

Settings Assessment Phases 2-4:

Land north of Bronwylfa Road, Rhostyllen, Wrexham

February 2024



Report No. 2271

By

Susan Stratton



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Prepared for Innova Renewable Developments Limited

By

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Summary

Archaeology Wales was commissioned by Innova Renewable Developments Limited to carry out Stages 2 – 4 of a Settings Assessment in relation to the proposed construction of a proposed new energy storage system and substation on Land north of Bronwyfla Road, Rhostyllen, Wrexham. The site is centred on NGR SJ 30539 48599, Lat Long 53.030237 / -3.0371404.

Numerous designated heritage assets lie within 3km of the proposed development. A separate report was previously produced following the methodology of Stage 1 of The Setting of Historic Assets in Wales. The report identified four assets with the potential to be impacted by the proposed development: Hadfod-y-Bwlch Round Barrow DE047, Croes-Foel Round Barrow DE048, Offa's Dyke Pentre-Bychan Hall Section DE137, and Moated Site near Groesfoel Farm, Rhostyllen DE193.

This report assesses the potential impact on the settings of these assets, following the methodology of Stages 2 to 4 of The Setting of Historic Assets in Wales. Stage 2 investigates the original setting of the monuments, changes to those settings, and their modern setting, in order to establish the importance of setting to the heritage significance of the assets. Stage 3 describes the potential impacts of the development proposals on the setting of each asset and how that may affect their heritage value. Stage 4 considers whether any additional mitigation would be beneficial.

The assessment has identified that the development proposals would have a Negligible negative impact on three of the assets (Hadfod-y-Bwlch Round Barrow DE047, Croes-Foel Round Barrow DE048, and Moated Site near Groesfoel Farm, Rhostyllen DE193) and a Low negative impact on one other (Offa's Dyke Pentre-Bychan Hall Section DE137). Embedded mitigation measures within the design proposals, including a bund and tree planting along the southern boundary of the site and additional planting along the west of the site, and the use of greys and greens to help the elements of the development blend into the landscape, would significantly reduce the visual impacts of the development, particularly in the long term. No additional mitigation measures have been recommended.

Crynodeb Annechnegol

Comisiynwyd Archaeology Wales gan Innova Renewable Developments Limited i gynnal Camau 2 – 4 o Asesiad Lleoliadau mewn perthynas â'r bwriad o adeiladu system storio ynni newydd ac is-orsaf ar dir i'r gogledd o Heol Bronwyfla, Rhostyllen, Wrexham. Mae'r safle wedi'i ganoli ar NGR SJ 30539 48599, 53.030237 / -3.0371404.

Mae nifer o asedau treftadaeth ddynodedig o fewn 3km i'r datblygiad arfaethedig. Yn flaenorol, cynhyrchwyd adroddiad ar wahân yn dilyn methodoleg Cyfnod 1 o Leoliad Asedau Hanesyddol yng Nghymru. Nododd yr adroddiad bedwar ased sydd â'r potensial i gael eu heffeithio gan y datblygiad arfaethedig: Crug Crwn Hadfod-y-Bwlch DE047, Crug Crwn Croes-Foel DE048, Adran Neuadd Pentre-Bychan Clawdd Offa DE137, a Safle amffosog ger Fferm y Groesfoel, Rhostyllen DE193.

Mae'r adroddiad hwn yn asesu'r effaith bosibl ar leoliadau'r asedau hyn, gan ddilyn methodoleg Cyfnodau 2 i 4 o Leoliad Asedau Hanesyddol yng Nghymru. Mae Cam 2 yn ymchwilio i leoliad gwreiddiol yr henebion, newidiadau i'r lleoliadau hynny, a'u lleoliad modern, er mwyn sefydlu pwysigrwydd gosod arwyddocâd treftadaeth yr asedau. Mae Cam 3 yn disgrifio effeithiau posibl y cynigion datblygu ar osod pob ased a sut y gallai hynny effeithio ar eu gwerth treftadaeth. Mae Cam 4 yn ystyried a fyddai unrhyw liniaru ychwanegol yn fuddiol.

Mae'r asesiad wedi nodi y byddai'r cynigion datblygu yn cael effaith negyddol ddibwys ar dri o'r asedau (Crug Rownd Hadfod-y-Bwlch DE047, Crug Crwn Croes-Foel DE048, a Safle Moated ger Fferm y Groesfoel, Rhostyllen DE193) ac effaith negyddol isel ar un arall (Adran Clawdd Offa Pentre-Bychan DE137). Byddai mesurau lliniaru wedi'u hymgorffori o fewn y cynigion dylunio, gan gynnwys bwndel a phlannu coed ar hyd ffin ddeheuol y safle a phlannu ychwanegol ar hyd gorllewin y safle, a defnyddio llwydni a gwyrddion i helpu elfennau'r datblygiad yn cyd-fynd â'r dirwedd, yn lleihau effeithiau gweledol y datblygiad yn sylweddol, yn enwedig yn y tymor hir. Nid oes unrhyw fesurau lliniaru ychwanegol wedi'u hargymell.

1. Introduction

1.1.1. In January 2024, Archaeology Wales (henceforth – AW) was commissioned by Innova Renewable Developments to carry out a Settings Assessment in relation to the proposed construction of a proposed new energy storage system and substation on Land north of Bronwyfla Road, Rhostyllen, Wrexham. The site is centred on NGR SJ 30539 48599, Lat Long 53.030237 / -3.0371404 (Figures 1 and 2).

1.1.2. Numerous designated heritage assets lie within 3km of the proposed development (Figure 3). An initial consultation with Cadw, dated 15th December 2022, stated that:

In regard to the historic environment desk-based assessment, the impact of the proposed development on the setting of the above designated heritage assets (which are located inside 3km of the proposed development should be carried out in accordance with the Welsh Government guidance given in the document “The Setting of Historic Assets in Wales”. It is expected that a stage 1 assessment to be carried out for all of the above designated heritage assets, which will determine the need, if necessary, for stages 2 to 4 to be carried out for specific heritage assets.

1.1.3. Consequently, a Stage 1 Settings Assessment was produced by AW on behalf of Innova Renewable Developments Limited (Davey 2023). This identified four assets with the potential to be impacted by the proposed development: Hadfod-y-Bwlch Round Barrow DE047, Croes-Foel Round Barrow DE048, Offa’s Dyke Pentre-Bychan Hall Section DE137, and Moated Site near Groesfoel Farm, Rhostyllen DE193.

1.1.4. The stage 1 settings assessment was submitted as part of the PAC process for the proposed development. On consultation, Cadw duly requested that a

Stage 2-4 assessment be carried out on the four assets identified in the Stage 1 assessment as having the potential to be impacted by the development proposals.

- 1.1.5. This report assesses the potential impact on the settings of these assets, following the methodology of Stages 2 to 4 of *The Setting of Historic Assets in Wales* (Cadw 2017) and in line with relative legislation.

2. Legislation, Policy and Guidance

2.1. Legislation

Historic Environment (Wales) Act

- 2.1.1. The Historic Environment (Wales) Act 2016 is the first legislation enacted specifically for the Welsh historic environment. The legislation was framed with three main aims: to give more effective protection to Wales' scheduled monuments and listed buildings; to enhance existing mechanisms for the sustainable management of the historic environment; and to introduce greater transparency and accountability into decisions taken on the historic environment. Whilst providing a number of new provisions to existing legislation, the act does not specifically affect the planning process or the way in which archaeology and heritage matters are addressed within it.

Scheduled Monuments

- 2.1.2. Scheduled monuments are defined and protected by the 1979 Ancient Monuments and Archaeological Areas Act. This legislation is concerned with the physical protection of scheduled monuments; their setting is addressed in more recent policy and guidance (see below).

Listed Buildings

- 2.1.3. The Planning (Listed Buildings and Conservation Areas) Act 1990 is the primary legislative instrument addressing the treatment of listed buildings and conservation areas through the planning process in Wales. Section 66(1) of the 1990 Act concerns listed buildings and states that:

“... in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State, shall 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.”

2.2. National Planning Policy

Future Wales: The National Plan 2040

- 2.2.1. The Welsh Government's *Future Wales: The National Plan 2040* states in the foreword that it forms a “framework for planning the change and development our country will need over the next two decades”.
- 2.2.2. In terms of the Welsh Government's objectives, Number 6 of ‘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.”

Planning Policy Wales

2.2.3. National planning guidance, concerning the treatment of the historic environment across Wales, is detailed in Planning Policy Wales Edition 11 (24 February 2021), Section 6.1 of Chapter 6, Distinctive and Natural Places.

2.2.4. Paragraph 6.1.2 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'. Paragraph 6.1.6 outlines the Welsh Government's objectives for the historic environment. These seek to:

"...conserve archaeological remains, both for their own sake and for their role in education, leisure and the economy' and 'safeguard the character of historic buildings and manage change so that their special architectural and historic interest is preserved."

2.2.5. Paragraph 6.1.7 states 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."

2.2.6. Planning Policy Wales does not state that any damage to the character and appearance of a conservation area would result in the refusal of planning permission. It is only damage that is of an 'unacceptable level' which would result in a strong presumption against the granting of planning permission. The required judgement is concerned with what constitutes an 'unacceptable' level of harm – not whether there is any harm at all.

Technical Advice Note 24 (TAN 24)

2.2.7. Additional heritage guidance in Wales is set out in Technical Advice Note 24: The Historic Environment. TAN 24 provides guidance on how the planning system considers the historic environment during development plan preparation and decision making on planning applications.

2.2.8. Effects through changes within the settings of historic assets are covered in TAN 24 at Paragraphs 1.23 to 1.29. Paragraph 1.25 defines 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.”

2.2.9. Paragraph 1.26 stipulates that:

“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.”

2.2.10. 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."

2.3. Local Planning Policy

Wrexham Unitary Development Plan 1996-2011 (adopted February 2005)

2.3.1. Local planning policy is contained in the Wrexham Unitary Development Plan (UDP) 1996 – 2011, which was adopted in 2005. The UDP sets out the council's vision and objectives for the development and use of land in Wrexham, together with the policies and proposals to implement them.

2.3.2. Policies EC7 and EC8 relate to Conservation Areas. Policy EC7 states:

"Within, and in close proximity to, conservation areas, the priority will be to preserve and/ or enhance those buildings, structures, streets, trees, open spaces, archaeological remains, views, and other elements which contribute to the unique character of the area. New buildings and alterations or additions to existing buildings in conservation areas, whether listed as of special architectural or historic interest or not, must reflect the design and character of the area as a whole and the form, scale, detailing and materials of existing buildings."

2.3.3. Policy EC9 relates to Listed Buildings. It states that:

"Alterations or additions to, and development or redevelopment within the curtilage of, buildings or structures listed as of special architectural or historic interest must respect the setting and character of the listed buildings or structures."

2.3.4. Policy EC11 relates to Archaeology. It states that:

Development which would adversely affect the site or setting of a Scheduled Ancient Monument or archaeological site of national significance will not be

permitted. Development that directly affects non-scheduled sites of archaeological importance will only be permitted if an archaeological investigation has been carried out to determine the nature, extent and significance of the remains, and this investigation indicates that in-situ preservation is not justified, and a programme of excavation and recording has been agreed. Development will also be carefully controlled to ensure that the setting of non-scheduled sites of archaeological importance is not harmed where appropriate.

2.4. Guidance

2.4.1. The following guidance documents were consulted in the production of this report:

- Setting of Historic Assets in Wales, Cadw, 2017;
- Sustainable Management of the Historic Environment in Wales (Conservation Principles), Cadw, 2011; and,
- Principles of Cultural Heritage Impact Assessment in the UK, IEMA, IHBC and CIFA, July 2021.

3. Methodology

3.1.1. The production of this report follows the guidance set out in *Setting of Historic Assets in Wales* (Cadw 2017). This details a four-stage approach:

- Stage 1: Identify the historic assets that might be affected by a proposed change or development.
- Stage 2: Define and analyse the settings to understand how they contribute to the significance of the historic assets and, in particular, the ways in which the assets are understood, appreciated and experienced.

