDP A1.5** and **Image EDP A1.6** between the conservation area and the Site. Furthermore the Site features in the wider setting of the western portion of the conservation area. However, the Site is a very minor part of an extremely expansive setting and can only be experienced from the edges of the undeveloped portion of the conservation area. Although the clock tower of the main hospital building can be seen from the Site, there is no reciprocal experience of the Site from ground level within the developed areas of the conservation area. The Site sits adjacent to existing suburban development and makes no contribution to the character and appearance of the conservation area, which is defined through its association with the hospital building and history relating to the hospital's development, as well as the historic development of Pontgarreg. Although there would be a very minor change to the setting of the conservation area, there would be no material changes to its special interest inherent in the hospital buildings, the undeveloped areas of the conservation area, or to any features which contribute to its significance. As such, the Proposed Development would have no negative impacts to the character or appearance of the Pontgarreg & St Davids Hospital Conservation Area.
- 4.18 No designated historic assets are determined to be capable of being affected by development of the Site, and their significance would remain unaffected.

#### **HISTORIC ASSETS OF SPECIAL LOCAL INTEREST**

- 4.19 Carmarthenshire County Council does not have a local list of assets of special local interest, and there are no formally identified assets of special local interest within the Study Area. Furthermore, there are no historic buildings recorded on the HER within proximity of the Site which have the potential to be affected by the Proposed Development. As such, the Proposed Development has no potential to result in any form of impact on historic assets of special local interest.

#### **HISTORIC DEVELOPMENT**

- 4.20 The following paragraphs summarise the general development of the Site and environs using written sources and archaeological data where appropriate, as well as known and recorded information for the presence of archaeological remains within the Site. Relevant HER features are labelled on **Plan EDP 3** and **4**.

### **Upper Palaeolithic and Mesolithic (c.50,000 BC – c.4000 BC)**

- 4.21 There is no evidence within the Study Area of activity from the earliest phases of prehistory, and a negligible potential for isolated artefacts from the Palaeolithic or Mesolithic to occur within the Site.

### **Neolithic and Bronze Age (c.9500 BC – 800 BC)**

- 4.22 Evidence of the Neolithic and Bronze Age within the Study Area is limited to a single area, mapped by the HER as c.125m south of the Site. This consists of a findspot of a large quantity of Neolithic Grooved Ware (**109204**), which is a rare occurrence in Wales. This pottery assemblage is known from excavation to have been overlain by a later series of at least three Bronze Age barrows (**109203**). Each of the three barrows was surrounded by a continuous ring ditch and a central cremation burial in one of the barrows was found along with a satellite cremation burial, which have been dated to the middle Bronze Age. Two post-built structures also found have been interpreted as a possible excarnation platform, for laying out the dead. The archaeological investigation did not show significant similar remains at the northern edge of the investigation area, continuing towards the Site.
- 4.23 The presence of Neolithic and Bronze Age remains in the same area are likely evidence of a continuation of activity throughout these periods, until the middle Bronze Age, when climatic change caused a widespread exodus of areas previously exploited in these eras.
- 4.24 The geography surrounding the remains is on a gentle south-facing slope which would have had good visibility in the wider surrounding area, as was favoured in the later Neolithic and early to mid-Bronze Age. There is no evidence to suggest that any funerary or other activity from these eras continued onto the Site. There is, therefore, a low potential for archaeological remains from the Neolithic and Bronze Age periods to be within the Site, although if remains associated with funerary practices did exist within the Site, they would likely have a regional level of archaeological significance.

### **Iron Age and Roman (c.800 BC – 383 AD)**

- 4.25 The Demetae were the Iron Age tribe living in the region at the time of the Roman invasion. The tribe also gave their name to the medieval Kingdom of Dyfed and thus the modern county of Dyfed. The centre of modern Carmarthen was occupied by the Demetae before the Romans founded Moridunum in the same area.
- 4.26 A Roman Road has been theorised as passing south of the Site by a previously prepared archaeological Desk-Based Assessment (DBA) c.10 south (at its closest point) of the Site (**102738**). There is no lidar or aerial photographs which support this theory, and without further evidence to the contrary, there is a low potential for any such remains to exist within the Site.
- 4.27 Within the Study Area, there is a possible defended enclosure, thought to date to the Iron Age due to its shape, c.715m north-west of the Site (**119216**). This enclosure has been identified by Lidar and has not been subject to archaeological investigation.

- 4.28 Aerial photography during a period of drought in 2018 revealed a possible univallate rectangular enclosure, though to have potential to be a Roman villa site, c.480m west of the Site (**126380**).
- 4.29 There is currently no archaeological evidence to demonstrate with any degree of certainty, the validity of the purported remains. However, if the features are as is supposed, this could suggest that the general area was subject to minor settlement in the form of a defended Iron Age farmstead, which was then likely replaced in the Roman period by a more modern villa, or farmstead.
- 4.30 It would be a reasonable supposition therefore, that there are unlikely to be further farmsteads within the Study Area, and that if the Site were exploited at this time, it would have been as part of an agricultural regime.
- 4.31 There is a moderate potential for Iron Age and/or Roman remains relating to agricultural practices, such as field boundaries, animal enclosures, ditches, and isolated pits within the Site. Such remains would have a local level of archaeological significance.

#### **Early Medieval (383 AD – 1067 AD)**

- 4.32 It is known that Carmarthen became known as Llanteulyddog following the Roman diaspora and was situated within the Kingdom of Dyfed. The church of St Teulyddog, and possibly the parish church of St Peter, which partly overlies the Roman west gate, are evidence of the early medieval settlement, which was an important town and episcopal see throughout the early medieval period.
- 4.33 There is no evidence dating from this period within the Study Area, and no indication that the Site or its environs was exploited at all at this time. There is a low potential for archaeological remains from the early medieval period to be present in the Site.

#### **Medieval (1067 AD – 1535 AD)**

- 4.34 The Norman invasion of Wales was lacklustre in comparison to the invasion of England, a year earlier. It was not until 1081 that an invasion was conducted with a greater degree of military might, and by 1094 most of Wales was under control of King William. It is around this time that Carmarthen Castle was initially built by the Normans c.2.4km east of the Site, although was shortly thereafter lost following the Welsh rebellion against the Normans.
- 4.35 Although the majority of documentary activity relates to the medieval core of Carmarthen there is both archaeological and documentary evidence of the medieval period within the Study Area.
- 4.36 In the region of the Site c.155m north-west, a moated homestead was constructed around the mid-13<sup>th</sup> century as a grange of the Priory of St John in Carmarthen who were granted the land sometime after 1244 (**CM249, 2147**). A rectangular cropmark (**5019**) identified c.460m north-west of the Site (c.190m north-west of the moated site) is implied by the HER to be possibly related to the moated site, although notes that it may be a geological feature, or an earlier enclosure, although no evidence to support either archaeological theory is currently forthcoming.

- 4.37 The small medieval hamlet of Llanllwch once lay c.750m south of the Site. The settlement was recorded in 1349 as suffering heavily from the Black Death and reportedly being destroyed during the Owain Glyndwr rebellion in AD 1407, although occupation in this area has since resumed, and remains in this area post-date 1407.
- 4.38 An area of ridge and furrow possibly dating to the Medieval era was recorded c.640m south-east of the Site (**10603**), although is no longer extant, and has been subject to modern development. A possible area of ridge and furrow is noted c.715m south-west of the Site (**11088**) in the vicinity of a former mid-14<sup>th</sup> century farmhouse c.700m south-west of the Site (**24977**), which seems to have continued as the residence of minor gentry through the medieval period into the 17<sup>th</sup> century.
- 4.39 A mill (**11637**) is mentioned in a deed dating from the mid-13<sup>th</sup> century and is thought to have been located c.630m north of the Site.
- 4.40 A fulling mill is recorded on Rees map of South Wales during the 14<sup>th</sup> century in the village of Llanllwch, c.690m south of the Site (**12759**).
- 4.41 Accounts of Carmarthen from between 1300 and 1546 record a leper hospital, the location of which is thought to be c.850m north of the Site (**12650**).
- 4.42 A church, St. Mary's, was built in Llanllwch, c.790m south of the Site in this era. Elements of the church date to at least the 15<sup>th</sup> century (**9495, 5241**).
- 4.43 A field, c.860m south-east of the Site, is known to have had a 'maen' element in its name, meaning stone. A possible related boundary stone, likely to have dated from the medieval period, has been identified within it (**10604**).
- 4.44 There is no direct evidence of activity within the Site dating from the medieval period. However, it is possible to see a variety of medieval activity which once occurred within the Study Area, which increases the potential that the Site was subject to activity in this era. Evidence suggests that agricultural and milling activity took place towards the southern edge of the Study Area, with the later medieval Church of St. Mary's and other remains indicating that Llanllwch was the nearest settlement to the Site in the medieval era. The presence of both a leper hospital and the former Priory of St John, may indicate that a large swathe of the land comprising the Study Area was owned by the church.
- 4.45 It is a reasonable supposition, that the Site was likely exploited as part of a wide agricultural landscape in at least part, if not all, of the medieval period. There is, therefore, a moderate potential for medieval archaeological remains to be within the Site. If present, any remains are most likely to be agricultural in nature, such as boundary ditches, isolated pits, and buried cultivation marks, all of which would have a local level of archaeological significance.

#### **Post-medieval (1536 AD – 1799 AD)**

- 4.46 After Henry VIII made himself the head of the Church of England in 1534, Thomas Cromwell brought forward Acts to unify Wales with England. The first of the Acts came into power in 1536 and was later strengthened by the Act of 1542/43. However, this likely made little difference to the average resident of Wales at this time.

- 4.47 Two mills are recorded as dating from this period. A grist mill is recorded in 1633 (**9954**) believed to have been located c.720m south of the Site, and a water mill is recorded in 1675 (**10618**), c.620m east of the Site. Other mills are recorded on the HER from post-1800 sources but may date from the post-medieval period.
- 4.48 Additionally, several farmhouses or farmsteads have their origin at this time, which is typical for many rural settings. These include a farmhouse first recorded in 1700 (**24956**) c.780m south-east of the Site, which is no longer extant. A still extant, although much altered, farmhouse c.605m east of the Site, which was built in the 18<sup>th</sup> century (**20343**), presumed to be part of a larger farmstead recorded in the 19<sup>th</sup> century (**113574**); and a substantial suburban house c.790m east of the Site, possibly originally a farmhouse or a minor gentry dwelling of the late 18<sup>th</sup> century (**20360**). Additionally, A mansion or manor house is recorded 670m south of the Site in the early 18<sup>th</sup> century (**25083**).
- 4.49 A small settlement, reputedly named after John Jones of Ystrad (1777 to 1842), MP for Carmarthen County appears to have evolved at this time c.660m south-east of the Site (**20345**). The settlement comprised parts of the former lands of St John's Priory and was roughly located in an area of several medieval and post medieval farmsteads.
- 4.50 A well is recorded in 1698, c.385m north-east of the Site, as being a "*large spring... wch inhabitants and foriegners finde to be very medicinal in the cure of scabs, ulcers and rickets*" (**20635**). By 1740, the Borough Corporation owned a public bathing place at Job's Well, (**39911**), which is presumed to have been a modification of the original well.
- 4.51 A toll road is known through Carmarthen, and following the approximate route of the A40 in the vicinity of the Site c.265m south of the Site (**109062**). This was likely the main route throughout both the medieval and post-medieval periods.
- 4.52 The evidence shows that the Study Area seems to have been part of a wide agricultural landscape, dotted with mills and farmhouses, with a growing satellite settlement to Carmarthen, around 700m south of the Site. There is no direct evidence of activity within the Site, although it is likely that the Site was part of the agricultural landscape at this time. There is, therefore, a high potential for agricultural remains, such as buried cultivation marks, drainage ditches, and field boundaries, all of which would have a negligible level of archaeological significance.

