

Heritage

Recording Services Wales

Ffosddu Fach Wind Turbine, Henllan Amgoed, Whitland, Carmarthenshire

Archaeological Appraisal



By

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ARCHAEOLOGICAL APPRAISAL

Ffosddu Fach Wind Turbine, Henllan Amgoed, Whitland, Carmarthenshire

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Executive Summary

The following report presents the results of a rapid archaeological appraisal undertaken by Heritage Recording Services Wales (HRS Wales), commissioned by Fine Energy Ltd, for the erection of a single wind turbine, positioned approximately 10.7km northwest of the town of St. Clears and approximately 2.5km west of the village of Llanboidy, Carmarthenshire (centered on NGR: SN 19311 22492) on land just north of Ffosddu Fach Farm

The proposed wind turbine will have a maximum overall height to blade tip of 35m. Initial access to the turbine site for construction and maintenance will be across fields along a temporary access track from the road. The turbine will also require an approximately 7m x 7m turbine foundation base and temporary crane hard-standing and one electrical supply box, which will feed electricity to the main house along an underground cable trench, a distance of approximately 300 meters.

The scope of the study was agreed in advance with Dyfed Archaeological Trust (DAT) in early September 2014 and a subsequent submitted and approved project specification agreed that only Historic Environment Records (HER) within a 2km radius from the proposed turbine location needed to be gathered to inform the archaeology of the wider landscape, and only designated and high value undesignated sites within 5km from the position of the proposed turbine need be appraised for the indirect impact assessment.

In summary, the appraisal has concluded that there will be no direct physical impacts on any known individual heritage assets from any elements of the proposed development.

The appraisal of the application site has also concluded that although the site visit and the primary HER database records have shown that there are no known sites within the proposed turbine location, nor along the route of the proposed cable trench, the appraisal has clearly shown that that the area has a high potential for buried archaeological remains associated with the prehistoric period, especially as there is a cluster of Bronze Age round barrows at Crosshands. As such, in order to offer mitigation against the possibility that buried archaeological remains could be exposed and destroyed further during construction, it is recommended that during all ground-works for the turbine base and the cable trench is undertaken under strict archaeological watching brief conditions.

The appraisal also concluded that none of the settings of designated Scheduled Ancient Monuments (SAMs), Listed Buildings, Conservation Area or any undesignated sites of schedulable quality, would be significantly affected by the proposed development. It was predicted that the most noticeable effect on any designated site within the 5km radius, would be the indirect effect on the high value SAM sites of Llanboidy Motte & Bailey (SAM No: CM08), the Lan Enclosure (SAM No. CM294) and the Crosshands Burial Chamber (SAM No. CM048), which were all predicted to be of Minor magnitude and therefore of Moderate/Minor significance, but also temporary for the lifetime of the turbine.

With regards to potential cumulative effects, the inclusion of the proposed turbine on land at Ffosddu Fach, along with the existing operational cumulative turbine sites that are scattered widely across the 5km radius, including the operational Dyffryn Bodryn Windfarm to the northeast would not significantly affect any of these designated sites.

1 Introduction

- 1.1 The following report presents the results of a rapid archaeological appraisal undertaken by Heritage Recording Services Wales (HRS Wales), commissioned by Fine Energy Ltd, for the erection of a single wind turbine, positioned approximately 10.7km northwest of the town of St. Clears and approximately 2.5km west of the village of Llanboidy, Carmarthenshire (centered on NGR: SN 19311 22492) on land just north of Ffosddu Fach Farm.
- 1.2 The specific objectives of the assessment were to:
- Identify the cultural heritage baseline within and in the vicinity of the proposed turbine;
 - Consider the application site in terms of its archaeological and historic environment potential;
 - Assess the potential and predicted effects of the construction and operation and decommissioning of the turbine on the baseline cultural heritage resource within the context of relevant legislation and planning policy guidelines; and
 - Propose measures, where appropriate, to mitigate against any predicted significant adverse effects.
- 1.2 The assessment comprised two main elements:
- i) An archaeological appraisal of all Historic Environment Record (HER) sites within a 2km from the proposed turbine position and a site visit of the application area.
 - ii) Direct and In-direct Assessment of predicted effects on all designated and undesignated High Value sites (Scheduled Ancient Monuments, Listed Buildings, Parks and Gardens and Historic Landscapes) within the application area and within a 5km radius.
- 1.3 The Technical Appendices for this Chapter contains the following information:
- *Appendix I:* Figures;
 - *Appendix II:* Photographs and photomontage;
 - *Appendix III:* Gazetteer of all known HER sites up to 2km radius and all designated sites and undesignated High Value sites up to 5km radius from proposed turbine location.
- 1.4 The assessment entailed a site visit and an appraisal of all readily available primary historical and archaeological documentary sources for the immediate application area and an appraisal focusing on the indirect effect of the proposed turbines on the setting of designated sites (Scheduled Ancient Monuments, Listed Buildings, Parks & Gardens and Registered Historic Landscapes) and undesignated high value sites within a 5km radius from the position of the proposed turbines. The study of the application area assessed the direct and indirect impact of the proposed development on known heritage assets and also the potential for hitherto unknown heritage assets. It also appraised the known heritage assets within a 2km radius of the proposed application area, in order to inform the assessment of the application area, in accordance with Welsh Office Circulars 60/95 and 60/96, '*Planning and the Historic Environment: Archaeology*'.
- 1.5 All works were undertaken in accordance with the I/A's Standards and guidance: for an *archaeological desk based assessment*.