- Stage 3: Evaluate the potential impact of a proposed change or development on that significance.
 - Stage 4: If necessary, consider options to mitigate or improve the potential impact of a proposed change or development on that significance.
- 3.1.2. In this instance, Stage 1 has already been carried out in an earlier report (Davey 2023).
- 3.1.3. Assessing the significance of the asset in this way will allow any potential impacts of the Proposed Development, both beneficial and harmful, on the asset's setting to be identified.
- 3.1.4. A search of the local Clwyd Powys Archaeological Trust Historic Environment Record (CPAT HER) was conducted to provide important contextual information about the surrounding area (HER enquiry number E6896).
- 3.1.5. The report has utilised the Screened Zone of Theoretical Visibility (ZTV) produced by Pegasus Group in the Landscape and Visual Impact Assessment (LVIA) as part of the supporting documentation relating to the proposals. The methodology for the production of the ZTV can be found in the LVIA (Pegasus Group 2023).

4. The Development Proposals

- 4.1.1. The proposed ESS will be based upon the latest energy storage technology. It will import and export large amounts of electricity with no time lag, storing surplus electricity from the grid and then providing a means of additional electricity supply at times of peak demand.
- 4.1.2. The UK has a legally binding target to achieve Net Zero by 2050 and has committed to fully decarbonising the electricity network by 2035. As a result,

many low carbon and renewable energy generation is needed across the UK. Renewable energy generation is however intermittent, and Energy Storage Systems are therefore required to provide a balancing service to the National Grid, facilitating the transition to renewable energy sources. These projects are therefore a crucial component of achieving Net Zero.

- 4.1.3. The Energy Storage units will be laid out in rows with intervening access areas (Figure 2). The units will sit on concrete slabs or supporting feet. Internal access tracks will comprise crushed stone and the access road for the abnormal load will be asphalt. The Energy Storage units will use LFP (Lithium Iron Phosphate) technology and measure approximately 2.9m in height. The GIS building in the substation area will measure approximately 14m in height and is therefore the tallest piece of equipment.
- 4.1.4. The associated MV skids are sited alongside the Energy Storage units and connect in groups to 33kV transformer bays distributed evenly throughout the main site. The substation compound is proposed to be located on the north-western corner of the main site with re-profiling of the existing topography.
- 4.1.5. Remaining areas within the main site, outside of the fence line will be landscaped to create and enhance ecological habitat and enhance the visual quality of the area. Woodland planting will be provided on the western and southern boundaries and adjacent to the existing PRoW to help screen the proposals from the surroundings, as well as bunding along the western, southern and eastern boundaries. An attenuation basin is included on the eastern part of the main site for sustainable drainage.
- 4.1.6. Primary access to the main development site during construction and operation will be from the existing B5097 access. A new secondary access is proposed from Cadwgan Lane at the main site's western boundary. A road for abnormal loads is proposed to intersect the southern part of the neighbouring

field (to the west of Cadwgan Lane) from the B5097 / Bronwyfla Lane. This will connect to the main site's new western access to provide access for abnormal load vehicles. A temporary construction compound is proposed on the northern part of this field.

4.1.7. In summary, the proposed ESS development comprises:

4.1.8. 400kV Substation with Gas Insulated Switchgear (GIS) building & Transformers;

- Energy storage containers;
- 33kV transformer bays;
- Medium Voltage (MV) Skid – Inverters & Transformers;
- Control buildings;
- Access from the adopted highway;
- Internal access road and crushed stone tracks;
- Drainage infrastructure, landscape, and ecological planting; and
- Security fencing and CCTV.

5. Stage 2: The Setting

5.1. Hadfod-y-Bwlch Round Barrow DE047 (Plate 1)

5.1.1. The barrow is located c. 300m to the east of Hafod-y-Bwch Hall on the southern boundary of a large pasture field (Figure 3). It is c. 900m south of the proposed development area. The recorded name 'Hadfod-y-Bwlch' is a mis-transcription of the farm name, and it is recorded in the HER as Hafod y bwch round barrow, PRN101238 (Figure 4).

5.1.2. It has a diameter of c. 40m and is 2.3m high with a rounded profile (Cadw

Scheduled Monument Description). It is circular in plan except where it was been cut by a farm track on its southern edge.

Original Setting

- 5.1.3. No archaeological investigation has been carried out on the mound and a clear date for its construction is unknown. As a monument class in Britain, round barrows date to the Early to Middle Bronze Age, between 2200BC and 1100BC (Historic England, 2015). There is very little settlement evidence from the Welsh border area from this period, but the presence of round barrows demonstrates that there were populations living in these areas. Pollen evidence from farther south in the border region demonstrate that there was tree clearance in the Late Neolithic and Early Bronze Age in Shropshire and cultivation of cereals in the Late Neolithic to Middle Bronze Age at various sites in the upper Severn Valley (Halsted 2015). There is also evidence for tree clearance in upland regions, found beneath some Early Bronze Age monuments, suggesting a pastoral landscape. The lack of settlement remains suggests that settlement was transient and may have involved mobility, such as seasonal transhumance or more regular movement between significant places, such as monuments (Halsted 2015).
- 5.1.4. There is evidence that barrows were constructed over earlier monuments, such as Neolithic pit graves as found at Four Crosses, Llandysilio, c. 30km south of Rhostyllen. Round barrows would have been significant visual markers in the landscape and may have formed a framework for settlement or as boundary markers (Halsted 2015).
- 5.1.5. Round barrows in the Welsh border area are generally isolated or less often in small groupings of two or three, unlike the large clusters found in other parts of Britain (Johnson 2015, 281). Hafod-y-Bwlch lies only 400m to the south-south-east of Croesfoel Round Barrow (DE048), separated by the shallow valley

of Pentrebychan Brook (Figure 4). Neither monument has been dated, but their proximity suggests they may have been related. Depending on the extent of clearance in the area, it seems likely that they would have been intervisible.

- 5.1.6. The HER also records another possible Bronze Age barrow 80m to the north-east of Croesfoel, 450m north of Hafod-y-Bwlch (PRN101824, duplicate number PRN105077) (Figure 4). The site was identified from aerial photography as a roughly circular light area, but there is no evidence for it either on site or LiDAR imagery (Figure 5).

Changes to function

- 5.1.7. In the Late Bronze Age, settlement focus shifted to hilltops, although this may have been seasonal, a trend which continued into the Iron Age (Halsted 2015). At the same time, round barrow construction ceased, indicating a change in relationships with the landscape. The monuments may have retained significance as visual markers.

Changes to setting

- 5.1.8. There is no evidence of Iron Age activity in the vicinity of the site, while Roman evidence comes from a find spot of two coins (PRN102980) to the north of Bronwyfla Road near Cadwgan Hall.
- 5.1.9. In the early medieval period, the linear earthwork Offa's Dyke was constructed, running north to south to the west of the barrow. At its closest, the Dyke was 850m from the barrow (Figure 4). Little is known about the landscape of the border area in this period. Pollen analysis from Crose Mere in Shropshire, 14km east of Oswestry, there was an intensification of landscape use from the 8th century, following a period of post-Roman woodland regeneration (Ray and Bapty, 2016). There is no evidence for early medieval activity in the Rhosyllen area except Offa's Dyke. It is likely that the area was a patchwork of woodland and cleared land and it is possible that parts of Offa's Dyke were visible from

the barrow.

- 5.1.10. A campaign of woodland clearance was carried out in areas of the border region in advance of Edward I's invasion in 1277 to prevent ambushes (Jones 2016). Clearance continued for agriculture following the establishment of the Marcher lordships. Rhostyllen was part of Bromfield and Yale, one of several lordships formed by Edward I between 1277 and 1283 that expanded English rule westwards following the defeat of the Welsh prince of Gwynedd, Llywelyn ap Gruffudd (Hume, 2021).
- 5.1.11. Areas of ridge and furrow are visible on the LiDAR imagery (Figure 5), suggesting the landscape had largely been cleared for agriculture by the late medieval period. Hafod-y-Bwlch Round Barrow can be seen to have been located at a meeting point of three fields, and the mound may well have formed a boundary marker. It would have sat in a wide area of undulating agricultural land.
- 5.1.12. Hafod y_Bwch farmstead is situated 250m to the north-east of the barrow. The word *hafod* relates to the pre-18th century transhumance system of *hafod* and *hendre*, where during the summer the farmer would take their animals to upland grazing and stay in the *hafod*, returning to the *hendre*, the main family dwelling, in the lowlands for winter. The earliest surviving element of the farm is the west range of Hafod-y-Bwch Hall (LB1587; PRN101242) (Figure 4), which was a late medieval timber framed hall-house, but it may have had earlier origins.
- 5.1.13. The house was extended and altered through the post-medieval period and various out-buildings were constructed, including the late 17th century timber framed barn (LB16596; PRN36697). The barrow is located on the land cultivated by this farm, and it is from it that it gets its name. The farmstead would likely have been visible from the mound before the trees along the

entrance track were established, but the farm also dominated the mounds setting in the control it had over the cultivation of the fields and the organisation of the field boundaries.

- 5.1.14. The first detailed mapping of the area, the Tithe map of 1839, shows an enclosed field system with irregular boundaries originating from the medieval open fields (Figure 6). Many of the boundaries can be seen on the LiDAR imagery (Figure 5), while some had been removed during enclosure. The track that now runs to the south of barrow is marked as a dashed line south of the field boundary on the same alignment. The barrow itself is marked with a dashed line.
- 5.1.15. The apportionment records the field as a part of Hafod y Bwch farm, occupied by Elizabeth Thomas. The field No. 122, is marked as being a meadow, as is field No. 123 to its west. Field No. 124, to the south, is recorded as being arable. This field has the name *Erw Lloran*, which translates as ‘an acre of moorland.’ The farm is part of the holdings of Thomas Fitzhugh, Esq., who owned the Plas Power estate.
- 5.1.16. The First Edition OS map of 1879 shows the effects of industrialisation on the landscape (Figure 7). Running north-east to south-west, under 300m to the south-east of the barrow, is the Great Western Railway (GWR) line from Chester to Shrewsbury. Originally built as part of the North Wales Mineral Railway in 1846 to service coal mines in the region, it was taken over by GWR in 1854 (Ottley, 1983). The railway was built on an embankment that would have dramatically changed the former view of rolling fields to the south-east of the barrow. Several coal mines had been established in the area, the closest being Bersham Colliery, c. 550m to the north-east.
- 5.1.17. The First Edition map also shows what appears to have been a ditch dug between Pentrebychan Brook and a sluice pond at Hafod-y-Bwch farmstead

(Figure 7). The ditch skirts the north side of the barrow. It is not clear what the function of this pond was. To the north-west of the barrow, between Pentrebychan Brook and Wrexham Road, Wrexham Water Works had been established, including as reservoir and filtering tanks.

- 5.1.18. Subsequent OS maps show gradual changes to the landscape. The tips at Bersham Colliery and Hafod-y-Bwch Colliery, c. 900m to the south, became large, stepped mounds that stood out over the undulating landscape. The Water Works expanded to the north-west, on the opposite side of Wrexham Road. Some field boundaries were removed, creating larger fields, including the former boundary extending west from the barrow (Figure 8).
- 5.1.19. The ditch seen on the First Edition does not appear on any later maps, although the pond at Hafod-y-Bwch is still present on the mid-20th century maps. The *Inventory of Ancient Monuments* for Denbighshire, published in 1914 (RCAMWM), described the mound from a site visit in 1911 as rounded topped, gorse covered, with a shallow ditch on the north and west sides.
- 5.1.20. In 1989, the A483 Wrexham bypass was constructed immediately to the east of Hafod-y-bwch farmstead. Like the railways, the road formed a linear boundary that cut through the historic landscape with no association to historic boundaries. It separated Rhostyllen from the land to the west. A junction, including a roundabout and flyover, were constructed next to Croesfoel House, 500m to the north of the round barrow. To the south of the junction the road is built on an embankment and crosses over the Chester to Shrewsbury rail line.

Modern setting

- 5.1.21. The barrow is located immediately to the north of a farm track, which appears to have cut into the southern edge of the monument slightly (Plate 2). At the time of the site visit the barrow was covered with short grass (Plate 1). A few

trees are growing around its north-west side.

- 5.1.22. The field the mound is in is a large, flat enclosed field (Plate 3). It is bounded on its north-west side by the tree-lined Pentrebychan Brook and around the east and south by the farm track, in places tree-lined and in others fenced. Residential properties in Pentre Bychan back onto the western corner. The field is a pasture, with short grass at the time of the site visit. A high voltage electricity line runs north-west to south-east across the north of the field, while telegraph lines run roughly east to west across the south, with a pole located on the north edge of the scheduled monument (Plates 4 and 5).
- 5.1.23. South of the farm track the barrow overlooks another large pasture field bounded on the south-east by the railway. Beyond the railway are the coal tips of the former Hafod Colliery, now a wooded Country Park.
- 5.1.24. The A483 is obscured from view by the trees growing along Hafod-y-Bwch farm track and also those planted along the road itself. However, the sound of traffic on the road provides a low background noise. The top of the former Bersham Colliery tip is visible over the trees.