#### **Industrial and Modern (1800 AD – Present)**

- 4.53 The earliest detailed maps of the Site date to the 19<sup>th</sup> century. By 1837, the Tithe Map (see **Plan EDP 5**) shows that the Site was undeveloped, and part of a wide agricultural landscape, with minimal development in its immediate surroundings. A series of small buildings can be seen to the west of the Site, north of Llysonnen Road, which are no longer extant. A road, which is no longer extant, bounded the south of the Site, and was aligned east-west. No other development is shown on the Tithe Map in the near environs of the Site at this time.
- 4.54 Mills continued being constructed in the 19<sup>th</sup> century, including Llanllwch Corn Mill (**9954**) and its associated mill-pond (**102940**) and Mill-race (**102941**) c.715m south-east of the Site; and Melin Trebersed Corn Mill (**15701**) c.880m north-west of the Site.

- 4.55 As a testament to the agricultural nature of the 19<sup>th</sup> century landscape, there are multiple farmsteads dating from this period across the Study Area, from between c.420m and c.995m away from the Site (**113225**) (**113226**) (**113228**) (**113230**) (**113573**) (**113574**) (**25083**) (**25629**). Additionally, Starling Park House, which was a minor gentry house, with associated farm and service buildings and fine gardens constructed sometime around the turn of the 19<sup>th</sup> century c.900m east of the Site (**44752**).
- 4.56 An Orchard (**104047**) was also recorded c.740m east of the Site.
- 4.57 Numerous cottages were built in this period, generally recorded from early Ordnance Survey (OS) maps, and are situated across the Study Area, between c.340m and c.980m away from the Site (**23540**, **23544**, **23551**, **51272**, **104046**, and **104105**), and are located predominantly in areas which are now developed, showing the pattern of development slowly increasing over time.
- 4.58 Public houses, associated with growing population centres also were constructed around this time, including the Traveller's Rest, c.425m south-west of the Site (**441**), and the Ystrad Arms, thought to be located in Johnstown, c.655m south-east of the Site (**451**).
- 4.59 With the growing population, and wealthy moving out of the cities, there are several grand houses within the east and south of the Study Area, which date to the 19<sup>th</sup> century. These predate the widespread development in these areas, and include Peterwell, a substantial villa of c.1840, c.690m east of the Site (**20341**). An early 19<sup>th</sup> century villa (**20342**) c.665m east of the Site, possibly associated with the larger Peterwell, as both were owned by the Soppitt family in the early 20<sup>th</sup> century, and Boksburg Hall, a substantial early 19<sup>th</sup> century villa c.740m south of the Site (**23543**).
- 4.60 There are also some industrial remains, in the form of a former gravel pit near Llanllwch village, c.575m south of the Site, which was disused by the late 19<sup>th</sup> century (**23541**), as well as a former 19<sup>th</sup> century woollen mill, c.615m east of the Site, now in agricultural use (**104470**), and a blacksmith's workshop c.850m south of the Site (**130337**).
- 4.61 A major late 19<sup>th</sup> century development within the Study Area was St David's mental hospital (**9456** – HER number **200**) and associated outbuildings (**82144**, **82154**, **9457**, and **82157** – HER numbers **61658**, **61666**, **61830**, **61669** and **129130**) which was opened in 1865 as the Joint Counties Lunatic Asylum for Carmarthenshire, Cardiganshire and Pembrokeshire. This was constructed to house 600 patients, officers and attendants. In 1895 it was enlarged to include a new female hospital, infectious diseases hospital, chapel, workshops and farm buildings, the labour being provided by the staff and patients of the hospital.
- 4.62 In general, with the notable exception of St. Davids Hospital, which was positioned away from population centres, non-agricultural development in the 19<sup>th</sup> century was confined to the now developed areas south and east of the Site. However, development at this time was extremely limited in comparison to currently, when compared with the 1890 OS map of 1890 (**Plan EDP 5**).

- 4.63 The first half of the 20<sup>th</sup> century had little change upon the landscape within the Study Area, particularly in the undeveloped areas surrounding the Site. A pillbox, c.875m west of the Site, is notable as a piece of evidence of WWII (**51274**), although there are no other historical changes notable until the Cattle Breeding Centre was opened at Carmarthen in 1946 by the Milk Marketing Board (**126556**), situated c.215m south of the Site.
- 4.64 It can be seen on the 1952 OS Map (**Plan EDP 5**) that the changes in the vicinity of the Site across the first half of the 20<sup>th</sup> century are limited. By 1971, a little development can be seen encroaching westwards from Carmarthen, and a little more by 1992 (**Plan EDP 5**). Widespread development of the scale seen today did not occur until after 2000, when the road alignments changed, and the road to the south of the Site was superseded (although still remains in the form of a trackway) by Ffordd Pendre, and modern development south of the Site was built.
- 4.65 Throughout this period, the Site appears to have remained agricultural and there is a near certain potential for industrial and modern period remains to exist within the Site. Any remains are most likely to be related to 19<sup>th</sup> and 20<sup>th</sup> century agricultural practices and have no level of archaeological significance.

#### **LIDAR ANALYSIS**

- 4.66 The hillshade LiDAR imagery shows some of the features mentioned above in the 'Historic Development' section (**Plan EDP 6**).
- 4.67 There is possible ridge and furrow faintly visible directly north of the Site, although this identification is uncertain, especially as ridge and furrow is generally rare in this area of Wales. No features which are believed to be archaeological in nature are observable on the Lidar within the Site.
- 4.68 No further relevant data was revealed through the analysis of the existing LiDAR data.

#### **AERIAL PHOTOGRAPHS**

- 4.69 There are 38 aerial photos obtained from CRAPW showing all or part of the Site. These range in date from 1941 to 2000 and are a mix of bird's-eye and oblique imagery. Later photographs are in colour.
- 4.70 A study was conducted of these photographs (not pictured). No relevant information regarding the Site was gleaned from this study, and no evidence of earthworks or indication of archaeological remains was found in these images.

#### **GEOPHYSICAL SURVEY**

- 4.71 On 10 December 2025, SUMO Surveys conducted an archaeological geophysical survey of the Site in support of the proposed development.

- 4.72 The survey did not find any magnetic responses indicative of probable archaeological interest. A pair of probable field boundaries were identified following an east-west alignment, one of which coincides with a modern gateway into the field. Although there is no mapping evidence of any boundaries, the survey concluded these were likely field boundaries due to their straight nature and intersection with the modern gateway.
- 4.73 A number of uncertain linear and curvilinear trends have been plotted. However, they lack the defined morphology of anomalies that would usually be interpreted as being of archaeological interest and are most likely to be natural in origin or a product of agricultural activity.
- 4.74 A number of amorphous anomalies are visible across the dataset, and these reflect natural magnetic variations in the underlying geology, with no assessed potential for archaeological remains. Overall, the survey shows that there is an extremely limited potential for any features likely to indicate settlement or significant activity. Whilst there are archaeological remains which are not either not detectable by geophysical survey, or difficult to detect, there remains a limited potential for concentrated activity within the Site.

#### **PREVIOUS REPORTS**

- 4.75 A widespread assessment for entire the Travellers Rest area encompasses the Site as well as large swathes of land around it, although no Site-specific information was relevant for this assessment (**34423**).
- 4.76 An archaeological DBA (**102738**) and following archaeological evaluation (**103454**) was conducted on land between c.10m south and c.290m south-east of the Site. This evaluation revealed the Bronze Age barrows (**109204**) and Neolithic pottery (**109203**) discussed in the Historic Development section. The DBA conjectured that a Roman Road passed through that site, based on a projected route, although no evidence of any road or roadside activity was discovered by the evaluation. The evaluation included evidence from a geophysical survey which did not indicate these remains continued into the Site.
- 4.77 A geophysical survey (**130153**) and following archaeological evaluation (**130154**) was conducted on land between c.10m and c.275m south of the Site. No archaeological features, structures, or deposits were revealed during the evaluation. A single fragment of post-medieval pottery and a fragment of 19<sup>th</sup> century clay pipe stem were recovered from the subsoil.
- 4.78 An archaeological evaluation at the former Cattle Breeding Centre, c.325m south of the Site (**131157**) did not reveal any archaeological remains predating the modern period.

## **Section 5**

### **Impact Assessment**

- 5.1 This section of the report identifies the nature and magnitude of any impacts arising from the Proposed Development to the significance of heritage assets within the Site, or to those whose setting includes the Site.

#### **DESIGNATED HISTORIC ASSETS**

- 5.2 The Site is assessed as not having the capacity to affect the significance of any designated historic asset. As such, the Proposed Development would have no impacts upon designated historic assets.

#### **HISTORIC ASSETS OF SPECIAL LOCAL INTEREST**

- 5.3 There are no known historic assets of special local interest within proximity to the Site, and therefore no capacity for the Proposed Development to alter the experience of a historic assets of special local interest. As such, the Proposed Development would have no impacts upon historic assets of special local interest.

#### **ARCHAEOLOGICAL REMAINS**

- 5.4 There is no evidence within the Study Area of activity from the earliest phases of prehistory, and a negligible potential for isolated artefacts from the Palaeolithic or Mesolithic to occur within the Site.
- 5.5 Evidence exists in the vicinity of the Site for Neolithic and Bronze Age activity in the form of extensive Neolithic pottery underlying probable Bronze Age barrows. There is no evidence that such remains would continue into the Site, and there is a low potential for such remains, although were they to exist, they would have a regional level of archaeological interest.
- 5.6 Based on evidence of farmsteads and enclosures in the Study Area, there is a moderate potential for Iron Age and/or Roman remains relating to agricultural practices, such as field boundaries, animal enclosures, ditches, and isolated pits within the Site. Such remains would have a local level of archaeological significance.
- 5.7 There is no evidence dating from the early medieval period within the Study Area, and a low potential for archaeological remains from the early medieval period to be present in the Site.
- 5.8 Based on the activity within the surrounding landscape, there is a moderate potential for medieval archaeological remains to survive within the Site. If present, any remains are most likely to be agricultural in nature, such as boundary ditches, isolated pits, and buried cultivation marks, all of which would have a local level of archaeological significance.

- 5.9 The evidence shows that the Study Area seems to have been part of a wide agricultural landscape, and there is a high potential for agricultural remains, such as drainage ditches, and field boundaries, which would all have a negligible level of archaeological significance.
- 5.10 There is a near certain potential for industrial and modern period remains to exist within the Site. Any remains are most likely to be related to 19<sup>th</sup> and 20<sup>th</sup> century agricultural practices and have no level of archaeological significance.
- 5.11 The archaeological geophysical survey conducted for the proposed development supports the evidence gleaned from the desk-based study. Importantly, it does not indicate any continuation of activity from Neolithic and Bronze Age which is known to the south of the Site. Significant archaeological remains were clearly identified from geophysical survey south of the Site and subsequently targeted by archaeological investigations. Furthermore, there is no evidence of structures, such as farmsteads or enclosures from the Romano-British period, which would reasonably be expected to be evident from the geophysical survey. Whilst isolated pits and ephemeral ditches cannot be ruled out, any level of archaeological interest is likely to be of a local level, at most.