The site

- 1.6 The proposed wind turbine is to be positioned in an enclosed improved field bordered by hedgebanks to the north, east, west and south, at a height of approximately 200m AOD (National Grid Reference SN 19311 22492. This grid reference is approximate to within 10 meters), approximately 10.7km northwest of the town of St. Clears and approximately 2.5km west of the village of Llanboidy, Carmarthenshire. The application study area as a whole is entirely an area of enclosed open fields with 19th century boundaries, predominantly hedge-banks, with the Ffosddu Fach farm complex to the southwest. The study application area covers approximately 40.15 hectares.
- 1.7 The wind turbine will have a maximum overall height to blade tip of 35m. Initial access to the turbine site for construction and maintenance will be across fields along a temporary access track from the road. The turbine will also require an approximately 7m x 7m turbine foundation base and temporary crane hard-standing and one electrical supply box, which will feed electricity to the main house along an underground cable trench, a distance of approximately 300 meters.
- 1.8 The proposed development site is not located within any Registered Historic Landscape (RHL). The nearest RHL to the application site is the *Preseli HLW (D) 7* Historic Landscape, which lies approximately 6km to the northwest. The development site is not within any Conservation Area. However, approximately 2.4km to the east is the Conservation Area of Llanboidy village. The application site is not within any registered Park & Garden. The nearest Registered Park & Garden is *Blackaldern (PGW (Dy) 27(PEM))*, which lies approximately 10.8km to the southwest. There are also no Scheduled Ancient Monuments (SAMs) or Listed Buildings (LBs) within the development area itself

Geology

- 1.9 The geology of the application area is generally of undifferentiated Llanvirin Rocks, consisting of mudstones, siltstones and sandstones.

2 Planning Policy Context and Legislation

2.1 Ancient Monuments and Archaeological Areas Act 1979

- 2.2 Under the Ancient Monuments and Archaeological Areas Act 1979 (1979 Act) (Ref. 1), the Welsh Assembly Government and Cadw are required to compile and maintain a Schedule of monuments considered to be of national importance. The statutory consent of Cadw is required before any works are carried out which would have the effect of demolishing, destroying, damaging, removing, repairing, altering, adding to, flooding or covering up a Scheduled Ancient Monument (SAM). In addition, impacts of development works upon the setting of a SAM form an important consideration in the granting or refusal of planning consent to conduct development works.
- 2.3 There are no Scheduled Ancient Monuments within the proposed development area (red line boundary). However there are eighteen (18) SAM sites and forty-two (42) Listed Building (LB) sites positioned within 5km of the proposed turbine location.

2.4 Town and Country Planning Act 1990

- 2.5 Other known sites of archaeological/heritage significance can be entered onto county-based Sites and Monuments Records (many now called Historic Environment Records) under the 1990 Town and Country Planning Act. Historic hedgerows are protected under the Hedgerow Regulations 1997. A hedgerow is historic if it marks a parish or township boundary which pre-dates 1850 AD, incorporates an archaeological feature or is part of or incorporates an archaeological site, marks the boundary of (or is associated with) an estate or manor which predates 1600 AD or forms an integrated part of a pre-parliamentary enclosure.

2.6 Planning (Listed Building and Conservation Areas) Act 1990

- 2.7 Under the Welsh Office Circular 61/96, 'Planning and the Historic Environment: Historic Buildings and Conservation Areas' and the 'Planning (Listed Buildings and Conservation Areas) Act 1990 (Ref. 1)' and the Historic Buildings and ancient Monuments Act of 1953 (Ref.1), listed buildings are categorised as Grades I and II in decreasing order of special architectural and historic importance. These buildings are of acknowledged importance to the nation's built heritage. Section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990 requires planning decision makers to have special regard to the desirability of preserving listed buildings, their settings or any features of special architectural or historic interest which they possess. There are no listed buildings within the proposed development area.
- 2.8 Conservation Areas may be designated under the Planning (Listed Buildings and Conservation Areas) Act 1990. Section 72 of the 1990 Act requires decision makers on applications for planning consents to pay special attention to the desirability of preserving or enhancing the character or appearance of the area. As a matter of policy, planning decision makers must take into account the potential effects of development on the setting of Conservation Areas. There are no Conservation Areas within the proposed development area. However, the Conservation Area of the village of Llanboidy lies approximately 2.4km to the east.

2.9 Welsh Office Circular 60/96 (Planning and the Historic Environment: Archaeology)

- 2.10 This guideline establishes the principles and framework within which archaeological matters are a material consideration within the planning process. It identifies how sites are preserved and recorded, and the role of local authorities and the Welsh Office working through Cadw. It states:
- 2.11 *Archaeological remains should be seen as a finite and non-renewable resource, in many cases highly fragile and vulnerable to damage and destruction...They are part of our sense of national identity and are valuable both for their own sake and for their role in education, leisure and tourism'.* (Paragraph 3, Ref 1).
- 2.12 Welsh Office Circular 60/96 places emphasis on the need for early consultation with the appropriate authorities (Paragraph 11) and includes information on the need for formal Environmental Assessments in some circumstances (Paragraph 12, Ref 1).
- 2.13 In Wales this guidance replaces Planning Policy Guideline (PPG) 16: Archaeology and Planning

(1990).