Contribution of setting to heritage significance

- 5.1.25. The barrow's setting is almost completely changed from its original setting. Only the topography and surviving natural landscape features, such as Pentrebychan Brook, provide evidence of how the monument was sited. The nearby Croes-foel barrow may also have formed part of its original setting. Although Croes-foel barrow is now difficult to discern, its presence demonstrates that Hafod-y-bwch was not an isolated monument.
- 5.1.26. Over time, the barrow became a marker in the landscape, and was incorporated into medieval and post-medieval field boundaries. The barrow demonstrates the time depth of human occupation of the area. However, Hafod-y-Bwch Round Barrow's significance as a heritage asset is derived

primarily from its evidential potential. Its current setting within a post-medieval agricultural landscape contribute minimally to its heritage value.

5.2. Croes-Foel Round Barrow DE048

- 5.2.1. Croes-Foel Round Barrow is located in an arable field c. 500m south of the proposed development area (Figures 3 and 4). It is round in plan and has a low rounded profile. The site has been subject to ploughing.
- 5.2.2. Like Hafod-y-Bwlch, 400m to the south-south-east, the barrow has not been investigated and its function as a barrow is assumed. Understanding of its original setting and changes to its function are the same as for Hafod-y-Bwlch above (paragraphs 5.1.7).

Changes to setting

- 5.2.3. The changes to Croes-foel Round Barrow's setting up to the medieval period are covered in the Hafod-y-Bwlch section above (paragraphs 5.1.8 – 5.1.10).
- 5.2.4. The LiDAR imagery (Figure 5) shows no surviving ridge and furrow in the field the barrow is situated in, but there is some in neighbouring fields to the south-east and south-west. Llyn Tro, the Moated Site near Groesfoel Farm (DE197), lies 300m to the north-west of the barrow. The enclosure is situated in a slight hollow, but would have been visible from the barrow, while the former leat ran south-east from the moat towards Wrexham Road, passing just over 100m to the west of the barrow.
- 5.2.5. The date of the establishment of Wrexham Road, 100m to the south of the barrow, and the B5098, c.150m to the east, is unknown, but they likely have a long history dating to at least the medieval period and possibly following earlier routes. The Croesfoel name may refer to the junction of these two routes.
- 5.2.6. In the late 17th and early 18th century, a smithy was located on the current site

of Croesfoel House, on the junction of Wrexham Road and the B5098. It was owned by the Davies brothers, who were known for their high quality, elaborate wrought ironwork gates and screens. The Timber framed building in yard at Croesfoel Farm (LB16573; PRN36699) (Figure 4), may date to this period. The smithy would have been visible and likely heard from the barrow.

- 5.2.7. After the Davies brothers, a farmhouse was built at Croesfoel (LB16573; PRN36698) in 1781 by William Lloyd of the Plas Power Estate. The farmhouse is a tall, three storey brick building, and would have been a prominent landmark.
- 5.2.8. The tithe map of 1839 (Figure 6) does not show the Croes-Foel Round Barrow. The map shows an area of enclosed fields with irregular boundaries originating from medieval open fields. The field the barrow sits in was listed as pasture. It was occupied by John Jackson and owned by Thomas Fitzhugh. The apportionment information shows that Jackson occupied Croesfoel Farmhouse and that the field was part of a farm located between what are now the B5605 and the B5087, extending east to Rhostyllen and west not quite as far as Pentrebychan Brook.
- 5.2.9. The First Edition OS map of 1874 shows that several field boundaries had been removed from the time of the tithe, creating fewer, larger fields. Several of the field boundaries in the area, including the north-west boundary of the field the barrow is in, had been straightened (Figure 7).
- 5.2.10. The setting of the barrow was affected by the same changes in the landscape in the late post-medieval and modern periods as Hafod-y-Bwch. Satellite imagery shows that the field boundary to the west of the barrow, on the route of the former leat from the moated site, was removed in 2016 during the installation of a high voltage cable route.

Modern setting

- 5.2.11. The barrow lies in the north of a narrow field located immediately to the north-west of Wrexham Road, B5605, between Croesfoel Lane and the Hafren Dyfrdwy headquarters. It sits c. 10m south of the field's north-western boundary hedgerow. High voltage electricity cables run almost directly over the barrow, with the closest pylon located on the opposite site of the boundary hedge to the north-west.
- 5.2.12. The field slopes gently up to the south-west (Plate 6), while the ground drops away gently to the north and east (Plate 7). There are views in all directions of the surrounding undulating fieldscapes. The fields are mainly bounded by low hedgerows, with isolated individual trees or small patches of woodland relating to former field boundaries or along streams.
- 5.2.13. Croesfoel Farmhouse and associated buildings are prominent in views to the north-east (Plate 7). During the winter, lack of foliage means there are also views of the A483 and buildings of the Croesfoel Industrial Park. The former Bersham Colliery tip sits incongruously in the undulating landscape.
- 5.2.14. To the south, a hedgerow partially blocks visibility of traffic along the B5605 (Plate 8). Traffic noise from the relatively busy local road intrudes. South of the road, trees growing along the Pentrebychan Brook block views of Hafod-y-Bwlch Round Barrow DE047.
- 5.2.15. Buildings in Pentre Bychan are visible to the south-west, including residential buildings along Wrexham Road and the Hafren Dyfrdwy headquarters (Plate 6).

Contribution of setting to heritage significance

- 5.2.16. Like Hafod-y-Bwlch, Croes-Foel Round Barrow now sits a landscape dramatically changed from its original setting. Unlike Hafod-y-Bwlch, Croes-Foel does not appear to have been an important marker in the landscape. Field

boundaries pass close to it but do not appear to reference it. The barrow has been greatly reduced by modern ploughing and is now a barely recognisable rise in the field. With the exception of Hafod-y-Bwch, which may have been contemporary, the monument's setting does not contribute to its significance. Rather, this is derived from its evidential potential.

5.3. Offa's Dyke: Pentre-Bychan Hall Section, extending 540m S from Bron-Wylfa DE137

- 5.3.1. Offa's Dyke is an early medieval linear monument stretching around 220km from Treuddyn in north-east Wales to Sedbury Cliffs in south Gloucestershire. The monument is scheduled in sections. DE137 runs from the B5426 in the south to Bronwyfla Road B5097 to the north (Figures 3 and 4).

Original Setting

- 5.3.2. Not much is known about the origins of Offa's Dyke. Even the attribution of its construction to King Offa and its 8th century date is largely supposition (Ray and Bapty, 2016). However, it does seem clear that the rationale behind its construction was to mark the division between Saxon Mercia and Wales. The scale of the monument, with a large ditch, excavated in places to a depth of 1.7m and width of 3.5m, and a counterscarp bank that still survives up to 3.5m in places, was a significant undertaking and would have made a clear political point about power. The placement of the bank on the east of the ditch, so that the scarp faces west into Wales, indicates it also had a defensive purpose.
- 5.3.3. The Dyke occupies a narrow east – west range and runs broadly north – south, with deviations to negotiate the crossing of uneven terrain including rivers, valleys, and hillsides. The Dyke was usually sited on highpoints or western-facing slopes, providing views into Welsh territory.
- 5.3.4. Section DE137 is part of a very straight section of the Dyke aligned almost

exactly north to south between Pentre Bychan and Afon Clywedog. The landscape is relatively flat, but a section excavated across Section DE194, immediately to the north of DE137, in 1990 as part of a gas pipeline construction (PRN17449) found that its positioning took advantage of a natural west-facing declivity (Ray and Bapty, 2016). The ditch was dug at the base of the declivity and from base of ditch to top of bank there was a 5m vertical difference in height. The scarp would have included the exposed natural rock face.

- 5.3.5. There is little available evidence to build a picture of what the landscape the Dyke was built through looked like. Pollen analysis from Crose Mere in Shropshire, 14km east of Oswestry, indicates a period of post-Roman woodland regeneration followed by an intensification of landscape use from the 8th century (Ray and Bapty, 2016). Across England there is evidence for a general trend towards an intensification of land-use in the 8th and 9th centuries which may have expanded to the border area.

Changes to function

- 5.3.6. The exact purpose of Offa's Dyke, whether it was intended to be militarily functional or a statement of power, is still debated and there is little understanding of how the Dyke functioned. While some have suggested it was an uncrossed line, others have suggested there may have been gateways through it (Ray and Bapty, 2016). Likewise, the role the Dyke played in the landscape in the centuries following its construction is unknown. The presence of English placenames to the west of the Dyke indicates that if it did originally mark the extent of English westward expansion, it did not hinder its continuation.
- 5.3.7. There are references to Offa's Dyke in medieval documents from around the 12th century onwards (Ray and Bapty, 2016). These references generally refer

to the dyke as a subjugation of or barrier against the Welsh by Offa and have an almost mythic quality to them. It is not until the works of early antiquarians, such as John Leland in the 16th century, that accounts concerning the Dyke's structure and appearance, as well as its historic significance, appear. By the 18th century, the Dyke would have been relatively well known by those with an interest in history (Ray and Bapty, 2016).

Changes to setting

- 5.3.8. As mentioned above, the intensity of settlement in the landscape around Offa's Dyke at the time of its construction is unclear, but evidence points to increasing agricultural clearance in the following centuries.
- 5.3.9. The remains of medieval ridge and furrow open field systems can be seen on LiDAR imagery of the area, most clearly around Hafod-y-Bwlch (Figure 5). The irregular field boundaries depicted on the Tithe map of 1839, including long sinuous curves, are indicative of the later enclosure of these medieval strip fields (Figure 6). Unsurprisingly, the ready-made physical boundary of the Dyke was utilised as a field boundary. Further evidence for medieval agriculture in the area includes Llyn Tro moated site (DE193; PRN101237), which lies c. 500m to the east of DE137 (Figure 4).
- 5.3.10. In the 17th century, the prominent Wrexham Meredith family built a house, Pentrebychan Hall, on their land holdings immediately to the east of Offa's Dyke Section DE137. In 1823-24 the house was completely rebuilt, and a section of the Dyke was flattened (PRN106762) (Figure 4), so that the western extent of the new hall sat roughly on the line of the Dyke. A photograph held in the North East Wales Archives, shows the Hall with the manicured bank of Offa's Dyke forming part of the gardens (Figure 9) It is recorded that during the levelling of the Dyke several Anglo-Saxon coins were discovered (PRN101153). The Tithe map for Eclusham Above (west of the Dyke), produced

in 1844 (Figure 6), shows that the Hall grounds continued west to the road, now the B5426, and included Pentrebychan Brook, small plantation plots, and a dog kennel field, all owned by Henry Walton Meredith. The first edition OS map, surveyed in 1872 and published in 1879, gives a more detailed picture of the grounds (Figure 10). The main entrance was from the east on Pentrebychan Road, from which a long driveway passed over parkland with occasional trees to the Hall. North of the Hall appear to have been formal gardens including a square walled garden. To the west of the Hall is a mixture of open and wooded areas, with two ponds, crossed by paths. The Dyke is shown as being wooded.

- 5.3.11. The first edition OS shows industrialisation in the wider landscape around Section DE137. The former North Wales Mineral Railway, built in 1846 and by this time part of Great Western Railway (Ottley, 1983), runs c. 1km to the south-east. Bryn-yr-Owen Colliery was c. 450m to the south, Hafod-y-bwch Colliery was over 1km to the south-east, Bersham Colliery was 1km to the east, and Llwyn-Einion Tile and Pipe Works 1km to the west. The GWR Rhos Branch (PRN142401), which left the mainline at Rhos Junction, was built in 1901 (www.disused-stations.org.uk). It crossed Offa's Dyke c. 100m to the north of Section DE137 (Figure 8). It is difficult to tell to what extent these would have impacted the setting of the Dyke, but certainly the Rhos branch on its elevated embankment would have been visible, and it is likely that coal tips and associated buildings would have been too. Although relatively small scale, this industrialisation would have changed the appearance, sound, and smell of the previously agricultural landscape.