## **Section 6**

### **Conclusions**

- 6.1 This AHA has been prepared to inform a full application for planning permission for a proposed residential development within allocated land, on the western edge of Carmarthen. The assessment has established the historic environment baseline and identified which designated and/or non-designated historic assets would be affected by the approval and implementation of the Proposed Development, directly and/or indirectly.
- 6.2 It concludes that, in terms of both designated historic assets, and historic assets of special local interest that no asset would experience a loss of significance and therefore no asset would be harmed by the approval and implementation of the Proposed Development. As such, no mitigation or compensation measures are necessary or desirable.
- 6.3 In terms of buried remains, based on the above evidence, this assessment has identified that the Site has low potential for archaeological remains of greater than a limited, local, significance, supported by the geophysical survey conducted in support of the proposed development. There is a moderate potential for Iron Age, Roman, and Medieval archaeological remains relating to agricultural practices to be within the Site. Such remains would have a local level of archaeological interest. There is a high potential for post medieval and modern archaeological remains relating to agricultural practices to be within the Site. These remains have a negligible level of archaeological interest. There is a low potential for Neolithic and Bronze Age remains, with the geophysical survey showing no evidence for similar archaeological features known to be present south of the Site.
- 6.4 Due to the low potential for remains of greater than a local level of significance, as supported by a site-specific geophysical survey, there is limited value in further archaeological works being undertaken.
- 6.5 There is, therefore, no reason why the Proposed Development could not come forward and be delivered in line with current planning policies for the conservation and management of the historic environment. Hence, there is no reason in terms of historic environment impact(s) why the detailed planning application should not be treated favourably when it is submitted for determination by Carmarthenshire County Council in due course.

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## Appendix EDP 1 Images



**Image EDP A1.1:** View south from northern end of Site.



**Image EDP A1.2:** View west from east side of Site.



**Image EDP A1.3:** View north from south side of Site.



**Image EDP A1.4:** View west-north-west from middle of the Site.



**Image EDP A1.5:** View east-north-east towards Carmarthen. The undeveloped edge of the Pontgarreg & St Davids Hospital Conservation Area is visible from the Site (marked with a red line in the right background of the image). To the left of this area, the clock tower of the main hospital building can be seen.



**Image EDP A1.6:** View from near the edge of the Pontgarreg & St Davids Hospital Conservation Area towards the Site (marked with a redline to the right of the image). The conservation area is on the other side of the treeline on the left of the image.



**Image EDP A1.7:** View north-west from the Site towards the Trebersed Moated Site. The moated site is not visible from the Site due to an intervening ridge line, but its approximate location below the terrain is marked with the red arrow.



**Image EDP A1.8:** View south-east towards the Site from access road adjacent to the field containing the Trebersed Moated Site. The moated site is visible as earthworks to the left of the image. The Site's location is marked with the red arrow, although it is not visible from the access road, which sits higher in the landscape than the moated site. A natural ridge and hedgerow screen the views towards the Site.



**Image EDP A1.9:** View north-east from access road adjacent to the field containing the Trebersed Moated Site. A new housing development can be in the middle background of the image. The Site is not visible from the access road, but its approximate location is at the far right of the image.

## **Appendix EDP 2 Development Proposal**

Proposed Accommodation Schedule				
HouseType	GIA	Beds	Total No.	Percentage
<b>Open Market</b>				
Fairhaven	665	2	11	26
Newbury	1013	3	8	19
Lansdown	896	3	4	10
Milford	981	3	3	7
Ramsey	1124	4	3	7
Redbourne	1266	4	7	17
Rochester	1198	4	6	14
	Sub Total		42	100
<b>Affordable</b>				
<b>Social Rent</b>				
1B2P	549/638	1	4	16
2B4P	880	2	10	40
3B5P	966	3	8	32
4B7P	1236	4	3	12
	Sub Total		25	100
<b>LCHO</b>				
Fairhaven	665	2	7	41
Lansdown	896	3	7	41
Newbury	1013	3	3	18
	Sub Total		17	100



**Legend**

- Red line boundary
- Existing PROW brideway (indicative)
- Proposed building
- Proposed trees
- Existing trees to be retained
- Root protection area (RPA)
- Proposed Hoggin Footpath
- Existing vegetation retained
- Proposed hedgerow
- Proposed SuDS - attenuation
- Proposed Rain Garden
- Private Drive/Parking
- Private Footpath
- Tarmac Footway/Shared Path
- Tarmac Carriageway
- Block Paving (On plot)
- Bin Collection Point
- Affordable Rent Properties
- Open Market Properties
- Low Cost Home Ownership Homes
- Show Home-Site Office
- Show Home

For specific landscape proposals and detailed key please see drawing 2513-URB-XX-DR-LA-001-Landscape General Arrangement Plan

**NOTES:**

SCALE: Do not scale from this drawing.

SETTING OUT: All setting out, levels, dimensions to be agreed on site. Do not use the information on this drawing without checking all dimensions on site. Any discrepancies between drawings, specifications and site works are to be reported to The Urbanists. Order of construction and setting out is to be agreed on site.

CHECK: This drawing must be the latest revision, read in conjunction with all other drawings, details, specifications and schedules. All dimensions are in millimetres unless otherwise stated. Where any contradiction or uncertainty arises between the drawings and/or the schedule of works / specification, it is the Contractor's responsibility to seek verification from The Urbanists before proceeding. No claims will be met by The Urbanists, where the Contractor continues work in absence of such confirmation.

No.	Date	By	Revision Notes
P01	14/11/2025		Initial review
P02	06/01/2026	LP	Highways amendments
P03	19/01/2026	LP	Attenuation amendment

**PROJECT STATUS:**

S4 (SUITABLE FOR APPROVAL)

**theurbanists**

Client Lovell Homes

Project Carmarthen West

Title Planning Layout

Project ID Organiser Volume Level Type Role Dwg Suit. Rev.  
2511 URB 00 XX DR UD 001 S4 P03

Drawn TS Date 14/11/2025 Checked LP Scale 1:500

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## **Appendix EDP 3 Geophysical Survey**



# **GEOPHYSICAL SURVEY REPORT**

**Carmarthen West**

Client

**The Environmental Dimension Partnership Ltd**

For

**Lovell Partnerships Ltd**

Survey Report

**25721**

Date

**19 January 2026**



## Survey Report 25721: Carmarthen West

<b>Survey dates</b>	10 December 2025
<b>Field co-ordinator</b>	Liam Brice-Bateman BA
<b>Field team</b>	Andrew Stewart
<b>Report date</b>	19 January 2026
<b>Report author</b>	Liam Brice-Bateman BA
<b>CAD Illustrations</b>	Liam Brice-Bateman BA
<b>Project manager</b>	Rebecca Fradgley BSc (Hons) ACIfA
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**SUMO GeoSurveys** is a trading name of **SUMO Geophysics Ltd**.

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*The geophysical interpretation drawings must be used in conjunction with the relevant results section and appendices of this report.*

## 1 EXECUTIVE SUMMARY

1.1.1 **SUMO GeoSurveys** was commissioned to undertake a geophysical survey of an area outlined for development. This survey forms part of an archaeological investigation being undertaken by **The Environmental Dimension Partnership Ltd** on behalf of **Lovell Partnership Ltd**.

No responses of archaeological interest were identified in the magnetic data. A number of uncertain linear and curvilinear trends have been plotted which are likely to have an agricultural or natural origin. Two possible former field boundaries are visible in the results which are dominated by responses associated with natural variations in the underlying geology.

1.1.2 *Fe gomisiynwyd **SUMO GeoSurveys** i ymgymryd arolwg geoffisegol ar ddarn o dir i'w ddatblygu. Mae'r arolwg yn rhan o archwiliad archeolegol gan **The Environmental Dimension Partnership Ltd** ar ran **Lovell Partnership Ltd**.*

*Ni chafwyd unrhyw dystiolaeth yn awgrymu bod nodweddion o ddiddordeb archeolegol yn bresennol yn y canlyniadau magnetig. Roedd ambell batrwm llinellol a chromlinog a welwyd, yn debygol o fod yn naturiol, neu o ganlyniad i brosesau amaethyddol. Mae'n bosib fod dau hen ffin cae i weld, ond y ddaeareg naturiol sydd yn fwy amlwg yn y canlyniadau gan fwyaf.*

## 2 PROJECT BACKGROUND

### 2.1 Site details

NGR / Postcode	SN 38585 19738 / SA31 3RP
Location	The site is located approximately 2km west of Carmarthen, Wales. Llysonnen Road lies 300m to the south with Fford Pendre bounding the site to the east. Agricultural land is west and north of the site with residential buildings on Maes Pedr in the south.
HER	Heneb
HER No.	131783
District	Sir Gaerfyrddin - Carmarthenshire
Parish	Carmarthen Community
Topography	Sloping gently south
Land use	Pasture
Geology (BGS 2025)	Bedrock: Tetragraptus Beds – Mudstone Superficial: Glaciofluvial Deposits, Devensian
Soils (CU 2025)	Soilscape (6) Freely draining slightly acid loamy soils
Survey method(s)	Magnetometer survey (fluxgate gradiometer)
Site area	3.4ha

## 2.2 **Archaeological context**

2.2.1 A search of the Archwilio Heritage Environment Record showed no known archaeological assets within the survey area but did show limited prehistoric activity and extensive Medieval remains surrounding the site.

2.2.2 A Bronze Age Round Barrow cemetery site consisting of at least 3 ring ditches found during archaeological works in 2012 (PRN 103454) 100m south-east of site.

2.2.3 The Scheduled site of Trebersed (PRN 2147) lies 200m NW of the survey area at its closest point. The monument comprises the remains of a well-preserved medieval moated homestead that has a well-documented foundation and history. Trebersed was a grange of the Priory of St John in Carmarthen. The area west of the moat also seems to be artificially terraced and these minor earthworks may represent garden features. Jobs Well, from the same period, sits 400m to the NE, one of many Medieval Wells recorded near the site. There is also the site of Possible Leprosy Hospital 1km to the north. The area has a great deal of Post-Medieval milling activity particularly at Tawelan. The remains of old Post Medieval roads connecting mills (PRN 51275) are found west of the survey area. A possible Medieval Homestead (PRN 5019) visible in crop marks.

2.2.4 East of the survey area lies Carmarthen constituting a great concentration of 19<sup>th</sup> Century archaeology including the Pontgarrey and St Davis Hospital conservation area [WAL/CARM/22]

## 2.3 **Aims and objectives**

2.3.1 To locate and characterise any anomalies of possible archaeological interest within the study area.

## 3 **SURVEY METHODOLOGY AND DATA PROCESSING**

A magnetic survey was employed as the most effective method of locating the type of archaeological anomalies which might be expected at this site.

The survey fieldwork and this report follow the general guidance set out by ClfA (2020) and the European Archaeology Council (EAC) (2016).

### 3.1 **Instrumentation**

3.1.1 The magnetic survey was undertaken using the following equipment configuration:

<b>Sensors</b>	<b>Equipment configuration</b>	<b>Traverse interval (m)</b>	<b>Sample interval (m)</b>
4 No. Bartington Grad 601	Cart-based system ATV towed Data is georeferenced by RTK GNSS	1.0	0.25

### 3.2 **Survey methodology**

3.2.1 The cart-based system was towed by an all-terrain vehicle (ATV).

3.2.2 The survey profiles are usually offset from buildings and other metallic features by several metres to reduce the detrimental effect that these surface magnetic features have on the

data. Gaps were also left adjacent to boundaries and surface obstructions to allow the ATV and cart-based system sufficient space to safely pass and turn.

- 3.2.3 The location of the cart-based survey data is converted direct to Ordnance Survey National Grid co-ordinates, using the UK OSTN15 transformation.

### **3.3 Data processing and display**

- 3.3.1 The only processes performed on data are the following unless specifically stated otherwise:

*Zero Mean Traverse:* This process sets the background mean of each traverse within each grid to zero. The operation removes instrument striping effects and edge discontinuities over the whole of the data set.

*Step Correction (De-stagger):* When gradiometer data are collected in 'zig-zag' fashion, stepping errors can sometimes arise. These occur because of a slight difference in the speed of data collection on the forward and reverse traverses. The result is a staggered effect in the data, which is particularly noticeable on linear anomalies.

- 3.3.2 The data was stored direct to a laptop using ML-GRAD software. Processing is carried out using Anomaly GeoSurveys which automatically corrects for instrument drift and calculates a mean value for each profile. A positional value is assigned to each data point based on the sensor number and recorded GNSS co-ordinates. The data is gridded, and parameters are set based on the sensor spacing and mean values. No additional processing is required.