3 Methodology and Consultations

3.1 Consultations

3.2 Following the submission of a planning application (W/30481) to Carmarthenshire County Council (CCC) planning department, Dyfed Archaeological Trust (henceforth DAT) were consulted on 17th July 2014 by the council with regard the application. DAT responded (letter dated 24th July 2014) by recommending that a rapid historic environmental appraisal be conducted at the site.

3.3 Following consultation by HRS Wales with Dyfed Archaeological Trust (DAT), it was agreed that the archaeological dimension would include a rapid archaeological appraisal of all undesignated sites up to a 2km radius from the proposed turbine and all designated sites up to a 5km radius. A Project Specification was submitted and approved by DAT on 15th September 2014.

3.4 Methodology of Baseline Survey

3.5 In accordance with the IfA's *Standards and guidance*, the purpose of a desk-based assessment is to gain information about the known or potential archaeological resource within a given area or site (including the presence or absence, character and extent, date, integrity, state of preservation and relative quality of the potential archaeological resource), in order to make an assessment of its merit in context, leading to one or more of the following:

- the formulation of a strategy to ensure the recording, preservation or management of the resource;
- the formulation of a strategy for further investigation, whether or not intrusive, where the character and value of the resource is not sufficiently defined to permit a mitigation strategy or other response to be devised; and
- the formulation of a proposal for further archaeological investigation within a program of research.

3.6 The other aim of the appraisal was to evaluate the potential direct effect of the proposed development on all cultural heritage features within the bounds of the application area, gather archaeological HER data for sites up to 2km from the proposed turbine location and to assess the potential indirect effect on the setting of all high value designated sites (Scheduled Ancient Monuments (SAMs), Listed Buildings (LBs) and other high value undesignated sites considered to be of national importance and worthy of scheduling) within a 5km radius from the proposed turbine location. A further aim was to evaluate the potential impact of the proposal on hitherto unknown buried archaeological remains in the proposed development area.

3.7 All work was conducted in compliance with the *Codes of Practice* of the Institute for Archaeologists (IfA 2000).

3.8 The appraisal considered the following:

- the nature, extent and degree of survival of archaeological sites, structures, deposits and landscapes within the study area;
 - the history of the site;
 - the potential impact of the proposed development on the setting of known sites of archaeological importance; and
 - a methodology for non intrusive survey and/or intrusive evaluation to determine the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development.
- 3.9 In considering the above, the following repositories were consulted as part of the research assessment
- Dyfed Archaeological Trust (DAT) – HER database;
 - Royal Commission on Ancient and Historic Monuments of Wales (RCAHMW), Aberystwyth – NMR, aerial Photos, maps, archives;
 - National Library of Wales (NLW), Aberystwyth – maps, archives;
 - Cadw – SAM Listings, Listed Buildings;
 - County Records Office – Maps, plans; and
- 3.10 The following cartographic sources were included in the study:
- OS Surveyors drawing (1809-1836);
 - Tithe apportionment and parish map of Llanboidy (1844);
 - Ordnance Survey 1st Edition map of 1889 (1:2500);
 - Ordnance Survey 2nd Edition map of 1907 (1:2500);
 - Ordnance Survey Edition map of 1953 (1:10560);
 - Ordnance Survey Edition map of 1964(1:10560);
 - Ordnance Survey Edition map of 1975 (1:10000).
 - RAF Aerial Photo 1946
- 3.11 Photographs**
- 3.12 Aerial photos consulted spanned the years 1946 – 2009.
- 3.13 All photographs appropriated during the site walkover were undertaken using a 10MP Olympus SLR in SHQ JPEG format and where considered necessary RAW file format were also appropriated.
- 3.14 Following the results of the desk based assessment, the potential for further archaeological work was considered in order to assess the viability for further study of the assessment results and to provide an indication of the relative importance of the material in any subsequent decision-making and mitigation strategies.

3.15 Assessment of Direct Impact Methodology

3.16 The system employed to evaluate the cultural value and direct effects of the proposed development on the archaeological resource is based on the site significance value scale as set out in the Design Manual for Roads and Bridges (DMRB, Volume 11, Section 3, part 2 HA 208/07) (Ref. 2).

3.17 The value of all the known and potential assets that may be affected by the Development should be ranked, whether they are archaeological remains, historic buildings or historic landscapes. The value of each asset has been ranked according to the following scale:

- *Very High* - World Heritage Sites (including nominated sites). Assets of acknowledged international importance. Assets that can contribute significantly to acknowledged international research objectives;
- *High* - Scheduled Monuments (including proposed sites). Undesignated assets of schedulable quality and importance. Assets that can contribute significantly to acknowledged national research objectives;
- *Medium* - Designated or undesignated assets that contribute to regional research objectives;
- *Low* - Designated and undesignated assets of local importance. Assets compromised by poor preservation and/or poor survival of contextual associations. Assets of limited value, but with potential to contribute to local research objectives;
- *Negligible* - Assets with very little or no surviving archaeological interest; or
- *Unknown* - The importance of the resource has not been ascertained.