Modern setting

- 5.3.12. Pentrebychan Hall was demolished in 1962 and in 1966 a crematorium was opened there by Wrexham County Borough Council (www.wrexham.gov.uk/service/pentrebychan-crematorium). The crematorium

building was built on the former location of the Hall. The grounds retain elements of the former gardens, including the dovecote (LB1715), which was built in 1721, the walled garden, woodland areas, and pond. The Dyke runs through the centre of the Crematorium grounds, but due to the trees growing on the Dyke and the wooded areas in the Crematorium grounds, particularly to the west of the Dyke, it is difficult to distinguish the line of the monument from any distance away.

- 5.3.13. North of the crematorium, the remainder of Section DE137 up to Bronwyfla Road forms the boundary between two agricultural fields. The field to the west was under cultivation at the time of the site visits, while the field to the east was scrubby pasture. Large trees and shrubs grow on the top of the Dyke (Plate 9), which helps to mark its route through the landscape but also largely obscures the form of the Dyke from the east (Plate 10).
- 5.3.14. A public footpath runs along the former ditch south from Bronwyfla Road before turn east to skirt the boundary of the Crematorium grounds. The trees growing on the Dyke and a field boundary hedge planted along the top of the west side of the ditch create a closed-in experience, akin to walking along a Holloway (Plates 11 and 12). The trees of the boundary hedge have formerly been coppiced but have since been left to grow untended. The hedge is likely to be of post-medieval date.
- 5.3.15. To the west the hedge forms a dense boundary that prevents views of Offa's Dyke (Plate 13). Only at the northern end of the section is the Dyke visible as there is no hedge and fewer trees (Plate 14). From this part of the Dyke there are views to both east and west. To the east, the views are punctuated by several high voltage power pylons, industrial buildings on Croesfoel Industrial Park, and the former Bersham Colliery tip (Plate 15). To the north-east, the fields west of the proposed development area are visible, but the development

area is not. The tree line along the former Rhos branch railway forms the horizon (Plate 16). To the west, the views are largely of agricultural fields and pockets of woodland, with the post-medieval farm buildings of Esclusham Farm, including the Grade II listed Barn Range at Esclusham (LB16574; PRN36701) and PRNs 146527 – 146531, in the middle distance (Plate 17). Views of Legacy substation are obscured by surrounding trees.

Contribution of setting to heritage significance

- 5.3.16. The landscape setting of Offa's Dyke as a whole makes a significant contribution to understanding its heritage value as a linear earthwork constructed to provide views westwards into Wales and to form some kind of boundary, be it military or symbolic, between Mercia and Wales.
- 5.3.17. The contribution of setting to the heritage value of Section DE137 has been significantly diminished by the construction of Pentrebychan Hall and its grounds in the 17th century. The placement of the Hall in the line of the Dyke, with the grounds expanding to either side, detracts from understanding of the monument as a linear feature and as a boundary.
- 5.3.18. North of the former Hall grounds, up to the end of this section at Bronwyfla Road, the Dyke forms the boundary between two agricultural fields. Marked by tall trees, it is more easily discernible in the landscape as a linear feature, although its incorporation in the post-medieval field system may reduce the understanding of it as a larger boundary. Views to the west, which the design of the Dyke prioritised, are limited by a post-medieval hedgerow planted on the west side of the Dyke. Only at the northern end are there views westwards. Eastward views from the bank are more extensive, although less significant in terms of the original design of the monument.
- 5.3.19. Despite extensive changes to the setting of Offa's Dyke from its original, probably marginal location, its setting still makes an important contribution to

understanding its heritage significance.

5.4. Moated Site near Groesfoel Farm, Rhostyllen DE193

- 5.4.1. This monument marks the site of a well-preserved medieval moated homestead, also known as Llyn Tro. It is located in arable fields, 60m south-east of Pentrebychan Road and 250m south of the proposed development area (Figures 3 and 4).

Original setting

- 5.4.2. Medieval moated sites are relatively rare in Wales (with 150 recorded compared to 6,350 probable sites in England) and are mostly found in the borderlands and the south Wales coastal strip (Jones 2016, 47). Moated sites in the Welsh borderland are found in areas of glacial boulder clay, which is water-retaining, suggesting they were constructed in locations where there was a need for a dry location for building, or retention of water supplies through dry seasons (Jones 2016, 49).
- 5.4.3. The emergence of moated sites is associated with the expansion of agriculture into more marginal areas, driven by population increases from the late Anglo-Saxon period to the 13th century, with moated sites themselves emerging between 1150 and 1400 (Atkins 1972). In the Welsh borderlands, moated sites are also related to the expansion of Anglo-Norman colonisation westwards, and the first sites in the region appear following Edward I's conquest in 1282 and the subsequent phase of castle building (Jones 2016). The rationale for the creation of moated sites may have been defensive, providing a place to keep livestock safe from raiders, as well as a symbol of status. The owners were often important local landowners or wealthy freeholders (Jones 2016).
- 5.4.4. Llyn Tro dates to the 14th century and was initially occupied by the Roberts family, who held both Croesfoel and Hafod-y-Bwch estates (Jones 2016, 51).

The moat at Llyn Tro was fed by a spring (shown on the Ordnance Survey Drawing of 1835, Figure 11)) that originated by Offa's Dyke north of Bronwyfla Road. It had sluice gates to control the drainage into a small stream to the south which then joined Pentrebychan Brook (Jones 2016).

Changes to function

- 5.4.5. Unlike the majority of moated sites in the region, Llyn Tro remained in use as a farmstead until the mid-20th century. Other sites started being abandoned as early as the end of the 14th century, presumably as the moats ceased to be important, and replacement houses were built elsewhere (Jones 2016).
- 5.4.6. In the Tithe apportionment of 1839, Llyn Tro is described as a house and garden, occupied by John Jackson, who is also listed as occupier for the farmhouse at Croesfoel. A newspaper cutting from 1981 in *The Leader*, held in the North East Wales Archives (NCD/882), includes the memories of two women who had been born at the site. Their great-grandfather, John Badwick, a master thatcher, was the first of the family to live at the house at some point in the second half of the 19th century. The family left the house around 1930 when another family moved in. It is shown as still occupied on the 1954 OS map, which was revised in 1949. It was later abandoned and fell into disrepair.

Changes to setting

- 5.4.7. Llyn Tro was established in the 14th century. It is not clear to what extent the surrounding landscape was under cultivation, but it appears that this was a period of assarting and enclosure in the region (Jones 2016, 66). There is no surviving evidence of ridge and furrow in the fields surrounding the site although there is in the wider landscape (Figure 5). Fields names recorded on the Tithe apportionment may offer some clues. Field 101: Cae pen y ty may have been the top field associated with the Moated Site near Groesfoel Farm. Field 102: Hen berllan appears to have been the site of a former orchard

associated with the Moated Site near Groesfoel Farm.

- 5.4.8. The Tithe map shows irregular field boundaries indicative of fields formed by the enclosure of medieval strip fields (Figure 6). The site was recorded as being part of Croesfoel Farm (see above). Two cottages were located on the north-west of Pentrebychan Road, 70m from the moated site. These were not present on the Second Edition of 1900.
- 5.4.9. The First Edition OS map of 1879 shows the same amalgamation of smaller fields as noted around the other assets (Figure 8). It shows the site was accessed from the Pentrebychan Road by a track, which crossed the feeder stream of the moat. A few trees are shown around the site and along the leat but it appears to have been relatively open.
- 5.4.10. The moated site's location in a hollow would have meant that some of the industrial changes in the landscape would have had less impact than on the other assets. There was probably no visibility of the Rhos branch railway, 400m to the north (Figure 8), although the trains would have been heard. The large coal tips at Bersham Colliery and Hafod that developed in the early 20th century were visible.
- 5.4.11. The *Inventory of Ancient Monuments* for Denbighshire (RCAMWM 1914, 36) described the enclosure from a site visit in 1911:

"A moated enclosure, with the moat still perfect on every side. A rill of water flows in at the north end of the eastern side, and runs off at the south end: it doubtless at one time encompassed the whole. The width of the moat varies from 12 to 20 feet, and is still wider at each corner; on the western side it is 6 feet deep. The present entrance is on the north, but the older entrance seems to have been on the west, where are foundations of masonry. The area of the enclosure is about a quarter of an acre. The original residence of Llyntro is represented in the present outbuildings by a single bay, the timbered forks of

which are still in good preservation on the eastern side."

- 5.4.12. The small patch of woodland to the north of the site, along the former access track, has been established since the 1964 OS map, surveyed between 1957 to 1962.

Modern setting

- 5.4.13. The site lies just 60m south-east of Pentrebychan Road on the boundary of two arable fields. It is now covered with trees and shrubs (Plate 18) and the only visible evidence of the former buildings are low surviving sections of stone walls, including bridge abutments (Plates 19 and 20). The moat retains water in the north-west (Plate 21), but elsewhere it has filled in and is marshy (Plate 22).
- 5.4.14. During the winter, the lack of foliage on the trees and shrubs covering the site allows views away from the monument. The site's location in a slight hollow means that, in most directions, views are of the surrounding post-medieval agricultural fields. However, to the east the industrial site of Pandy Heap can be seen (Plate 23). A modern high voltage electricity cable route runs north-west to south-east past the site, with a pylon located immediately outside the scheduled area to the north-east of the monument (Plate 24). Several other cable routes that cross the landscape are prominent in views of the site (Plate 25).
- 5.4.15. Extending south-east from the moated site is the former leat (Plate 26). The leat is visible in the landscape as a tree line, which also acts as a field boundary. The orientation and similarity of tree height between the leat and those growing on the scheduled monument mean that when viewed from distance the moated site appears to be part of a field boundary (Plates 27 and 28). This is compounded by the small pocket of woodland immediately to the north of the site. It is difficult to appreciate the site as anything other than a patch of

woodland or field boundary from much of the surrounding area.

Contribution of setting to heritage significance

- 5.4.16. Research into medieval moated sites indicates that their location was influenced by local geology, generally being located on water retaining boulder clay (Jones 2016). Llyn Tro was constructed in a hollow with a small watercourse running through to provide water to the moat. The other important factor may have been that the landscapes they were built in were marginal and the moats were defensive. However, the construction of moats may also have been to do with displays of status rather than practically defensive, being an emulation of higher status residences, including castles.
- 5.4.17. Llyn Tro was established in the 14th century by the local landowning Roberts family, during what appears to have been a period of assarting and enclosure in the area. The site is therefore linked to the development of the medieval agricultural landscape and played a role in the creation of the subsequent post-medieval landscape that exists today. Despite some intrusion from later industrial and modern additions, the setting of the enclosure is an important part of understanding its heritage significance.

6. Stage 3: Evaluation of the Potential Impact

Hafod-y-Bwlch Round Barrow DE047

- 6.1.1. The LVIA ZTV mapping (Pegasus Group 2023; Figure 12) indicates there would be no visibility of any elements of the proposed development, with the trees along Pentrebychan Brook effectively screening views of the site.
- 6.1.2. Current views from the scheduled monument towards the proposed development area show two gaps in the treeline where the trees have been reduced in height to allow overhead cables to pass through (Plate 29). Plate

30, taken from the proposed development area, demonstrates that these gaps still allow visibility of the field Hafod-y-Bwlch is situated in during the summer.

- 6.1.3. The views of the proposed development area from the barrow are of the eastern part of the site. This area is to contain the lower height elements of the development, the MV skids and Energy Storage Container. These will be effectively screened by the proposed landscaping and planting along the southern boundary of the site when the planting has matured. Before the trees mature there is potential for there to be views from the barrow of the fencing and structures along the south of the site. In order to integrate the site in the landscape in the short and medium term, the structures will be grey and green in colour.
- 6.1.4. The distance from the scheduled monument and the use of sympathetic colours means that even in the short term the visual impact on the asset will be low.

Croes-Foel Round Barrow DE048

- 6.1.5. The LVIA ZTV mapping (Figure 12) suggests clear visibility of elements of the development from the scheduled monument. Currently, there are views of parts of the development field and the treeline along the northern-edge of the development area from the barrow (Plate 31). The proposed landscaping and planting along the southern boundary of the development area would, in the long term, provide screening of the site, but the LVIA ZTV indicates that there will be residual effects with the visibility likely of taller elements of the development. These elements are dispersed across the site, with most of the tallest in the north-west corner. Visibility of structures over the proposed screening is therefore likely to be patchy and occasional.
- 6.1.6. As described in section 5.2.16, setting contributes minimally to the heritage significance of Croes-Foel Round Barrow. Degree of change to the setting

caused by the proposed development would have a negligible negative impact on the monument's heritage significance.