- 3.3.3 *Greyscale* raster images (PNG files) are displayed at a range of -2 nT to 4nT, due to the nature of the local geology. A second range of -x to y nT is also included; this can make it easier to identify some anomalies but very weak responses may not be visible in the wider range.

- 3.3.4 X-Y trace plots are examined for all the data and overlain onto the greyscale plot to assist in the interpretation, primarily to help identify dipolar / bipolar responses (that will probably be associated with surface / near-surface iron objects) and thermoremanent material. When not displayed in the report, a digital drawing showing the X-Y trace plot is provided in the Archive.

- 3.3.5 A detailed discussion of data processing, display and the general categories of anomaly which have been identified by the survey is provided in the Appendices.

## **4 RESULTS**

### **4.1 Probable /Possible archaeology**

- 4.1.1 No magnetic responses have been recorded that could be interpreted as being of definite archaeological interest.

### **4.2 Uncertain**

- 4.2.1 A few weak linear trends have been detected and assigned to the category of *Uncertain*. They generally lack the defined morphology of anomalies that would usually be interpreted as being of archaeological interest and are most likely to be natural in origin or a product of agricultural activity.

### **4.3 Former field boundary –conjectural**

- 4.3.1 Approximately 100m from the northern limits of the survey area there are linear trends visible in the data, including two parallel responses. They follow an east-west alignment and coincide with a modern gateway into the field. As such the responses could indicate a former

field boundary but there is no supporting map evidence. Further north, a second but weaker trend, could indicate another conjectural boundary.

#### **4.4 *Natural***

4.4.1 A number of amorphous anomalies are visible across the dataset and these reflect natural magnetic variations in the underlying geology.

#### **4.5 *Ferrous / fired / magnetic disturbance***

4.5.1 Smaller scale ferrous anomalies ("iron spikes") are present throughout the data and are characteristic of small pieces of ferrous debris in the topsoil. Some fired material (brick / tile) can produce similar responses as can gravels derived from igneous rocks. These types of responses are commonly assigned a modern origin, unless there is strong supporting evidence indicating a different cause. Where isolated responses are grouped together, they are usually categorised as magnetic disturbance and indicate the presence of a concentration of (usually modern) material. Only the most prominent of these are isolated responses and areas of magnetic disturbance are highlighted on the interpretation diagram

4.5.2 Ferrous responses close to field boundaries are usually due to adjacent fences and gates.

## **5 DATA APPRAISAL AND CONFIDENCE ASSESSMENT**

5.1 The results from this survey indicate a range of differing magnetic responses but the geology could be masking weaker archaeological responses.

5.2 It should be noted that a geophysical survey does not directly locate sub-surface features - it identifies variations or anomalies in the background response caused by features. The interpretation of geophysical anomalies is often subjective, and it is rarely possible to identify the cause of all such anomalies. Not all features will produce a measurable anomaly, and the effectiveness of a geophysical survey is also dependant on the site-specific conditions. The main factors that may limit whether a feature can be detected are the composition of a feature, its depth and size and the surrounding material. It is not possible to guarantee that a geophysical survey will identify all sub-surface features.

## **6 CONCLUSION**

6.1 The magnetometer survey has not recorded any magnetic responses that could be interpreted as being of definite archaeological interest. Uncertain anomalies, possible former field boundaries, ferrous material and natural anomalies were detected.

## 7 BIBLIOGRAPHY AND REFERENCES

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- ClfA 2020 *Standard and guidance for archaeological geophysical survey*; ClfA guidance note 2014 (amended 2020). Chartered Institute for Archaeologists, Reading <https://www.archaeologists.net/sites/default/files/2023-11/ClfA-SandG-Geophysical-Survey-2020.pdf>
- CU 2025 *Soilscapes Viewer*; LandIS: The Land Information System. Soil data for England and Wales. Website: <https://www.landis.org.uk/soilscapes/>
- EAC 2016 *EAC Guidelines for the Use of Geophysics in Archaeology*; European Archaeological Council, Guidelines 2.

## 8 ARCHIVE

- 8.1.1 The minimally processed data, data images, X-Y traces and a copy of this report are stored in **SUMO GeoSurveys'** digital archive, on an internal RAID configured NAS drive in the Eckington Office. These data are also backed up to the Cloud for off-site storage.
- 8.1.2 The Grey Literature will be archived with OASIS and the relevant HER within a period of 12 months.

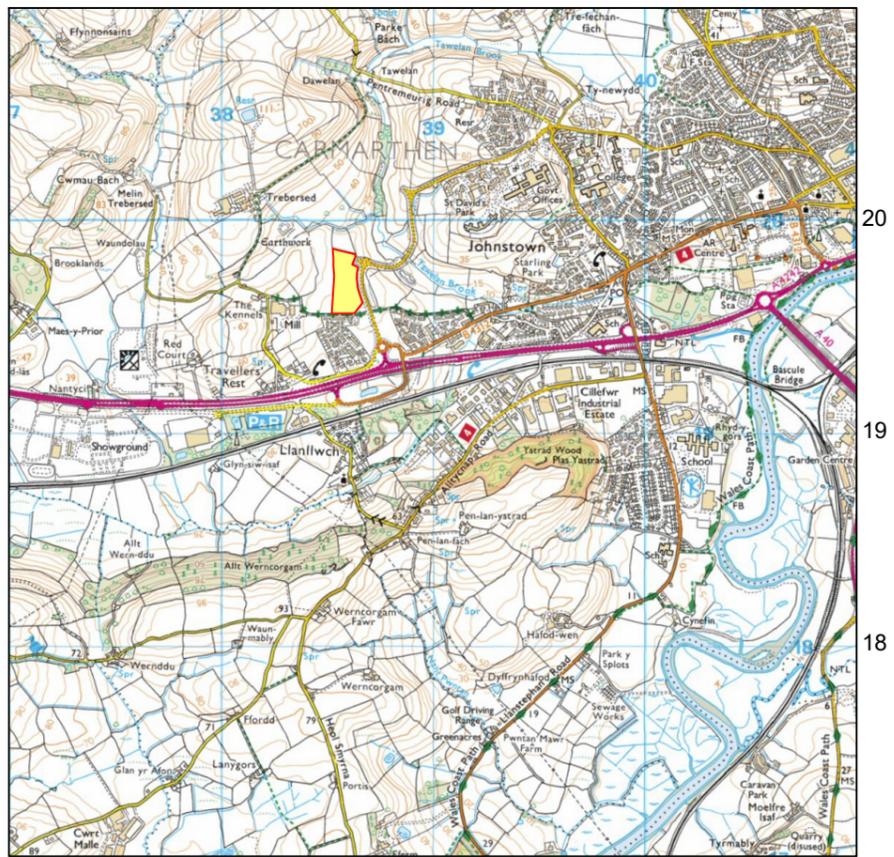
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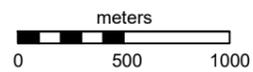
Site ★

NTS

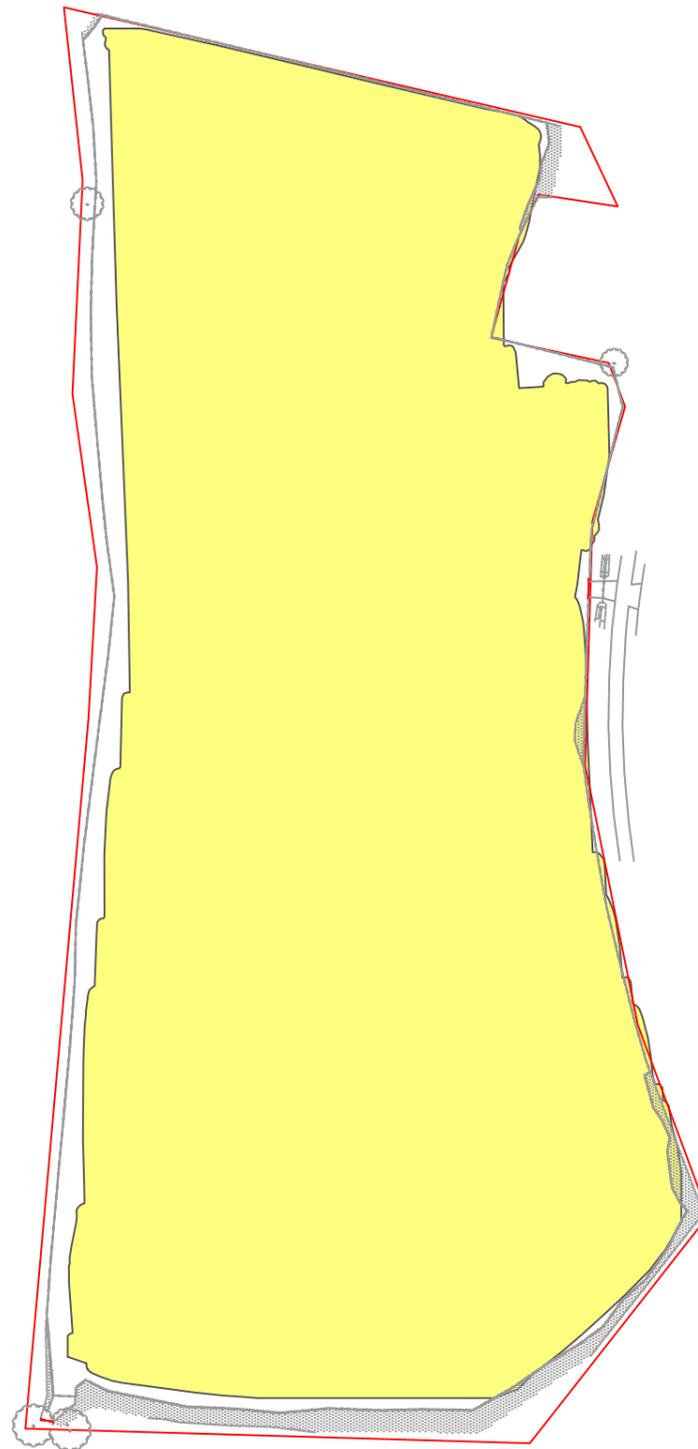


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**KEY**

- Site boundary
- Survey area(s)