3.18 The following list provides an indication as to the predicted effect the Development will have on individual archaeological features. Potential impacts, direct and indirect, have been assessed in terms of their longevity, reversibility and nature (beneficial / neutral / adverse):

- **Permanent impacts** are those that persist beyond the predicted operational lifetime of the Development. All direct impacts are considered to be permanent;
- **Temporary impacts** arise as a result of the presence of elements of the Development but which would be removed by the dismantlement of those elements. Temporary impacts can be short-term (e.g. construction phase impacts); or long-term (arising from the long-term presence of the development affecting the setting of a receptor);
- **Reversible impacts** are those that are removed by the decommissioning / dismantling of the Development;
- **Irreversible impacts** are those that persist beyond the lifetime of the Development. All permanent and direct impacts are irreversible;
- **Beneficial impacts** are those that contribute to the value of a receptor through enhancement of desirable characteristics or the introduction of new, positive attributes. In terms of cultural heritage, beneficial impacts include those that add to an appreciation of the receptor and/or its setting;
- **Neutral impacts** occur where the development can be accommodated comfortably by the receptor while neither contributing to nor detracting from the value of the receptor; and

- **Adverse impacts** are those that detract from the value of a receptor through a reduction in, or disruption of, valuable characterising components or patterns, or the introduction of new inappropriate characteristics. In terms of cultural heritage, adverse impacts include those that detract from an appreciation of the receptor and/or its setting, or compromise views to or from the receptor.

- 3.19 The magnitude of the effect needs to be viewed in conjunction with the value of the monument, in order to appreciate the overall significance of any effect on a given archaeological feature. The magnitude of the effect (degree of change) can also be negative or positive, and should be ranked without regard to the value of the asset. The total destruction of a Low Value asset will have the same magnitude of impact on the asset as the total destruction of a High Value asset; the value of the asset is factored in when the significance of the effect is assessed.
- 3.20 The magnitude of the effect was ranked according to the following scale:
- **Major:** Change to most or all key archaeological materials, such that the resource is totally altered. Comprehensive changes to setting;
 - **Moderate:** Changes to many key archaeological materials, such that the resource is clearly modified. Considerable changes to setting that affect the character of the asset;
 - **Minor:** Changes to key archaeological materials, such that the asset is slightly altered. Slight changes to setting;
 - **Negligible:** Very minor changes to archaeological materials, or setting; or
 - **No Change:** No change
- 3.21 Assessing the significance of the effects of the scheme brings together the value of the resource and the magnitude of the effect for each cultural heritage asset, using the matrix illustrated in the Table 1. The adverse or beneficial significance of effect has been expressed according to the following scale: Major; Moderate; Minor; or Negligible.
- 3.22 For the purpose of satisfying this assessment, those effects that are rated as 'moderate', 'major' or 'major/moderate' based on Table 1, are considered to be 'significant'.

Table 1. Matrix of Significance Criteria						
		Magnitude of Effect				
		No Change	Negligible	Minor	Moderate	Major
Value	Very High	Negligible	Minor	Moderate / Major	Major	Major
	High	Negligible	Minor	Moderate / Minor	Moderate / Major	Major
	Medium	Negligible	Negligible / Minor	Minor	Moderate	Moderate / Major
	Low	Negligible	Negligible / Minor	Negligible / Minor	Minor	Moderate / Minor
	Negligible	Negligible	Negligible	Negligible / Minor	Negligible / Minor	Minor

3.23 Site Inspection

- 3.24 The site visit set the context of the assessment, identifying:

- The location and character of archaeological sites and features within the proposed development area and all high value sites up to a 5km radius from the centre of the site that fall within Zones of Theoretical Visibility (ZTV).
- The current site condition.

3.25 **Assessment of Indirect Impact Methodology**

- 3.26 In terms of indirect effects concerned with issues of setting, there are no established definitive criteria or methodologies for assessing the setting of listed buildings or scheduled monuments, a concept that was introduced by the Planning (Listed Buildings and Conservation Areas) Act 1990. The requirement to assess the potential effects of a development on the setting of designated heritage features, such as scheduled monuments, conservation areas and listed buildings, is outlined in Planning Policy Wales (2011).
- 3.27 There are no established definitive criteria or methodologies for assessing the setting of listed buildings or scheduled monuments, a concept that was introduced by the Planning (Listed Buildings and Conservation Areas) Act 1990. In the absence of more detailed advice on setting in Wales, the requirement to assess the potential effects of a development on the setting of designated heritage features, such as scheduled monuments, conservation areas and listed buildings, has to turn to the Government's recent *Planning Policy Statement 5 (PPS5)*, March 2010, *Planning for the Historic Environment: Historic Environment Planning Practice Guide (2010)* (Ref 3).
- 3.28 The PPS5, Policy HE10, sections 113 – 117 refers to setting as,
- 3.29 *"...the surroundings in which an asset is experienced. All heritage assets have a setting, irrespective of the form in which they survive and whether they are designated or not. 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.*
- 3.30 *The extent and importance of setting is often expressed by reference to visual considerations. Although views of or from an asset will play an important part, the way in which we experience an asset in its setting is also influenced by other environmental factors such as noise, dust and vibration; by spatial associations; and, by our understanding of the historic relationship between places. For example, buildings that are in close proximity but not visible from each other may have a historic or aesthetic connection that amplifies the experience of the significance of each. They would be considered to be within one another's setting.*
- 3.31 *Setting will, therefore, generally be more extensive than curtilage and its perceived extent may change as an asset and its surroundings evolve or as understanding of the asset improves.*
- 3.32 *The setting of a heritage asset can enhance its significance whether or not it was designed to do so. The formal parkland around a country house and the fortuitously developed multi-period townscape around a medieval church may both contribute to the significance.*
- 3.33 *The contribution that setting makes to the significance does not depend on there being public rights or an ability to access or experience that setting. This will vary over time and according to circumstance. Nevertheless, proper evaluation of the effect of change within the setting of a heritage asset will usually need to consider the implications, if any, for public appreciation of its significance."*