Offa's Dyke: Pentre-Bychan Hall Section DE137

- 6.1.7. The LVIA ZTV mapping (Figure 12) suggests visibility of elements of the development from the northern half of this section of the Dyke, while the southern half is screened by the woodland of the surrounding former Pentrebychan Hall grounds. Currently there is no visibility of the development area from the Dyke, but the trees along the former Rhos branch railway embankment that form its northern boundary are.
- 6.1.8. The proposed landscaping and planting for the western end of the site are shown in the LVIA (Viewpoint 3 – Photomontages Year 1 and Year 15), although Viewpoint 3 is to the north-east of Section DE137. The proposed landscaping and planting, combined with the existing hedgerows, will result in only the taller elements to the west of the proposed development being visible from the Dyke over the existing trees along Bronwyfla Road. The use of greens and greys in the structures of the development will reduce their visual impact.
- 6.1.9. As described in Section 5.3 above, views westwards from the Dyke are more important for understanding its heritage significance than those to the east. The potential visibility of the development proposals would have a low negative impact on the scheduled monument.

Moated Site near Groesfoel Farm Rhostyllen DE193

- 6.1.10. The LVIA ZTV mapping (Figure 12) suggests visibility of the eastern half of the site from the southern edge of the moated site, with the majority of it screened by a small area of woodland immediately to the north-east. The proposed development would have a negligible impact on the setting of the moated site, which is already impacted in this direction by high voltage power cables, and which has more open views of the fieldscapes to the south and east.

7. Stage 4: Mitigation

- 7.1.1. The design proposals include embedded mitigation to reduce the impacts of the proposed development on the surrounding landscape, including on heritage assets. No additional mitigation is recommended.

8. Conclusions

- 8.1.1. This report has considered the potential impact of a proposed new energy storage system and substation on Land north of Bronwyfla Road, Rhostyllen, Wrexham on the setting of four designated heritage assets. The site is centred on NGR SJ 30539 48599, Lat Long 53.030237 / -3.0371404.
- 8.1.2. Numerous designated heritage assets lie within 3km of the proposed development. A separate report was previously produced following the methodology of Stage 1 of *The Setting of Historic Assets in Wales* (Cadw 2017). The report concluded that there were four assets with the potential to be impacted by the proposed development: Hadfod-y-Bwlch Round Barrow DE047, Croes-Foel Round Barrow DE048, Offa's Dyke Pentre-Bychan Hall Section DE137, and Moated Site near Groesfoel Farm, Rhostyllen DE193 (Davey 2023).
- 8.1.3. This report assesses the potential impact on the settings of these assets, following the methodology of Stages 2 to 4 of *The Setting of Historic Assets in Wales* (Cadw 2017). Stage 2 investigates the original setting of the monuments, changes to those settings, and their modern setting, in order to establish the importance of setting to the heritage significance of the assets. Stage 3 describes the potential impacts of the development proposals on the setting of each asset and how that may affect their heritage value. Stage 4 considers whether any additional mitigation would be beneficial.

8.1.4. The assessment has identified that the development proposals would have a Negligible negative impact on three of the assets (Hadfod-y-Bwlch Round Barrow DE047, Croes-Foel Round Barrow DE048, and Moated Site near Groesfoel Farm, Rhostyllen DE193) and a Low negative impact on one other (Offa's Dyke Pentre-Bychan Hall Section DE137). Embedded mitigation measures within the design proposals, including a bund and tree planting along the southern boundary of the site, planting along the eastern boundary of the site adjacent to the existing Public Right of Way, and additional planting along the west of the site, as well as the use of greys and greens to help the elements of the development blend into the landscape, would significantly reduce the visual impacts of the development, particularly in the long term. In addition the application includes localised re-profiling of the site topography to reduce the height of the tallest infrastructure (the 400kv substation). No additional mitigation measures have been recommended.

9. Sources

General

Atkins, P.J. 1972. Moated Medieval Sites. In *The Local Historian* vol. 10, no. 3, 135–138.

Cadw, 2017. Setting of Historic Assets in Wales. Cardiff: Cadw.

Cadw, 2011. Sustainable Management of the Historic Environment in Wales (Conservation Principles).

Davey, J. 2023. *Stage 1 Settings Assessment: On Land North of Bronwyfla Road, Rhostyllen, Wrexham. October 2023*. Unpublished Archaeology Wales Report No. 2234.

Halsted, J.C. 2011. *Settlement patterns from the Late Neolithic to the Late Bronze Age: The central Welsh border region in context*. Unpublished PhD thesis, University of Birmingham.

Hume, P. 2021. *The Welsh Marcher Lordships. I: Central and North*. Eardisley: Logaston Press.

Johnson, N. 2015. *From Malvern to the Irish Sea: Early Bronze Age round barrows in a border landscape*. Unpublished PhD thesis, University of Worcester.

Jones, R. 2016. Medieval moated sites in the Cheshire-North Wales borderland. In S.M. Varey and G.J. White (eds.), *Landscapes Past and Present: Cheshire and Beyond*, Chester: University of Chester Press, 47-98.

Pegasus Group, 2023. *Planning Application for the Installation of an Energy Storage System including Substation Land North of Bronwyfla Road, Landscape and Visual Impact Assessment*.

RCAHMWM, 1914. *An Inventory of the Ancient Monuments in Wales and Monmouthshire. IV. County of Denbigh*. London: His Majesty's Stationary Office.

Welsh Government, 2017. *Planning Policy Wales. Technical Advice Note (TAN) 24: The Historic Environment, May 2017*.

Websites

Corlannau/Sheepfolds, <https://www.cofnodicorlannau.org/corlannaur-carneddau-sheepfolds/english/history> - accessed 08/02/2024

Disused Stations, <http://www.disused-stations.org.uk/r/rhostyllen/index.shtml> - accessed 29/01/2024

Historic England, This Historic England Blog. A Brief introduction to Bronze Age

Barrows, heritagecalling.com/2015/07/10/a-brief-introduction-to-bronze-age-barrows – accessed 02/02/2024

Pentrebychan Crematorium, <https://www.wrexham.gov.uk/service/pentrebychan-crematorium> - accessed 30/01/2024

University of Cambridge, Cambridge air photos, <https://www.cambridgeairphotos.com/location/yy68/> - accessed 31/01/2024

Wrexham History, <https://www.wrexham-history.com/wrexham-bypass-construction-a483/> - accessed 08/02/2024

Maps consulted

Map of the township of Eclusham Below in the parish of Wrexham and County of Denbigh, Henry Hughes, 1839.

Map of the township of Eclusham Above in the parish of Wrexham and County of Denbigh, Issac Taylor, 1844.

Ordnance Survey County Series, Denbighshire XXVIII, surveyed 1872, published 1879, 1:10,560.

Ordnance Survey County Series, Denbighshire XXXV, surveyed 1872 to 1873, published 1879, 1:10,560.

Ordnance Survey County Series, Denbighshire XXVIII, surveyed 1898, published 1900, 1:10,560.

Ordnance Survey County Series, Denbighshire XXXV, surveyed 1898, published 1900, 1:10,560.

Ordnance Survey County Series, Denbighshire XXVIII.3, surveyed 1909 - 1910, published 1914, 1:10,560.

Ordnance Survey County Series, Denbighshire XXXV, surveyed 1909, published 1914, 1:10,560.

Ordnance Survey County Series, Denbighshire XXVIII.SE, surveyed 1949, published 1954, 1:10,560.

Ordnance Survey County Series, Denbighshire XXXV.NE, surveyed 1949, published 1954, 1:10,560.

Ordnance Survey SJ34NW-A, surveyed/revised 1957-1962, published 1964. 1:10,000.

Archive Documents Consulted - North-East Wales Archives

NCD/882 "Moat House memories." Wrexham Leader. Reminiscences of Llyn Tro, a moated house at Pentrebychan c.1850-1930.

PPD/32/12 Postcard of Pentrebychan Hall and Offa's Dyke

PPD/32/6 Photograph of Pentrebychan Hall

PPD/32/7 Photograph of Pentrebychan and the dovecote

PPD/32/8 Photograph of Pentrebychan Hall and two children at the sundial

D/E/547, plan of part of Hafod y bwch showing Hafod pits, 1880



Figures

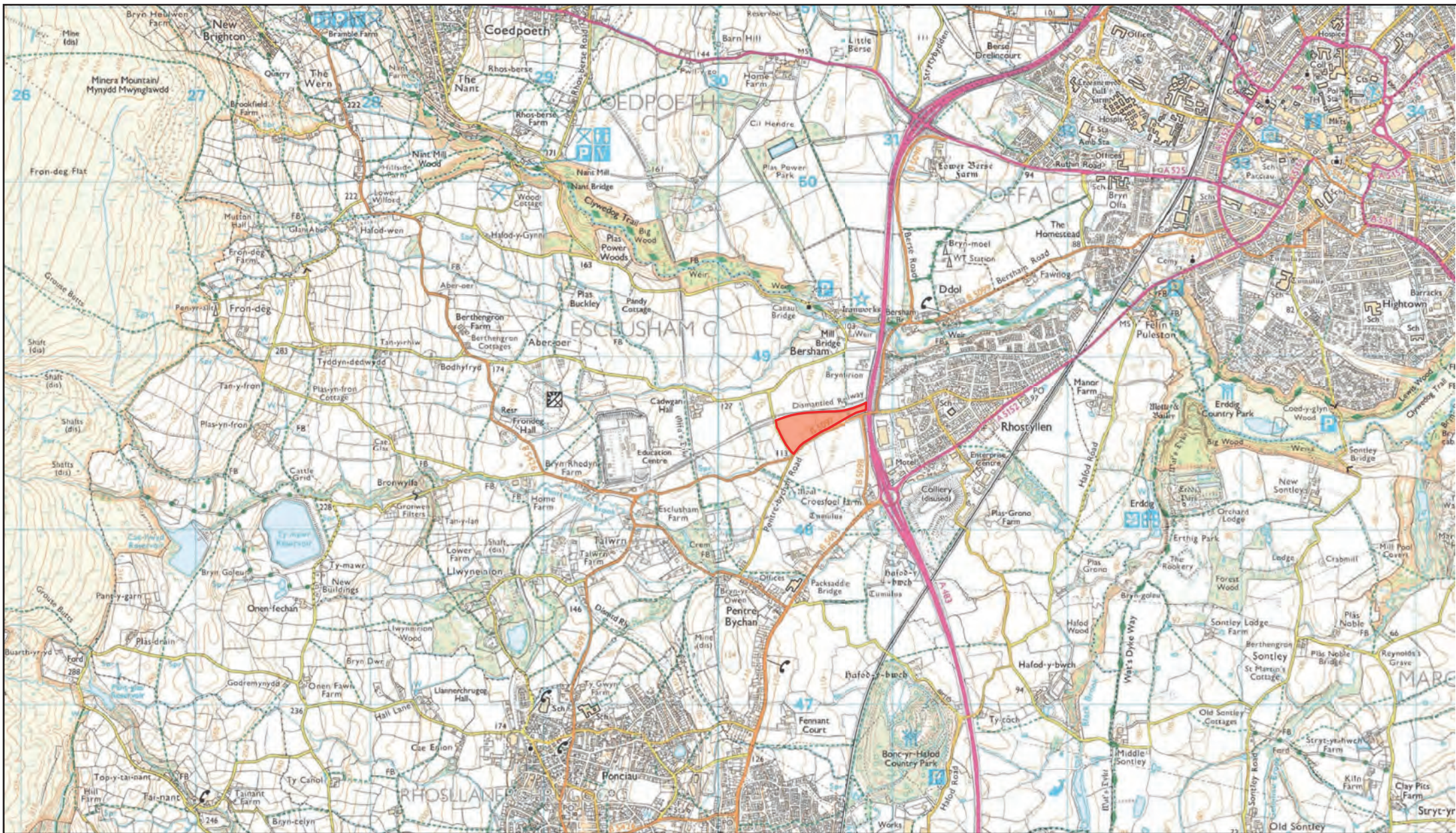


Figure 1. Site Location

— Site Location



0 500m 1000m 1500m



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Figure 2. Proposed development plans.

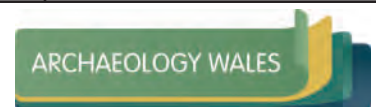
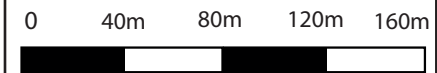


Figure 3. Designated heritage assets within 3km of the proposed development area.