Title: Site location

Client: The Environmental Dimension Partnership Ltd

Project: SUMO-25721 Carmarthen West

Scale: As shown

Fig No: 01



### NOTES

1. The Ordnance Survey co-ordinates obtained for this survey were measured using the UK OSTN15 transformation. This transformation should be taken into account if the survey data is relocated.
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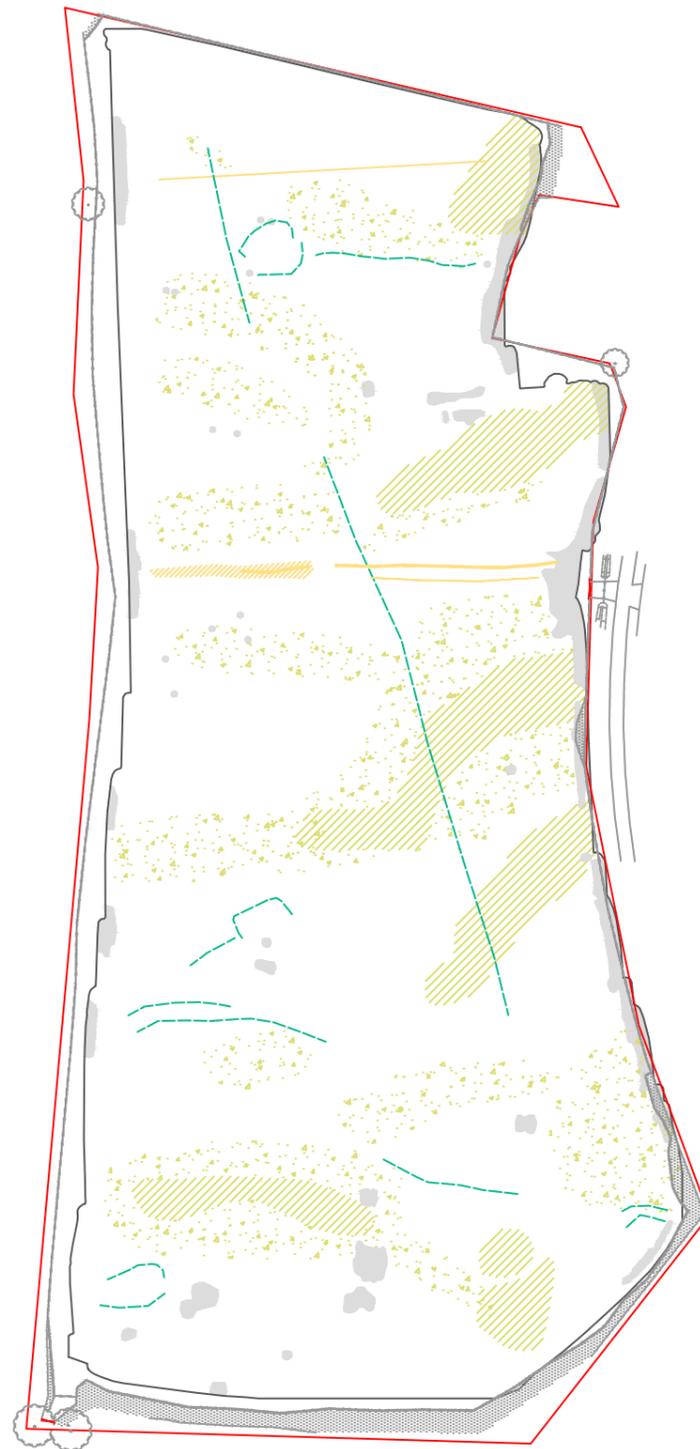
Title:  
Magnetic Gradient Data - Greyscale Plot

Client:  
The Enviromental Dimension Partnership Ltd

Project:  
SUMO-25721 Carmarthen West

Scale: 1:1500@A3  
0 25 50 meters

Fig No:  
02



### NOTES

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### KEY

	Uncertain origin (trend)
	Former field boundary (conjectural)
	Natural (e.g. geological / pedological)
	Ferrous and / or fired material



Title:  
Magnetic Gradient Data - Interpretation

Client:  
The Enviromental Dimension Partnership Ltd

Project:  
SUMO-25721 Carmarthen West

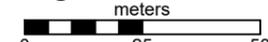
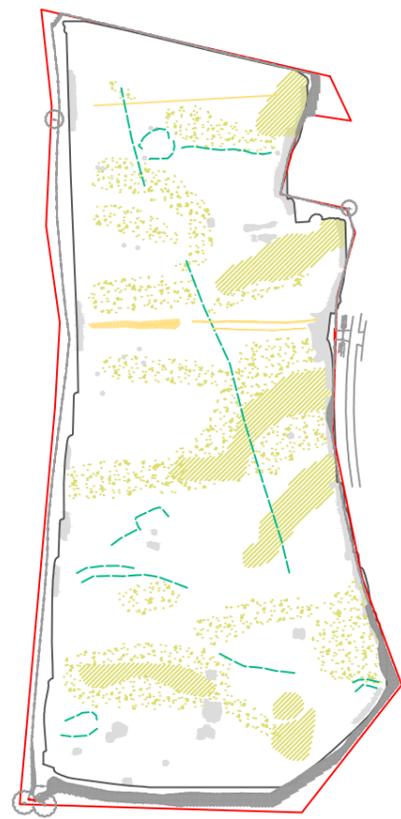
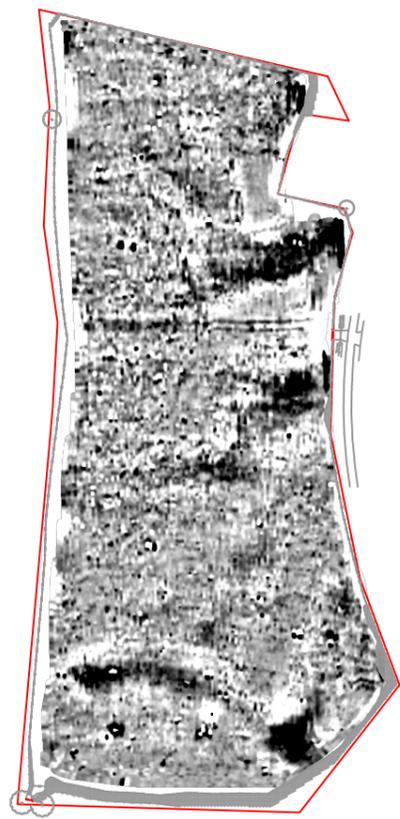
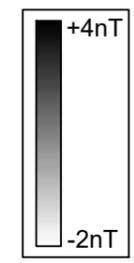
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Fig No:  
03



**NOTES**

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**KEY**

	Uncertain origin (trend)
	Former field boundary (conjectural)
	Natural (e.g. geological / pedological)
	Ferrous and / or fired material

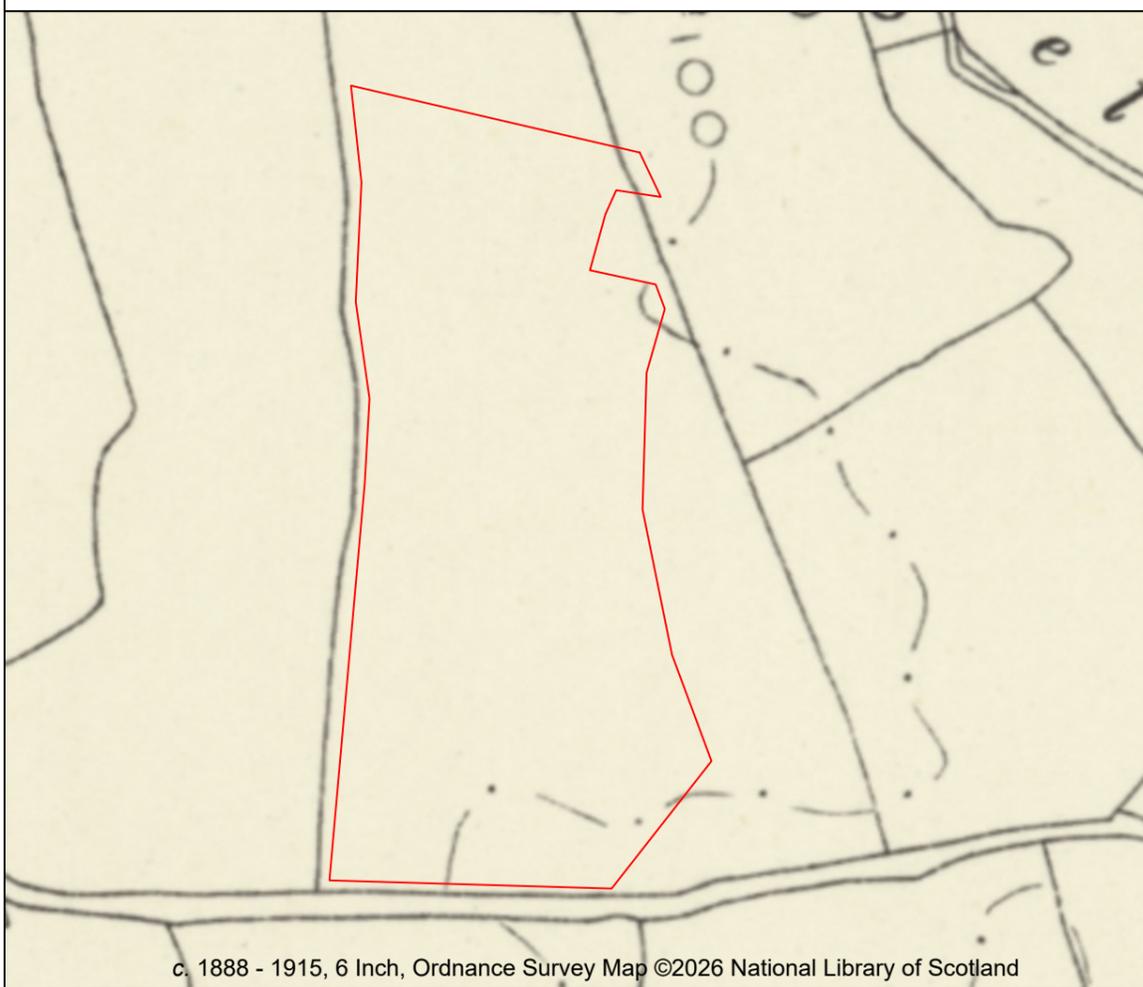


Title:  
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Ordnance Survey Map / 2021 Aerial Image

Client:  
The Enviromental Dimension Partnership Ltd

Project:  
SUMO-25721 Carmarthen West

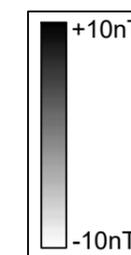
Scale: NOT TO SCALE / AS SHOWN	Fig No: 04
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## NOTES

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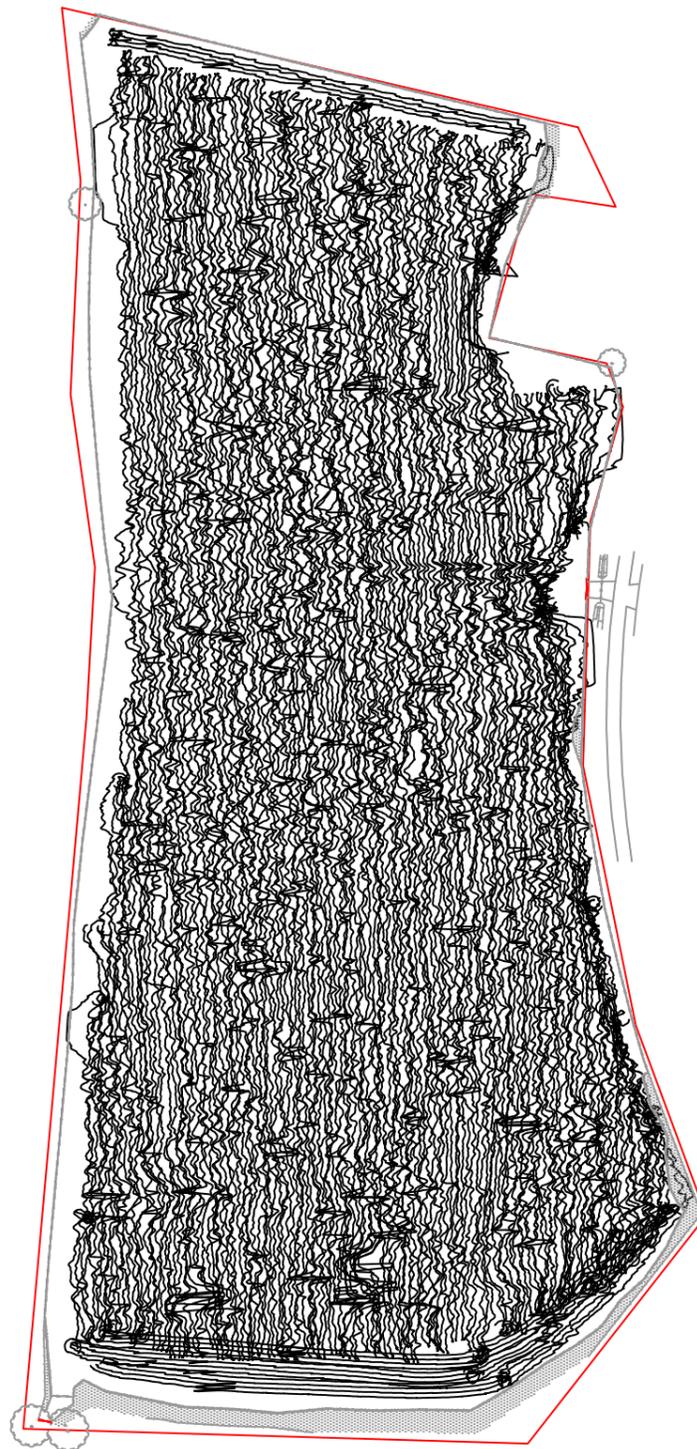
Title:  
Minimally Processed Magnetic Gradient Data -  
Greyscale Plot

Client:  
The Enviromental Dimension Partnership Ltd

Project:  
SUMO-25721 Carmarthen West

Scale: 1:1500@A3  
0 25 50  
meters

Fig No:  
05



### NOTES

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Title: Magnetic Gradient Data - X-Y Trace Plot  
(clipped at +/-15nT)

Client: The Enviromental Dimension Partnership Ltd

Project: SUMO-25721 Carmarthen West

Scale: 1:1500@A3

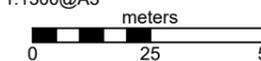


Fig No: 06

## Appendix A - Technical information: Magnetic survey

### **Instrumentation:**

Fluxgate gradiometers were used for the magnetic survey. These are systems that have two fluxgate magnetometers a set distance apart in a vertical sensor each of which measures the vertical component of the earth's magnetic field. The difference in measurements between the two magnetometers indicates the gradient of the earth's magnetic field.