- (Planning Policy Statement 5 (PPS5), March 2010, Planning for the Historic Environment: Historic Environment Planning Practice Guide (2010) (Ref: 3).
- 3.34 The aim in assessing the setting of an archaeological site, particularly one that is designated, such as a listed building, a scheduled monument or further still an historic landscape, is to prevent it becoming isolated from its surroundings.
- 3.35 For the purposes of this assessment, a setting is considered to have two principal dimensions - "immediate or near setting" and "wider or far setting", although some features, by nature of their location and surroundings, may not have a wider setting.
- *immediate/near setting* - ancillary land used with the building or monument, or within the curtilage of the building, e.g. the garden of a listed building or the rear gardens of buildings around the outskirts of a conservation area. Citation boundaries can be an indication of the immediate setting; and
 - *wider/far setting* - an area around the cultural heritage feature, which may be built environment or part of the countryside and which may or may not be functionally linked or contemporaneous with the age of the feature, but which contributes to the special interest and understanding of the feature.
- 3.36 There is no requirement under current statute, guidance or even case law that the wider setting should extend to the extreme limit of visibility, although the extent of a setting will tend to widen with the importance of the principal heritage feature. Regard should be given to views from the cultural heritage feature towards the Proposal, views from the Proposal towards the cultural heritage feature and views from any other relevant location. However, visibility is only the necessary starting point and, thereafter, it must be determined just what of relevance is visible in the heritage feature and its setting, what relationships exist between these visible elements and what weight or importance should be attributed to the whole (Ref. 4).
- 3.37 Further to this approach, regard must be given to the fact that setting is primarily governed by function and even nationally important heritage features may have narrow settings.
- 3.38 Landscapes and land-use often change over time, and thus an assessment of the setting of a designated site within the wider landscape requires a balance to be achieved between the concept of its original historic setting and its development as part of the modern day landscape.
- 3.39 The study has considered the physical attributes of each site and its setting in terms of topography, its original economic function and natural resources, historic resonance with land-use, connections and communications with neighboring features of the historic landscape and inter-visibility between them, as well as cultural associations and issues of public perception. The assessment has also examined what peripheral effect the wind turbine would have on the historic views from each site, and on public appreciation of them as features of special historic and architectural interest.
- 3.40 Assessing the significance of the indirect effects of the scheme brings together the value of the resource and the magnitude of the effect for each cultural heritage asset, using the same matrix illustrated in the Table 1. The adverse or beneficial significance of effect has been expressed according to the following scale: Major; Moderate; Minor; or Negligible.
- 3.41 For the purpose of satisfying this assessment, those effects that are rated as 'moderate', 'major' or

- 'major/moderate' based on Table 1, are considered to be 'significant.
- 3.42 The value of archaeological sites have been assessed in accordance with the value scale as set out in the Design Manual for Roads and Bridges (DMRB, Volume 11, Section 3, part 2 HA 208/07) (Ref. 2).
- 3.43 All designated Scheduled Ancient Monuments (SAMs), undesignated sites of schedulable quality and Grade I and Grade II* Listed Buildings have been assessed as being High Value sites and as such are of National importance.
- 3.44 All Grade II Listed Buildings have been assessed as being Medium Value sites and as such are of Regional Importance.
- 3.45 In order to aid and inform the assessment of the potential indirect effect of the proposed development on heritage assets within the 5km radius, a Zone of Theoretical Visibility (ZTV) map was produced (see Figures 17 and 18 in Appendix I). By examining the ZTV map, specific sites, where impacts were visually predicted, were targeted and each identified site was assessed on its own merits. Photo-montages were produced where considered necessary.
- 3.46 As part of the indirect effect assessment the cumulative effect of the proposed development was assessed in conjunction with other known wind turbine sites within the 5km radius (see Figures 19 and 20 in Appendix I).

4 Baseline Conditions

4.1 Previous Archaeological Works

- 4.2 Other than general field work that has taken place in the wider landscape over the decades in the region, there has been no archaeological work undertaken within the application area (red line boundary) itself.

4.3 Carmarthenshire Historic Landscape – LANDMAP

- 4.4 The proposed application area falls entirely within one (1) historic Landscape character area within the LANDMAP survey region of Carmarthenshire. The Carmarthenshire region survey was surveyed in 2003.
- 4.5 The Carmarthenshire Historic Landscape was defined at Level 3 according to LANDMAP methodology (Ref 6). The application area falls within one (1) identified historic landscape area. This area is listed below followed by a detailed description of its characteristics and value to the Carmarthenshire Historic Landscape as a whole.