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- Site
- 3km Buffer
- ▲ Listed Buildings
- Scheduled Monuments
- RHPG
- RHPG Significant Views
- Conservation Areas

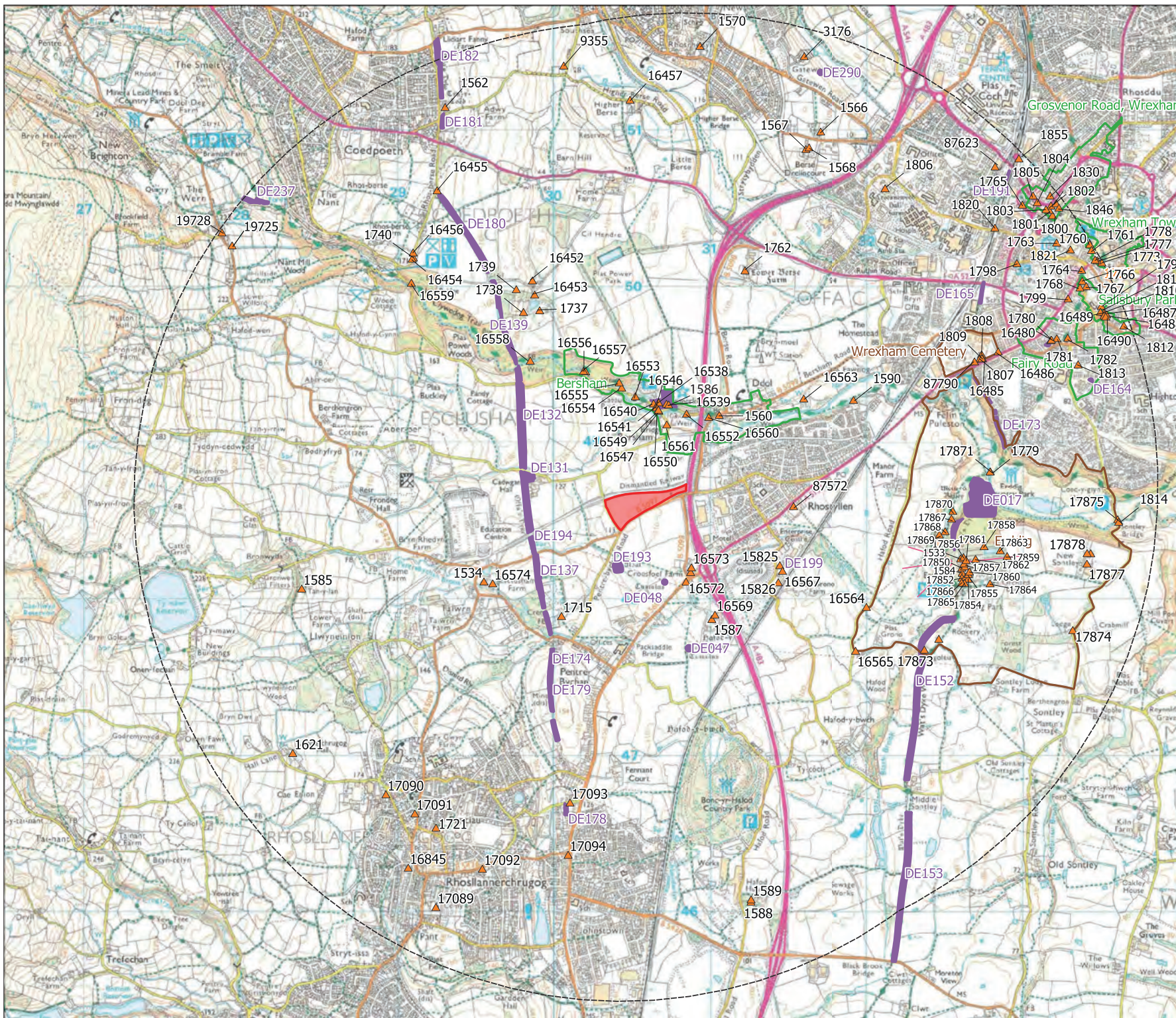
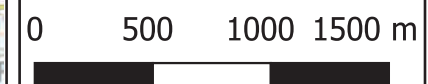
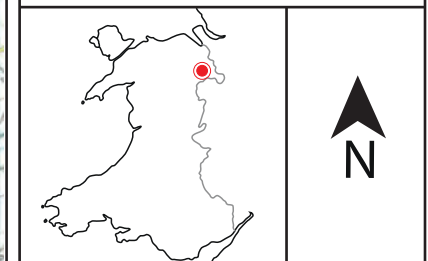
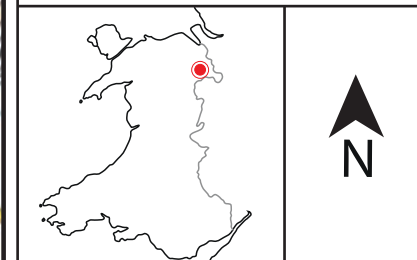


Figure 4. Sites recorded in the HER around the Scheduled Monuments subject to the Settings Assessment.

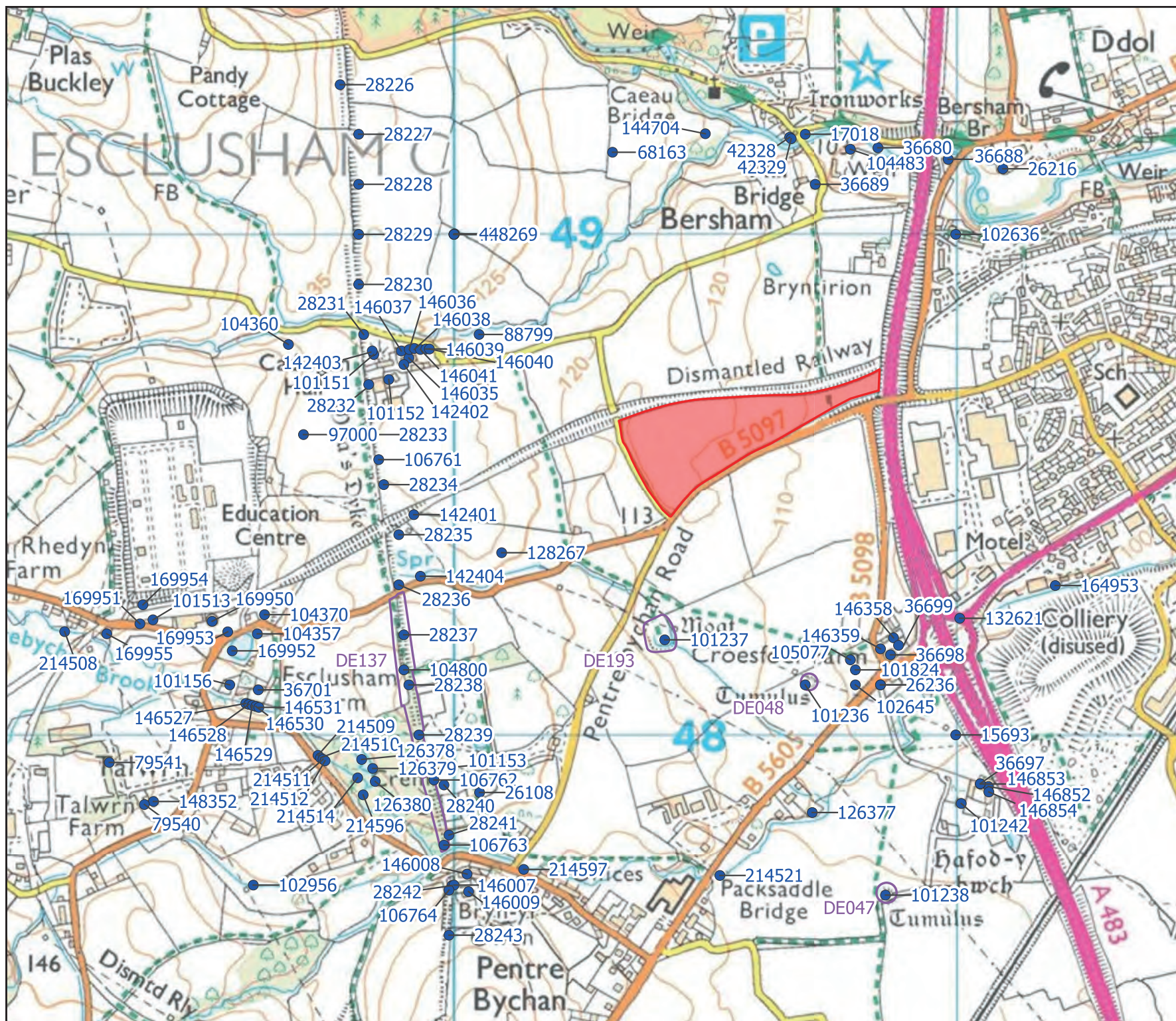
CPAT HER enquiry E6896.

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- Site
- Scheduled Monument
- HER point



0 100 200 300 400 m



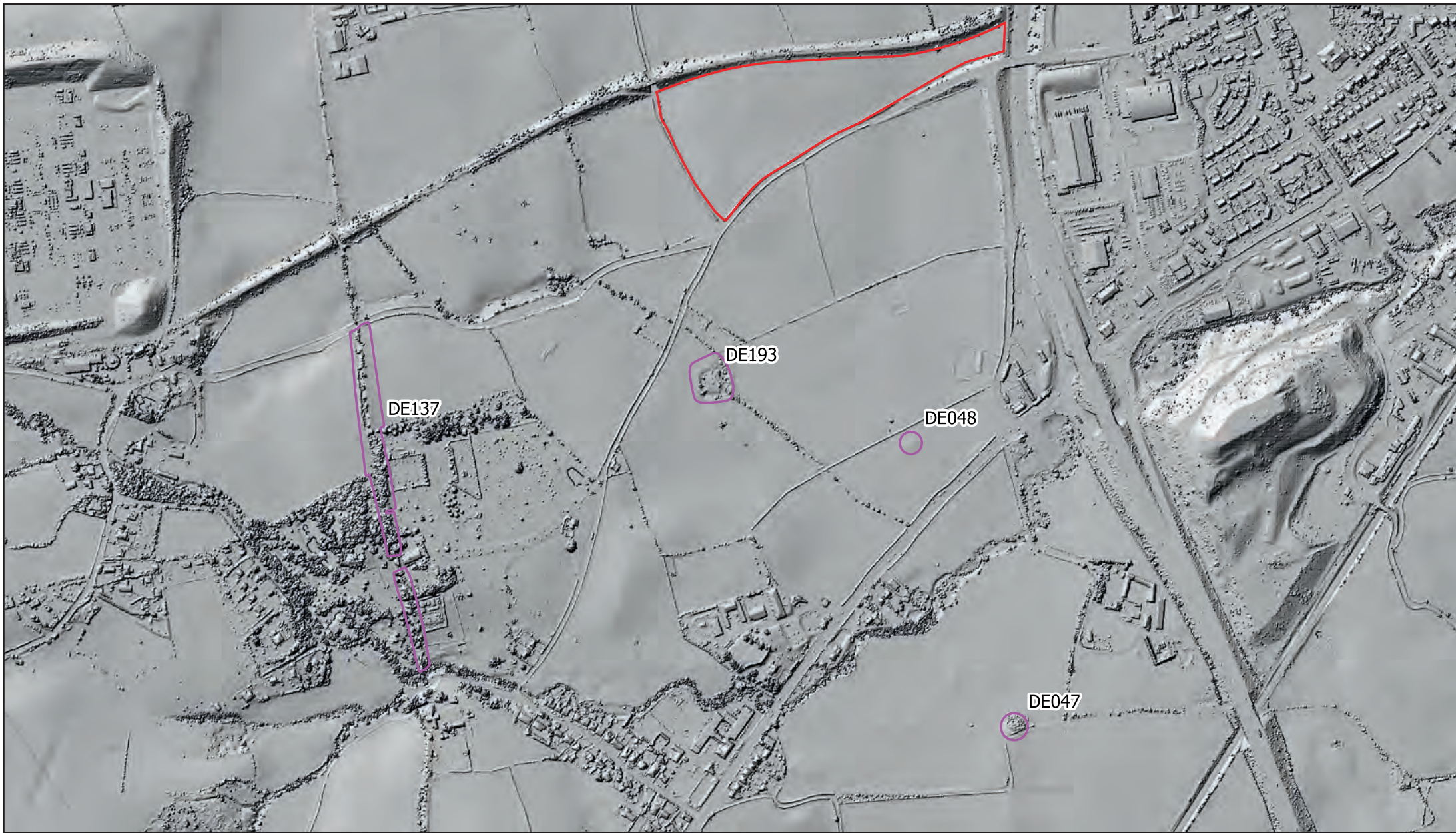


Figure 5. NEA LiDAR data (2021) at 2m DSM hillshade plot.