Generally, features up to 1 m deep may be detected using fluxgate gradiometers, though strongly magnetic objects may be visible at greater depths and features / material that produce relatively weak magnetic responses may only be detected at shallower depths.

Data points and survey grids are georeferenced using using an RTK GNSS (Real-Time Kinematic Global Navigation Satellite System) to an accuracy usually in the order of +/- 0.05 m, and at all times better than 0.1 m. Positional data is converted to the Ordnance Survey National Grid co-ordinates, using the UK OSTN15 transformation.

SUMO GeoSurveys utilise Bartington or Foerster fluxgate gradiometers in several different configurations, depending on the client's requirements, survey objectives and site specific conditions. These include:

### **Bartington cart system**

Cart survey: Four Grad601 sensors, with a sensor spacing of 1.0 m, are mounted on a non-magnetic cart. Readings are taken at nominal 0.125 m intervals. The sensors and an on-board RTK GNSS are connected to a control unit / data logger which allows each data point to be geo-referenced and related to Ordnance Survey National Grid. Readings are triggered at time intervals so the speed of survey can affect how often a reading is taken but the frequency a reading is taken and the speed of survey are set so that on average a reading will be taken at the required interval or better.

### **Bartington Grad 601-2**

Hand-held: In this configuration two paired sensors, connected to a control unit / data logger, are carried by hand. The sensor are spaced 1 m apart and readings are taken at 0.25 m centres along traverses. Regular 30 m grids are set out across the survey area and the data is collected over these.

### **Foerster cart system (MACS)**

Cart survey: A multi-sensor array cart system (MACS) utilising 4 or 8 Foerster 4.032 Ferex CON 650 gradiometers that are mounted on a non-magnetic cart. Readings are taken at between 0.1 and 0.15 m intervals. The sensors and an on-board RTK GNSS are connected to a control unit / data logger (an Eastern Atlas digitiser) which allows each data point to be geo-referenced and related to Ordnance Survey National Grid. Readings are triggered at time intervals so the speed of survey can affect how often a reading is taken but the frequency a reading is taken and the speed of survey are set so that on average a reading will be taken at the required interval or better.

### **Foerster cart system (MACS)**

Cart survey: A multi-sensor array cart system (MACS) utilising 4 Foerster 4.032 Ferex MG-10-550 gradiometers that are mounted on a non-magnetic cart. Readings are taken at between 0.1 and 0.15 m intervals. The sensors and an on-board RTK GNSS are connected to a control unit / data logger which allows each data point to be geo-referenced and related to Ordnance Survey National Grid. Readings are triggered at time intervals so the speed of survey can affect how often a reading is taken but the frequency a reading is taken and the speed of survey are set so that on average a reading will be taken at the required interval or better.

## Data processing

The processing sequence used for the data will depend on the instrument and configuration used.

### Bartington Grad601 cart survey data

Zero Mean            This process sets the background mean of each traverse to zero. The operation  
Traverse            removes striping effects and edge discontinuities caused by individual sensors  
                         having slightly different values when zeroed or where striping errors occur due to  
                         instrument drift or are a product of data collection.

### Bartington Grad601-2 hand-held data

Zero Mean            This process sets the background mean of each traverse within each grid to zero.  
Traverse            The operation removes striping effects and edge discontinuities caused by  
                         individual sensors having slightly different values when zeroed or where striping  
                         errors occur due to instrument drift or are a product of data collection.  
Step Correction      When gradiometer data are collected in 'zig-zag' fashion, stepping errors or stagger  
(De-stagger)        can sometimes arise. These occur because of a slight difference in the speed of  
                         walking on the forward and reverse traverses. The result is a staggered effect in  
                         the data, which is particularly noticeable on linear anomalies. This process corrects  
                         these errors.

### Foerster cart system (MACS)

ealdec                This process decodes the raw data and converts it to a csv file. Positional values  
                         are assigned to each data point based on data from the GNSS and the offset of  
                         each sensor relative to the GNSS.  
Ealmat.m            This is the equivalent of a zero mean traverse, wherein the data is normalised and  
                         a drift correction applied for each probe.  
Ealgrid.m            This grids the data by merging each profile file. Parameters are set by based on  
                         the sensor spacing and resolution required.

### Foerster cart system (MACS)

Zero Mean            This process sets the background mean of each traverse to zero. The operation  
Traverse            removes striping effects and edge discontinuities caused by individual sensors  
                         having slightly different values when zeroed or where striping errors occur due to  
                         instrument drift or are a product of data collection.

## Display

Greyscale plot      A greyscale plot of magnetic data is a visual representation of magnetic field  
                         strength variations over a given area. Magnetic gradient measurements are  
                         converted into a two-dimensional image where different shades of grey correspond  
                         to different magnetic values.

This format divides a given range of readings into a set number of classes. Each  
class is represented by a specific shade of grey, the intensity increasing with value.  
All values above the given range are allocated the same shade (maximum  
intensity); similarly, all values below the given range are represented by the  
minimum intensity shade. In this instance black is used for the maximum intensity  
values and white for the minimum.

X-Y trace plot      An X-Y trace plot of magnetic data is a visual representation of magnetic field  
                         strength variations over a given area. Magnetic gradient measurements along a  
                         single traverse are displayed as a graph where the X-axis represents the distance  
                         along a traverse and the Y-axis is the measured magnetic gradient value at that  
                         point. Plots for each traverse are stacked to produce the X\_Y trace plot for an area.

The main advantage of the shape of individual anomalies can be viewed, and if  
required the full range of data can be viewed, although the data is often clipped at  
+/- 15 nT to +/- 20 nT.

## Interpretation Categories

In certain circumstances (usually when there is corroborative evidence from desk-based or excavation data) very specific interpretations can be assigned to magnetic anomalies (for example, *Roman Road, Wall, etc.*) and where appropriate, such interpretations will be applied. The list below outlines the generic categories commonly used in the interpretation of the magnetic gradient data.

<i>Archaeology / probable archaeology</i>	This term is used when the form, nature and pattern of the responses are clearly or very probably archaeological and /or if corroborative evidence is available. These anomalies, whilst considered anthropogenic, could be of any age.
<i>Possible archaeology</i>	These anomalies exhibit either weak signal strength and / or poor definition, or form incomplete archaeological patterns, thereby reducing the level of confidence in the interpretation. Although the archaeological interpretation is favoured, they may be the result of variable soil depth or plough damage.
<i>Industrial / Burnt / fired</i>	Strong magnetic anomalies that, due to their shape and form or the context in which they are found, suggest the presence of kilns, ovens, corn dryers, metal- working areas or hearths. It should be noted that in many instances modern ferrous material can produce similar magnetic anomalies.
<i>Ridge and furrow</i>	Parallel linear anomalies whose broad spacing suggests ridge and furrow cultivation. In some cases, the response may be the result of more recent agricultural activity.
<i>Uncertain origin</i>	Anomalies which stand out from the background magnetic variation, yet whose form and lack of patterning gives little clue as to their origin. Often the characteristics and distribution of the responses straddle the categories of <i>Possible Archaeology / Natural</i> or (in the case of linear responses) <i>Possible Archaeology / Agriculture</i> ; occasionally they are simply of an unusual form.
<i>Former field boundary (probable and possible)</i>	Anomalies that correspond to former boundaries indicated on historic mapping, or which are clearly a continuation of existing land divisions. Possible denotes less confidence where the anomaly may not be shown on historic mapping but nevertheless the anomaly displays all the characteristics of a field boundary.
<i>Agriculture (ploughing)</i>	Parallel linear anomalies or trends with a narrower spacing, sometimes aligned with existing boundaries, indicating more recent cultivation regimes. The general orientation of the cultivation regime is shown but, for the sake of clarity, each individual anomaly has not been shown.
<i>Agriculture (land drain)</i>	Weakly magnetic linear anomalies, quite often appearing in series forming parallel and herringbone patterns. Smaller drains may lead and empty into larger diameter pipes, which in turn usually lead to local streams and ponds. These are indicative of clay fired land drains.
<i>Natural (e.g. geological / pedological)</i>	These responses form clear patterns in geographical zones where natural variations are known to produce significant magnetic distortions.
<i>Magnetic disturbance</i>	Areas of strong dipolar / bipolar anomalies, usually related to a spread / concentration of modern magnetic including ferrous and fired (e.g. brick or tile rubble) material.
<i>Service (e.g. pipe, cable or drain)</i>	Magnetically strong anomalies, usually forming linear alignments are indicative of ferrous pipes cables. Sometimes other materials (e.g. pvc) or the fill of the trench can cause weaker magnetic responses which can be identified from their uniform linearity.
<i>Ferrous</i>	This type of response is associated with ferrous material and may result from small items in the topsoil, larger buried objects such as pipes, or above ground features such as fence lines or pylons. Ferrous responses are usually regarded as modern. Individual burnt stones, fired bricks or igneous rocks can produce responses similar to ferrous material.

Where appropriate some anomalies will be further classified according to their form (positive or negative) and relative strength and coherence (trend: weak and poorly defined).

## Appendix B - Technical information: Magnetic theory

Detailed magnetic survey can be used to effectively define areas of past human activity by mapping spatial variation and contrast in the magnetic properties of soil, subsoil and bedrock. Although the changes in the magnetic field resulting from differing features in the soil are usually weak, changes as small as 0.1 nanoTeslas (nT) in an overall field strength of 48,000 (nT), can be accurately detected.

Weakly magnetic iron minerals are always present within the soil and areas of enhancement relate to increases in *magnetic susceptibility* and permanently magnetised *thermoremanent* material.

Magnetic susceptibility relates to the induced magnetism of a material when in the presence of a magnetic field. This magnetism can be considered as effectively permanent as it exists within the Earth's magnetic field. Magnetic susceptibility can become enhanced due to burning, soil formation, weathering, erosion and complex biological or fermentation processes.

Thermoremanence is a permanent magnetism acquired by iron minerals that, after heating to a specific temperature known as the Curie Point, are effectively demagnetised followed by re-magnetisation by the Earth's magnetic field on cooling. Thermoremanent archaeological features can include hearths and kilns; material such as brick and tile may be magnetised through the same process.