Henllanfallteg (LANDMAP Ref id: CRMRTL42460)

- 4.6 This character area was surveyed at Level 3 in 2003 and is described as a Carmarthenshire rural agricultural environment, with irregular field-scapes, dispersed fields and woodland. Henllanfallteg is a large historic landscape covering approximately 1,481 hectares in extant, with hedge-banks being the traditional boundary type. Significant archaeological interests are confined to relict earthworks, documents and relict stone monuments of the prehistoric, Roman, medieval and post medieval periods. There are several Scheduled Ancient Monuments (SAMs) and Listed Buildings (LBs) within

this historic landscape. There are no Registered Parks & Gardens, Conservation Areas, or Registered Historic Landscape

- 4.7 The area is considered of *High* value historically, but is generally of poor condition, but it is still a good example of a Carmarthenshire rural landscape with an outstanding survival of historic remains, which contribute to the general historic landscape character of the wider region. According to LANDMAP evaluation, the landscape is considered to have moderate integrity, outstanding survival, moderate rarity and is generally of High value overall. Management of this area was not assessed. The following table lists the principle evaluation criteria for this character area. The overall evaluation of this landscape concludes that it is a High value landscape, which scores moderate in two categories and outstanding in one other. The areas Condition and Potential criteria have not been assessed.

Table 2 - LANDMAP Evaluation Criteria (Ref id: <i>CRMRTL42474</i>)					
Integrity	Survival	Condition	Rarity	Potential	Overall Evaluation
<i>Moderate</i>	<i>Outstanding</i>	-	<i>Moderate</i>	-	<i>High</i>

4.12 Heritage Assets within 5km radius (Historic Environment Records (2km) and Designated Sites (5km))

Prehistoric Periods (Palaeolithic, Mesolithic, Neolithic, Bronze Age)

- 4.13 There are no known prehistoric sites of any period recorded within the proposed application area, neither within the regional Historic Environment Record (HER) and nor within the National Monuments Record database.
- 4.14 However, within the prescribed 2km radius from the proposed turbine location, the HER database records six (6) known prehistoric sites, in the form of four (4) Bronze Age round barrows (PRN's: 937, 938, 939 and 4969), one (1) Bronze Age Chambered Tomb (PRN: 940), and one (1) Bronze Age Standing Stone (PRN: 10864). Three of the round barrows are positioned only approximately 490m north-north-east of the proposed turbine in the hamlet known as Crosshands, each positioned on opposing sides of the road by the cross roads and form the Crosshands Round Barrow Cemetery (PRN: 14421).. The Bronze Age Chambered Tomb known as 'Cefn Brafle' is a designated scheduled monument (SAM Ref: CM048) and this site is also positioned within the centre of Crosshands and is very likely contemporary with the round barrows in the same area. The remaining barrow is that of Parc Carn round barrow (PRN: 4969), positioned approximately 1.6km northwest of the proposed turbine location. However, a site visit in 1984 found there to be no barrow at this location, so it has presumably been destroyed.
- 4.15 Other known prehistoric sites within the 2km radius within the HER database include, one Bronze

Age standing stone known as Park Main standing stone (PRN: 10864). This stone was located approximately 1.8km to the east-south-east. However, on a site visit to the stone in 1985, no stone was discovered at the given location, so it is presumed destroyed. (For details on each of these prehistoric sites see the Site Gazetteer in Appendix II).

- 4.18 Of the above prehistoric sites within the 2km radius, only one (1) site is a designated scheduled ancient monument (SAMs).

- 1) Burial Chamber near Cross Hands (SAM Ref: CM048 /PRN: 940) – 518m northeast from proposed turbine location.

- 4.19 Within the 2km - 5km radii from the proposed turbine position, there are a further six (6) designated prehistoric sites. These sites include:

- 1) *Two Round Barrows near Crossroads N of Eglwsfair-a-Churig Church (SAM Ref: CM134)* – 4.4km north-north-east from proposed turbine location;
- 2) *Pant-Glas Round Barrow (SAM Ref: CM133)* – 4.20km north-north-east from proposed turbine location;
- 3) *Standing Stone 495m NW of Coynant (SAM Ref: CM185)* – 4.86km northwest from proposed turbine location;
- 4) *Dol-Wilym Burial Chamber (SAM Ref: CM031)* – 3.86km northwest from proposed turbine location;
- 5) *Lan Round Barrows (SAM Ref: CM187)* – 3.23km north-north-east from proposed turbine location;
- 6) *Crug Hywel Round Barrow (SAM Ref: CM132)* – 4.5km north-north-east from proposed turbine location;

4.16 Iron Age and Romano-British period

- 4.17 There are no known Iron Age or Romano-British sites within the application site study area recorded within the regional HER, nor within the National Monuments Record database.
- 4.18 However, within the 2km radius the HER database records the positions of five (5) Iron Age Defended Enclosures (PRN's: 935 / 941 / 11790 / 11791 / 11792), one (1) Iron Age Promontory Fort (PRN: 946) and one (1) Roman Findspot (PRN: 3953).

Defended Enclosures

- 1) *Gelli Dogyn Defended Enclosure (PRN: 935)* – This site is a large concentric enclosure situated at the southern end of a spur of land at approximately 170m above sea level. It consists of a central sub-circular shaped enclosure, c.80m in diameter, defined by at least two lines of bank and ditches. This site is positioned approximately 1.07km south-south-east of the proposed turbine and is also a designated Scheduled Ancient Monument (SAM Ref:

CM293)

2) *Allt Clyn-Iar; Cilgynydd Enclosure* (PRN: 941) - Allt Clyn-Iar or Cilgynydd is a possible defensive site lying on an outcrop of shale situated on the floor of a narrow valley at 122m above sea level. This site is positioned approximately 1.2km northwest of the proposed turbine.