-  Site boundary
-  Heritage asset subject to SA



0 100m 200m 300m 400m



A scale bar showing distances in meters: 0, 100m, 200m, 300m, and 400m.



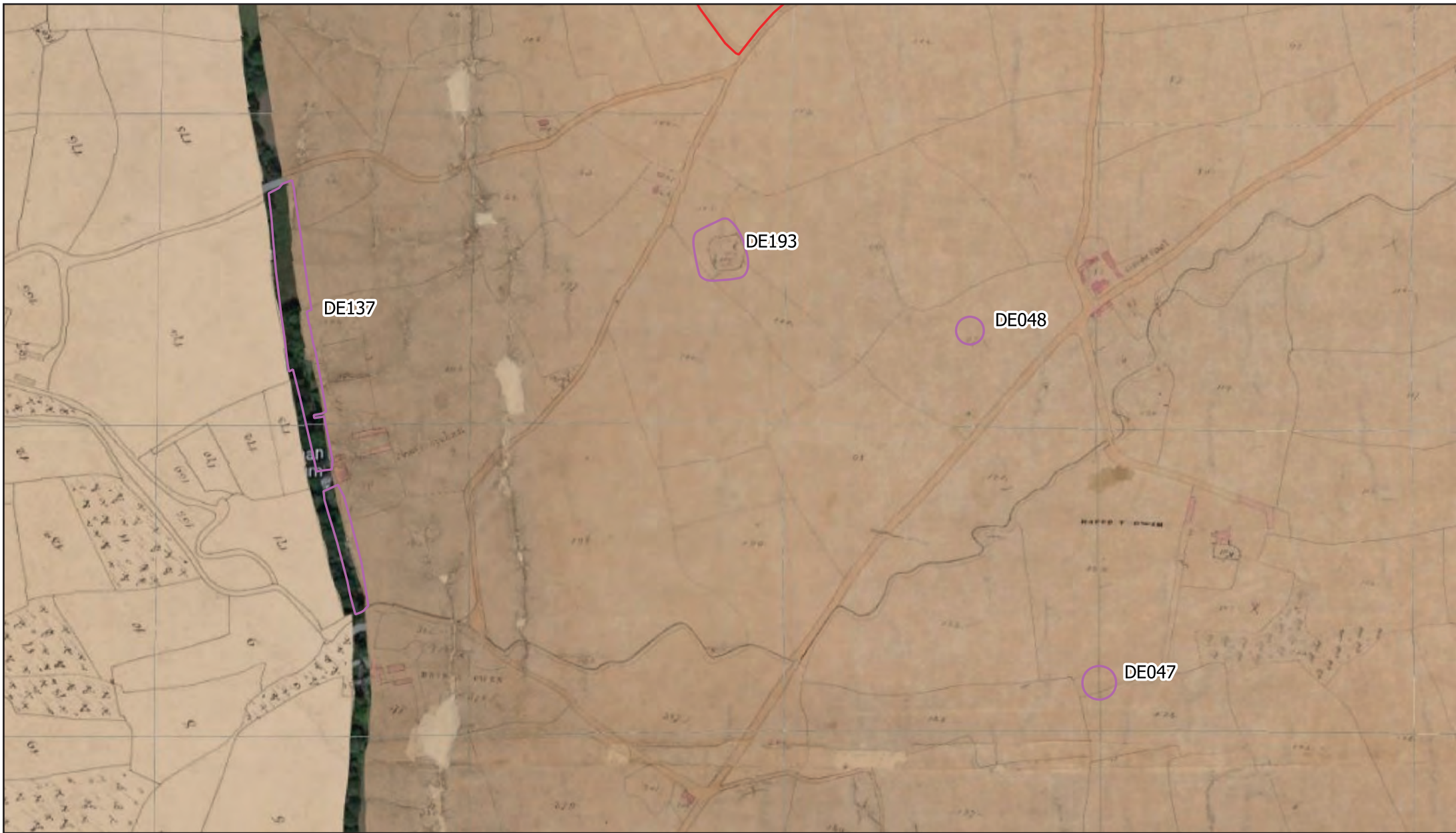


Figure 6. Tithe maps for Esclusham Below, 1839 (right) and Esclusham Above, 1844 (left) showing the heritage assets.



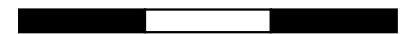
Site boundary



Heritage asset subject to SA



0 100m 200m 300m



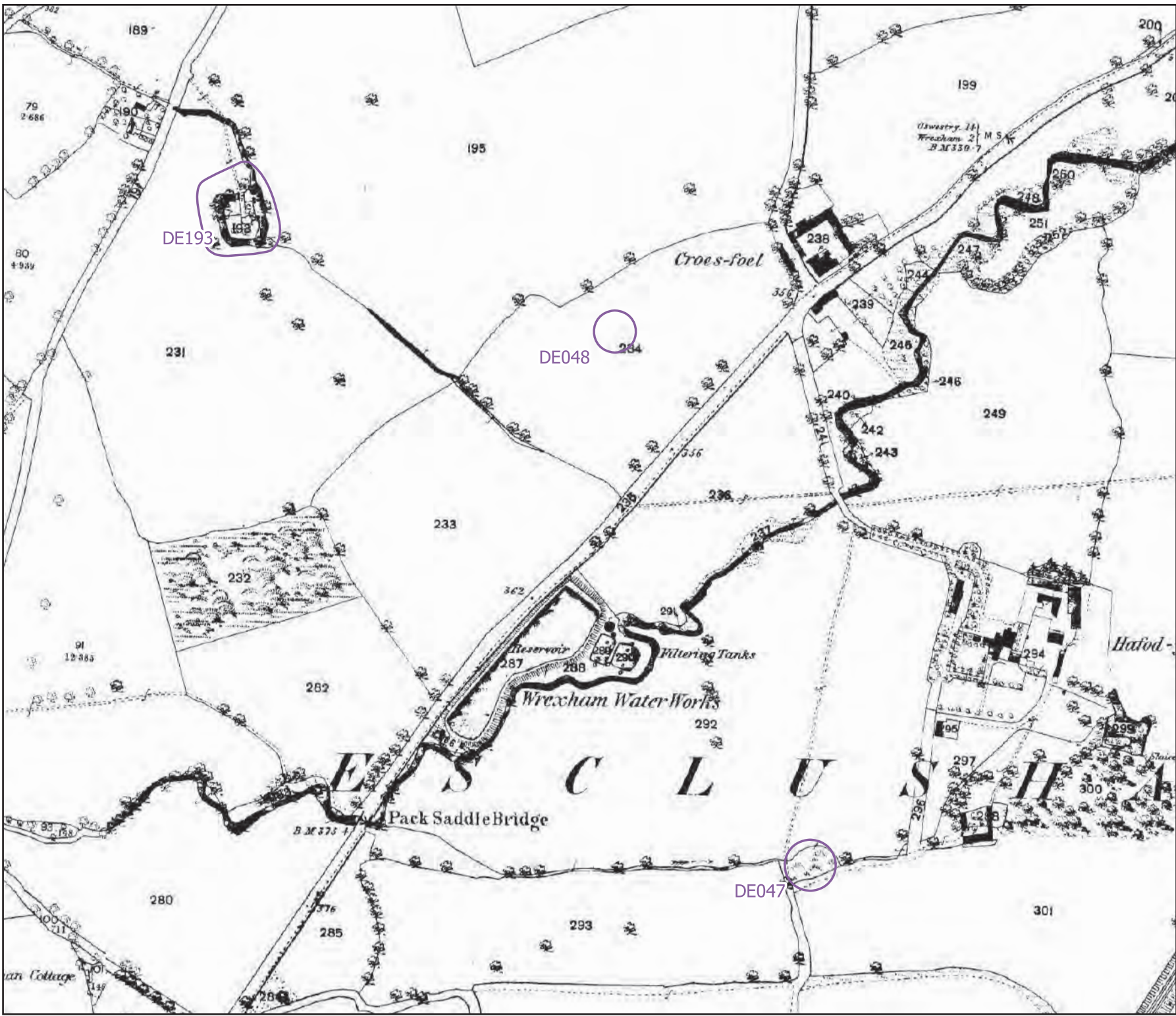


Figure 7. Detail from First Edition OS map, 1879, originally produced at 1:2,500

 Heritage asset subject to SA



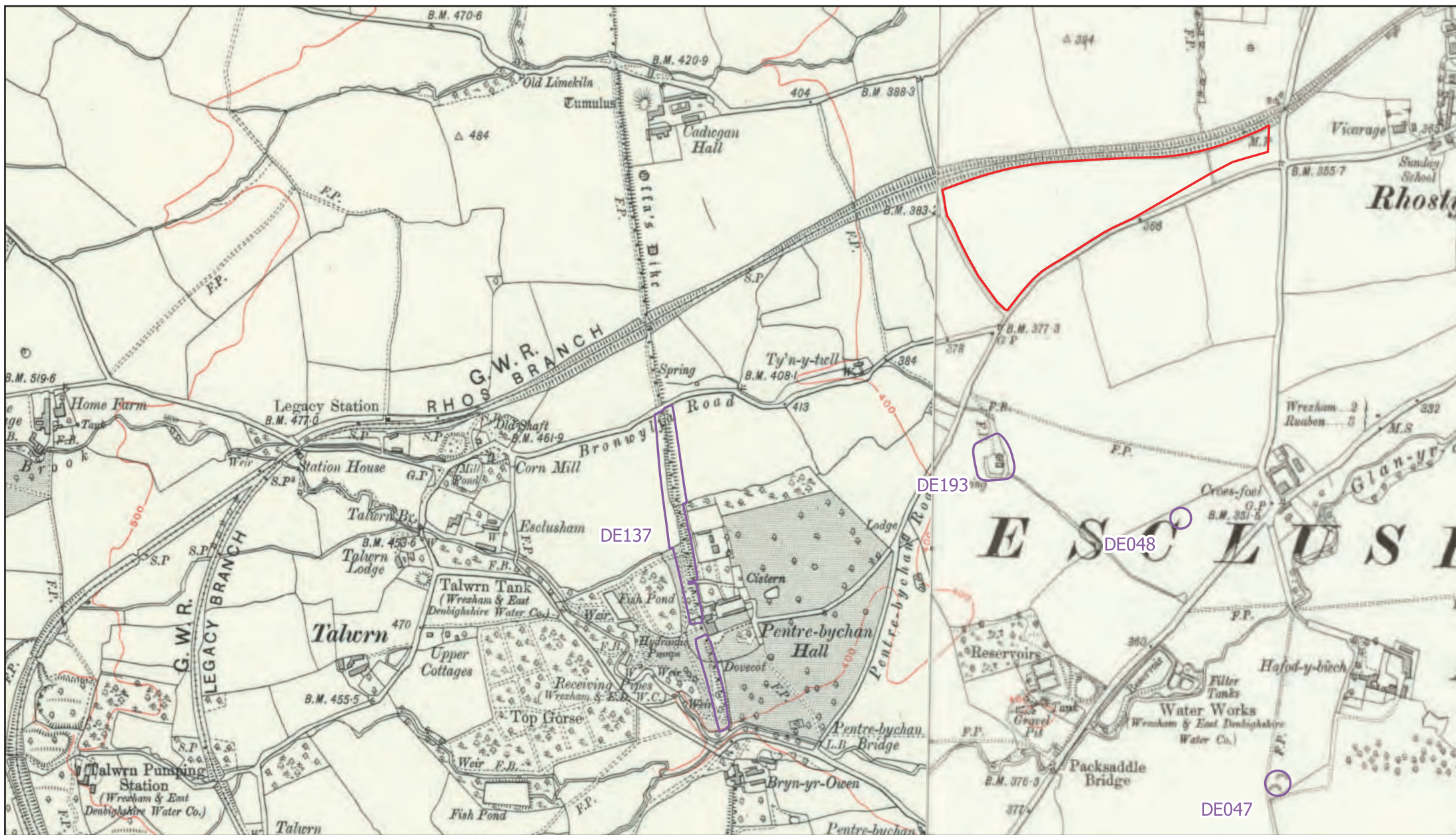
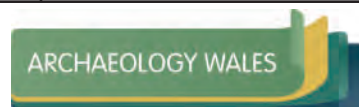


Figure 8. Detail from Ordnance Survey Country Series map of 1914, original scale 1:10,560.