Silting and deliberate infilling of ditches and pits with magnetically enhanced soil creates a relative contrast against the much lower levels of magnetism within the subsoil into which the feature is cut. Systematic mapping of magnetic anomalies will produce linear and discrete areas of enhancement allowing assessment and characterisation of subsurface features. Material such as subsoil and non-magnetic bedrock used to create former earthworks and walls may be mapped as areas of lower enhancement compared to surrounding soils.

A magnetic survey is carried out using a magnetometer which can measure these small changes in magnetic properties, which are referred to as anomalies. Magnetometers can either measure the total field or the gradient. Measuring the gradient of the earth's magnetic field can suppress any diurnal or regional effects and makes the instrument sensitive to smaller, localised anomalies, which is critical for archaeological surveys. The total field or magnetic gradient are measured in Tesla (T) with the small variations detected in archaeological surveys recorded in nanoTesla (nT).

Factors affecting the magnetic survey may include soil type, local geology, previous human activity and disturbance from modern services (pipes, cables or drains) or other modern material / activity.

## Appendix C – Data Management Plan & Archive Selection Strategy

### Data Management Plan

Project ID

SUMO-25721

Project Name

Carmarthen West

Project Description

A detailed magnetometer survey was carried out over 3.4 hectares at Carmarthen.

Client

The Environmental Dimension Partnership Ltd

Project Manager

Thomas Cockcroft / Liam Brice-Bateman

Field Leader

Liam Brice-Bateman

Date DMP created

25.11.2025

Date DMP last updated

12.01.2025

Version

2

Technique - data

Detailed magnetic survey.

Manual – cart - other

ATV cart system

Documentation and metadata

All documentation and data produced are stored on SUMO servers in a specific job file.

Data storage, access and back-up

- SUMO Secure server during the project life set up in a RAID configuration (a RAID configuration incorporates a level of data redundancy meaning if a single hard drive in fails data can still be restored).

- Snap shots of the data will be made at several intervals during the day to allow data to be restored for up to 30 days if changed / deleted.
- Once the final report has been completed data will be moved onto NAS drive set up in a RAID configuration.
- All data is backed up to an off-site location (Cloud storage).

## **Archive Selection Strategy**

### **Digital Data**

#### Selection

It is proposed that only the final version of all born digital documents (reports, images and CAD files) will be selected for inclusion in the Preserved Archive. All raw and processed survey data will be included in the preserved archive. Below is what will constitute the selected archive:

- Raw data in XYZ format .csv and .png plus .pgw world file
- Processed data as .png plus .pgw world file
- Final survey report .pdf
- CAD and Vector graphics (interpretations) in .dwg format

#### De-selected digital data

The de-selected material will be retained on the SUMO Secure server and Cloud storage.

### **Documents**

Not applicable – no archive

### **Materials**

Not applicable – no archive



- Archaeological Geophysics
- Engineering Geophysics
- Measured Building Services
- Utility and Topographic Services
- Aerial Surveys
- Rail Surveys

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SUMO Services Ltd, incorporated under the laws of England and Wales,  
Company Registration No.4275993.  
Registered Office Unit 8 Hayward Business Centre, New Lane, Havant, Hampshire, PO9 2NL

## Plans

**Plan EDP 1:** Site Location  
(edp9176\_d013a 11 November 2025 JLe/RTe)

**Plan EDP 2:** Designated Heritage Assets  
(edp9176\_d014a 16 January 2026 JLe/RTe)

**Plan EDP 3:** HER Features  
(edp9176\_d015a 16 January 2026 JLe/RTe)

**Plan EDP 4:** HER Events  
(edp9176\_d016a 16 January 2026 JLe/RTe)

**Plan EDP 5:** Historic Maps  
(edp9176\_d017a 16 January 2026 JLe/RTe)

**Plan EDP 6:** LiDAR Data  
(edp9176\_d018a 16 January 2026 JLe/RTe)

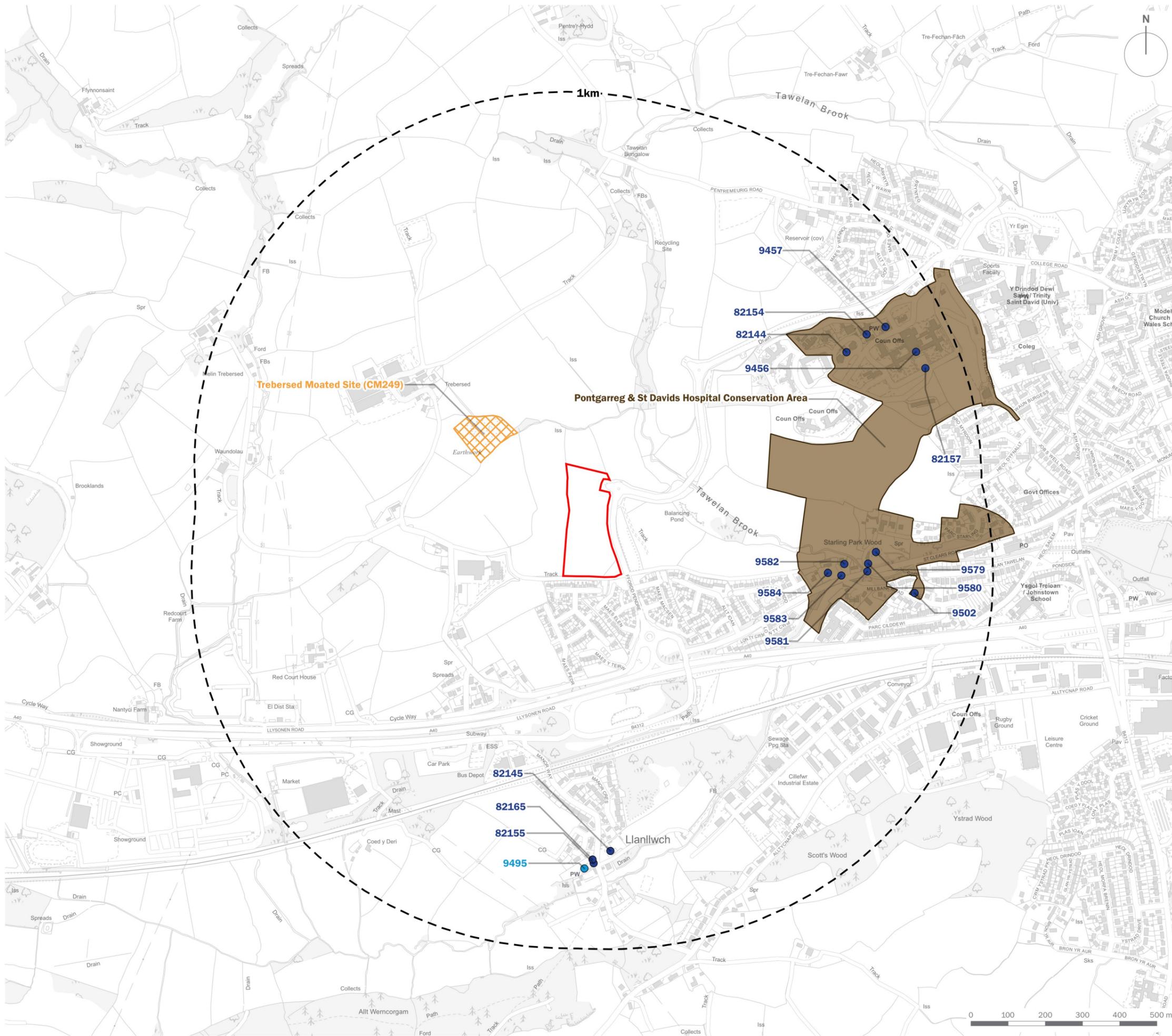


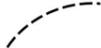
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date	<b>11 NOVEMBER 2025</b>	drawn by	<b>JLe</b>
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-  Site Boundary
-  1km Study Area
-  Grade II\* Listed Building
-  Grade II Listed Building
-  Conservation Area
-  Scheduled Monument

client  
**Lovell Partnerships Ltd**

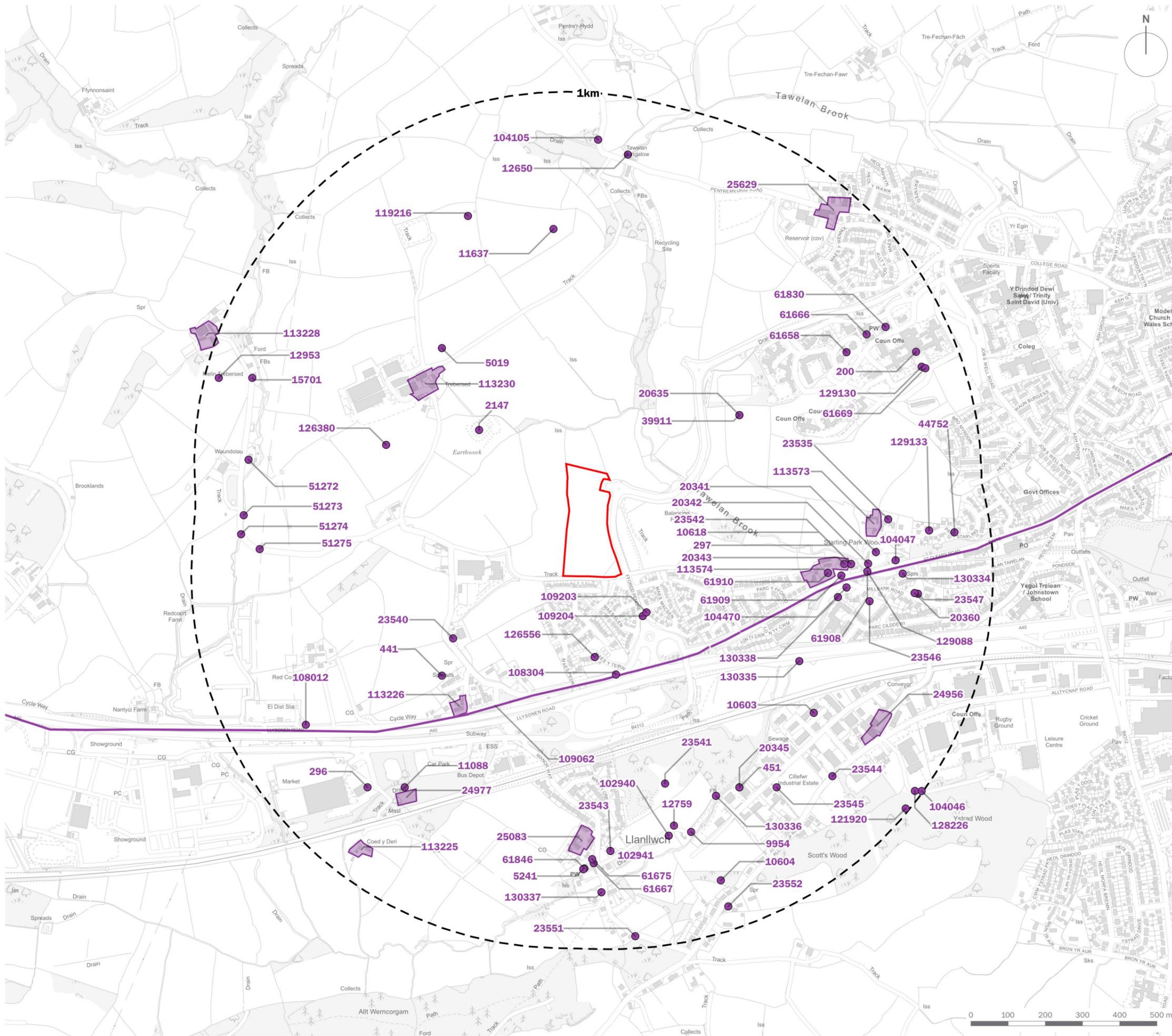
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**Carmarthen West, Carmarthen**