3) *Henllan Farm I Defended Enclosure* (PRN: 11790) - This is a good example of a small, univallate defended enclosure with a concentric annexe. It lies on a south-facing slope at 105m -120m above sea level in improved pasture. It was discovered from the air in 1984 when it was visible as a faint cropmark. This site is positioned approximately 1.77km southwest of the proposed turbine.

4) *Henllan Farm II Defended Enclosure* (PRN: 11791) - This is an oval shaped defended enclosure occupying a gentle south-facing slope at 130m above sea level. It lies 100m north of enclosure PRN11790 and 50m southwest of enclosure PRN11792. It was discovered during aerial survey. This site is positioned approximately 1.5km southwest of the proposed turbine.

5) *Henllan Farm III Defended Enclosure* (PRN: 11792) - This cropmark enclosure site was discovered during aerial survey in 1984. It lies towards the crest of a south-facing slope at 140m above sea level, 50m northeast of enclosure PRN11791 and 150m north of enclosure PRN11790. This site is positioned approximately 1.47km southwest of the proposed turbine.

4.19 The Iron Age Promontory Fort known as 'Pen Gaer Promontory Fort' (PRN: 946) is a small inland promontory fort situated on a hillslope, at some 110m above sea level. It is located on a promontory on ground sloping gently to the south-east in the angle created by the confluence of two streams. This site is positioned approximately 1.9km northwest of the proposed turbine location and is a designated Scheduled Ancient Monument (SAM Ref: CM214).

4.20 The Roman find-spot (PRN: 3953) has been given only a general grid co-ordinate and its name in the HER database is purely Llanboidy, so this Roman site is very dubious.

4.20 Within the 2km - 5km radii from the proposed turbine position, there are a further three (3) designated Iron Age sites. Two of these monuments are Inland Promontory Forts and the other site is a cropmark enclosure.

1) *Hafod Camp Hillfort* (SAM Ref: CM166) - 2.4km east from proposed turbine location.

2) *Defended Enclosure 300m NW of Closbach* (SAM Ref: CM380) - 4.7km west from proposed turbine location.

- 3) *Llangan Church Cropmark Enclosure (SAM Ref: CM264)* – 4.04km south-south-east from proposed turbine location.

4.20 Medieval Periods

- 4.21 The HER records no known medieval sites within the application area itself. However, within the 2km radius there are six (6) known medieval data-points. All of these undesignated sites are of medium value and all lie over 1.5km from the proposed turbine location. These sites include:

- 1) *Ffynon Frynach Holy Well (PRN: 5081)*
- 2) *Castell Draenog Farmstead (PRN: 10749)*
- 3) *Henllan Amgoed Parish Church; St. Davids (PRN: 11667)*
- 4) *Henllan Amgoed Early Medieval Parish Churchyard; St. Davids (PRN: 11789)*
- 5) *Fron Mynach Monastic Land (PRN: 12075)*
- 6) *Maesgwyne Grange (PRN: 12620)*

- 4.22 Within the 2km - 5km radii from the proposed turbine position, there are six (6) designated medieval sites. These sites include three early medieval sites and three medieval. They include:

- 1) *Inscribed Stone N of Parciau Farmhouse (SAM Ref: CM069)* – This is an early medieval inscribed stone that lies approximately 3.03kmsouth-south-west from proposed turbine location.
- 2) *Llanglydwen Churchyard Cross (SAM Ref: CM160)* – This is an early medieval stone cross that lies approximately 4.46km north-north-west from proposed turbine location.
- 3) *St Canna's Chair (SAM Ref: PE148)* – This monument is an early medieval inscribed stone that lies approximately 4.02km south-south-west from proposed turbine location.
- 4) *Lan Enclosure (SAM Ref: CM294)* – This is a medieval enclosure that lies approximately 2.9km southeast from proposed turbine location.
- 5) *Whitland Abbey (SAM Ref: CM014)* – This is a medieval abbey that lies approximately 4.5km south from proposed turbine location.
- 6) *Llanboidy Mound & Bailey Castle (SAM Ref: CM098)* – This is a medieval Norman Motte and Bailey that lies approximately 2.6km east from proposed turbine location.

4.23 Post-Medieval periods

- 4.24 Within the HER database there are no post-medieval sites recorded within the application area itself. Most, if not all of the field boundaries, predominantly hedge-banks, were founded in either the late 18th century or else in the mid 19th century.
- 4.25 As would be expected, this chronological period marks the greatest number of known sites within the wider study area, a total of 30 undesignated medium value post medieval sites are located within the 2km radius. Site types include: 2 Blacksmiths shops, 1 Cart Shed, 1 Church, 3 Cottages, 1 Country

House, 1 Cow House, 1 Dwelling, 1 Farmhouse, 2 Farmsteads, 1 Gravel Pit, 1 Lodge, 2 Mansions, 2 Mills, 1 Mill Race, 1 Monastic Land, 2 Out-buildings, 1 Park, 3 Quarries, 1 Racecourse, 1 Toll Gate, 1 Woolen Mill

- 4.27 Within the 2km radius from the proposed turbine location, there are six (6) Listed Buildings. Each of these designated buildings are Grade II Listed and five of them have a group association.