- ✓ Site boundary
- Heritage asset subject to SA



PENTREBYCHEN HALL AND OFFA'S DYKE.

"The Unique Series".



Figure 9. Postcard of Pentrebychen Hall and Offa's Dyke, c. 1910. Shot is looking north-east.

Courtesy of North East Wales Archives (Ruthin) PPD/32/12



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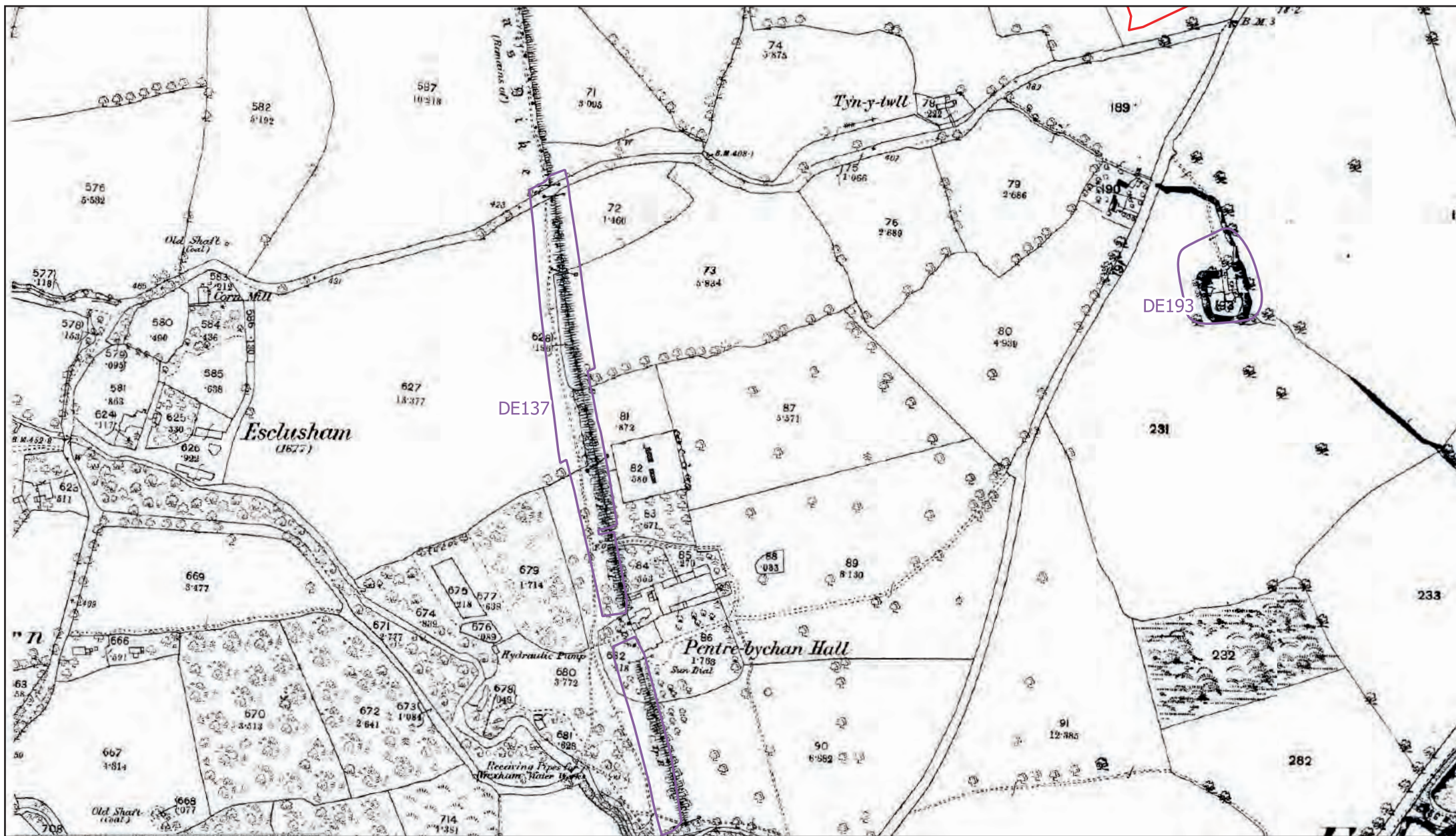


Figure 10. Detail from First Edition Ordnance Survey maps, 1879, original scale 1:10,560.



Site boundary



Heritage asset subject to SA



0 50m 100m 150m 200m



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Figure 11. Detail from Ordnance Survey Drawings of Cynr y Brain, 1835 (main) and Chester, 1819 (bottom right).

-  Site boundary
-  Heritage asset subject to SA



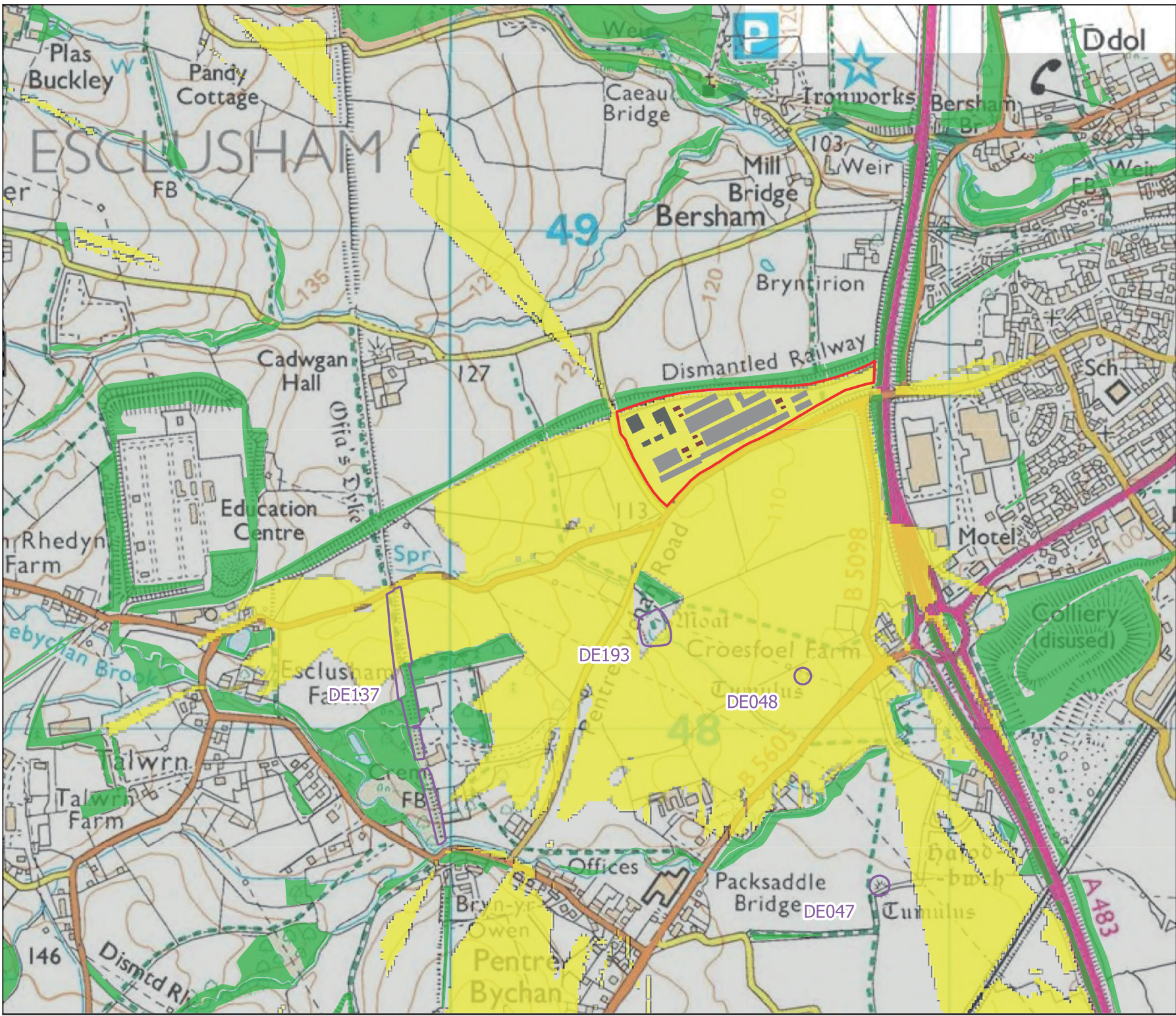
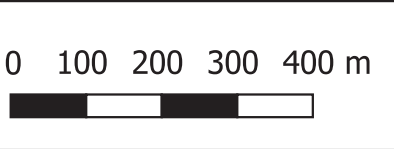


Figure 12. Screened Zone of Theoretical Visibility mapping, after Pegasus Group 2023.

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- Site
- Scheduled Monument
- OS Local woodland
- Compound elements 6 - 7.3m high
- Alpha substation elements 2.5 - 14m high
- Battery elements 2.9 - 3m high
- Zone of Theoretical Visibility multiple heights





Plates



Plate 1. Hafod-y-Bwlch Round Barrow (DE047), looking south-west.



Plate 2. Fenced farm track running along the southern edge of the barrow with sheep feeder in foreground, looking east.



Plate 3. View north-north-east from Hafod-y-Bwlch Round Barrow.



Plate 4. View of Hafod-y-Bwlch Round Barrow from the farm track on the southern field boundary, looking north-east.



Plate 5. Telegraph pole on the north edge of the round barrow, looking west.



Plate 6. View south-west from Croes-Foel Round Barrow, DE048.



Plate 7. View north-east from Croes-Foel Round Barrow, DE048, with Croesfoel Farmhouse visible to right of centre and Pandy coal heap to the far right.



Plate 8. View south-east from Croes-Foel Round Barrow, in the direction of Hafod-y-Bwlch Round Barrow, roughly to centre of shot.



Plate 9. Trees growing on the top of Offa's Dyke Section DE137, left of shot. View north from the north boundary of the Crematorium grounds.



Plate 10. Trees marking the line of Offa's Dyke through the landscape, looking south-west from the field to the south of the proposed development area.



Plate 11. Footpath in the former ditch of Offa's Dyke Section DE137, looking south.



Plate 12. Footpath in the former ditch of Offa's Dyke Section DE137, looking north.



Plate 13. West side of the boundary hedge planted along the top of the west of Offa's Dyke ditch, looking south.



Plate 14. Northern end of Offa's Dyke Section DE137 from Bronwyfla Road, with the line of the bank visible through the trees. Looking east.



Plate 15. View eastwards from the bank at the northern end of Offa's Dyke Section DE137.



Plate 16. View north-east from the bank at the northern end of Offa's Dyke Section DE137.



Plate 17. View west from the bank at the northern end of Offa's Dyke Section DE137.



Plate 18. Croes-foel moated site DE193, looking south-east.



Plate 19. Remains of a stone wall at Croes-foel moated site, looking north-west.



Plate 20. Bridge abutment at Croes-foel moated site, looking north.



Plate 21. North-west corner of Croes-foel moated site where the moat retains water, looking south.



Plate 22. Largely infilled, marshy section of moat at Croes-foel moated site, looking south.



Plate 23. View east from the centre of Croes-foel moated site, with Pandy tip visible in the background.



Plate 24. Croes-foel moated site, view south-east from Bronwyfla Road.



Plate 25. View north-east from the field to the west of Croes-foel moated site showing various electric cable routes crossing the landscape. Croes-foel is the area of trees to the right of shot.



Plate 26. The tree-covered Croes-foel moated site to the left with the tree-lined former leat running away from it. View south-east.



Plate 27. Croes-foel moated site, viewed from the adjacent field to the west, looking east.



Plate 28. Croes-foel moated site, viewed from the adjacent field to the east, looking southwest.



Plate 29. View north from Hafod-y-Bwlch Round Barrow, showing reduced areas of the treeline along Pentrebychan Brook where the overhead cables pass.



Plate 30. View south from east of proposed development area, with two small areas of the field Hafod-y-Bwlch is situated in visible to the left of the pole.



Plate 31. Parts of the proposed development area visible in centre of shot beyond the far hedgerow, view north from Croes-Foel Round Barrow.

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