drawing title  
**Designated Heritage Assets**

date	<b>16 JANUARY 2026</b>	drawn by	<b>JLe</b>
drawing number	<b>edp9176_d014a</b>	checked	<b>RTe</b>
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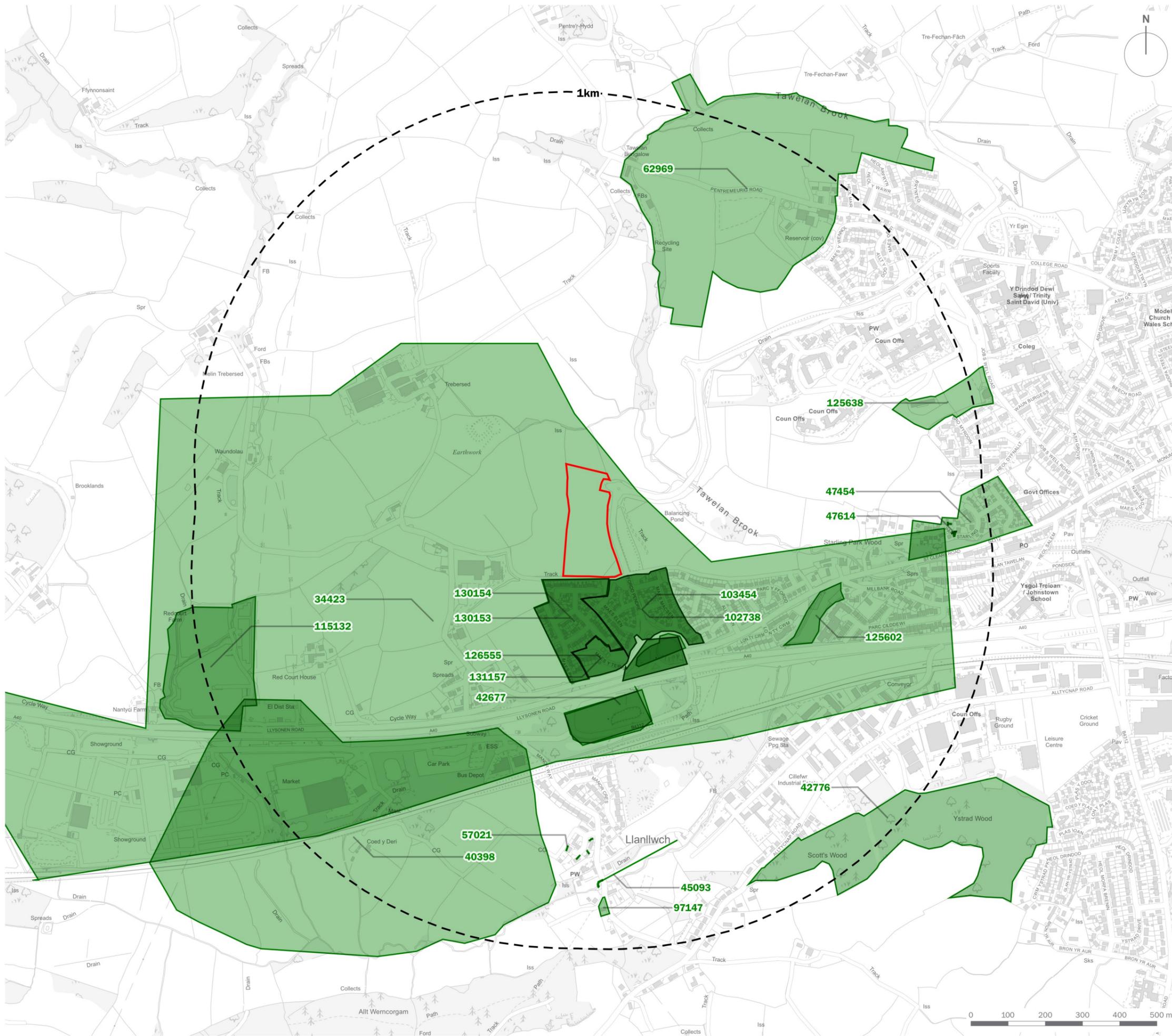


Site Boundary  
 1km Study Area  
 HER Monument

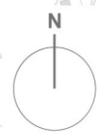
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**Carmarthen West, Carmarthen**  
 drawing title  
**HER Features**  
 date **16 JANUARY 2026** drawn by **JLe**  
 drawing number **edp9176\_d015a** checked **RTe**  
 scale **1:10,000 @ A3** QA **GYo**



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- Site Boundary
- 1km Study Area
- HER Event



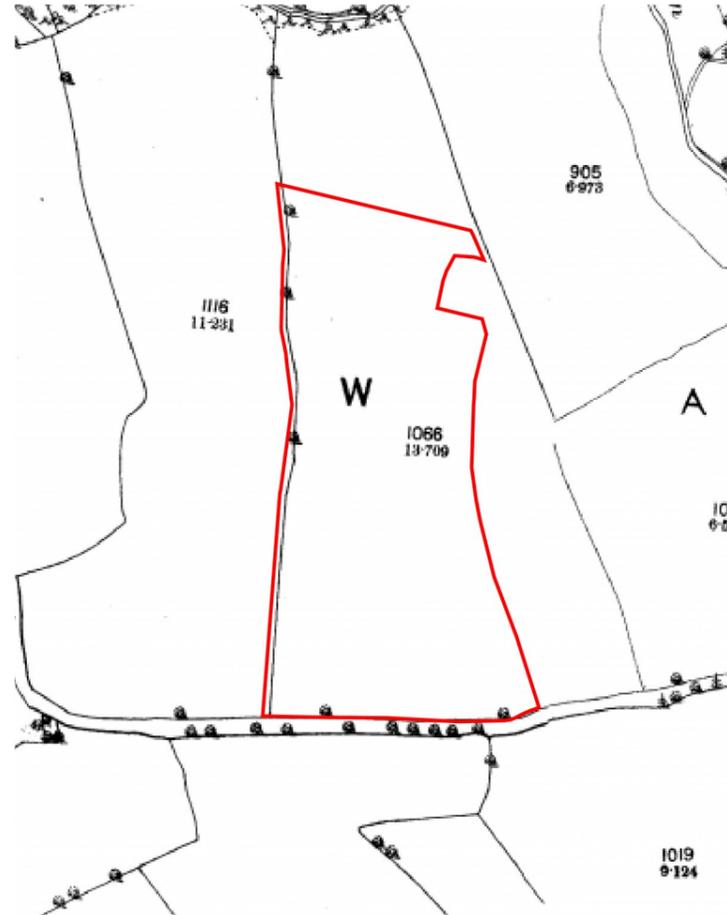
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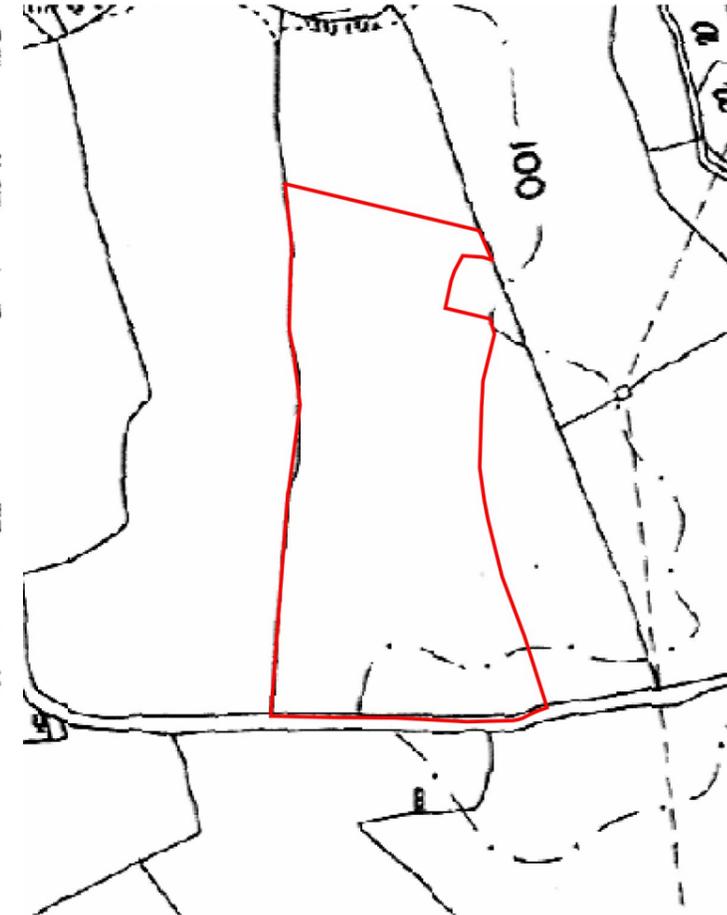
Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



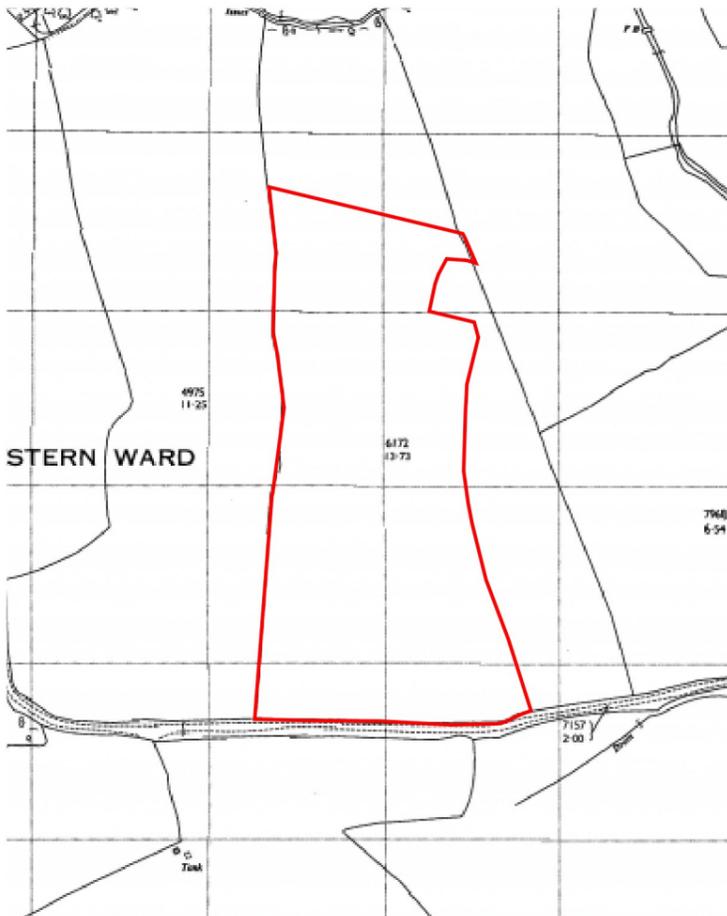
1837 Tithe Map



1890 Ordnance Survey Map



1952 Ordnance Survey Map

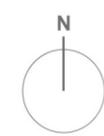


1971 Ordnance Survey Map



1992 Ordnance Survey Map

 Approximate Site Boundary



client  
**Lovell Partnerships Ltd**

project title  
**Carmarthen West, Carmarthen**

drawing title  
**Historic Maps**

date	<b>16 JANUARY 2026</b>	drawn by	<b>JLe</b>
drawing number	<b>edp9176_d017a</b>	checked	<b>RTe</b>
scale	<b>1:4,000 @ A3</b>	QA	<b>GYo</b>





- Site Boundary
- LiDAR Data Using 1m Digital Terrain Model (DTM) with Multi-directional Azimuth Shading

client

**Lovell Partnerships Ltd**

project title

**Carmarthen West, Carmarthen**

drawing title

**LIDAR Data**

date	<b>16 JANUARY 2026</b>	drawn by	<b>JLe</b>
drawing number	<b>edp9176_d018a</b>	checked	<b>RTe</b>
scale	<b>1:2,000 @ A3</b>	QA	<b>GYo</b>



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