- 1) *The Rest Farmhouse* (LB Ref: 25649 / PRN: 61429) – This is a Grade II Listed Farmhouse positioned approximately 600m west of the proposed turbine location
- 2) *Cilgynydd Country House* (LB Ref: 25640 / PRN: 24962) – This is a Grade II Listed Country House positioned approximately 1.3km to the northwest of the proposed turbine position.
- 3) *Cilgynydd Outbuilding* (LB Ref: 25641 / PRN: 61421) – This is a Grade II Listed Outbuilding positioned approximately 1.3km to the northwest of the proposed turbine position.
- 4) *Cilgynydd Cow House* (LB Ref: 25643 / PRN: 61423) – This is a Grade II Listed Cow House positioned approximately 1.3km to the northwest of the proposed turbine position.
- 5) *Cilgynydd Out-building at N end of house* (LB Ref: 25640 / PRN: 61428) – This is a Grade II Listed Outbuilding positioned approximately 1.3km to the northwest of the proposed turbine position.
- 6) *Cilgynydd Lofted Cartshed* (LB Ref: 25642 / PRN: 61422) – This is a Grade II Listed Cartshed positioned approximately 1.3km to the northwest of the proposed turbine position.

- 4.28 Within the 2km – 5km radius, there are a further thirty-five (35) designated Listed Building sites. All of these listed sites have Grade II listing, apart from one, the WRH Powell Memorial (LB Ref: 25616) which has a Grade II* Listing, which is located within Llanboidy parish Church yard. Within Llanboidy village there is a concentration of twenty (20) Listed buildings in total. All of the other listed sites are spread fairly evenly across the 2km – 5km radial bands. For the location and details of these LBs please see the Site Gazetteer in Appendix III.

4.30 *Modern Period*

- 4.31 Within the HER database there are no modern sites recorded within the application area study area.
- 4.32 Within the prescribed 2km to 5km radius, there are no designated or undesignated high value modern sites

Unknown Period

- 4.38 Within the HER database there are two (2) medium value sites of unknown period (PRN's: 10191 and 11670). One of these sites (PRN: 10191) is a former St. David dedication associated with an ecclesiastical site record which has since been deleted, and the other site is a road or trackway with no descriptive record.

4.39 Cartographic Sources

OS Surveyors drawing (1809-1836)

- 4.40 This early OS map shows the application area as an area of enclosed fields with Ffosddu Fach Farm marked.

Tithe Map and Apportionment of the parish of Llanboidy (1844) (Figure 5)

- 4.41 The Tithe map and apportionment records for the parish of *Llanboidy* of 1844 clearly marks the farm complex of Ffosddu Fach and its associated enclosed fields much as they still are today. According to the apportionment records, the land belonged to one Jonah Lewis who also resided at the farm. All of the enclosed land was either laid out as arable or else was used as pasture and meadow. The area for the proposed turbine at this time (Tithe No. 1123) was pasture land. The original access track was different than it is today, as it formerly turned west toward the farm known as the 'Rest' rather than run directly northward toward the road.

OS First Edition map 1:2500 (1889) (Figure 6)

- 4.42 This first published Ordnance Survey map series shows the application area much as it is today. Although, now the access track has been altered from that on the Tithe Map of 1844. This probably had something to do with the appearance of a Racecourse established by W.R.H. Powell in the mid 19th century that was operating to the north across the road.

OS second Edition map 1:2500 (1906) (Figure 7)

- 4.43 No change from the earlier first edition map.

OS 1953 Edition map 1:10560 (Figure 8)

- 4.44 No change from the earlier first edition map.

OS 1964 Edition map 1:10560 (Figure 9)

- 4.45 No change from the earlier first edition map.

OS Edition map 1:10000 (1975) (Figure 10)

- 4.46 No change from the earlier OS map series.

Aerial Photos (Figure 11)

- 4.47 Aerial photos investigated as part of the desk based assessment included vertical sheets from the RAF 1946 vertical photograph series. These early aerial photos show the application site much as it is today, but without the modern forestry to the north, east and west. No apparent crop-marks were identified on any of the aerial photos analysed. The vertical photographs of the area suggest that the entire area was open fields for arable, meadow and pasture, all appearing to have been ploughed.

Table 5. RAF Vertical Aerial Photos consulted				
Sheet No.	Sortie	Frame No.	Date	Type
-	106G/UK/1625	6171	07/07/1946	RAF

4.48 Site Visit

- 4.49 The field visit to the site walked all of the fields and the perimeter of the application area noting the character and form of all of the boundaries. These were all her late 18th century or else mid 19th century hedge-banks, with occasional modern post and wire fencing.
- 4.50 In the area of the proposed turbine and access track, no surface features were readily evident. All of the fields within the study area were laid out for pasture, with a number of them having been ploughed in recent years.
- 4.52 A site visit was also undertaken to key high value sites within the 5km study area, as identified by falling within the Zones of Theoretical Visibility (ZTV), in order to assess their potential significance of indirect effect from the proposed turbine on their setting.

4.53 Sites noted within the Application Area

- 4.54 Within the application area, the regional HER database and the NMR database recorded no known archaeological sites present.
- 4.55 The cartographic study and site visit however, identified a total of fourteen (25) new sites. The majority of these are hedgebanks identified from the cartographic work. However, one interesting feature, was an approximately 4m long x 2m wide stone cairn which stood to approximately 0.60m in height. The cairn was turf covered and had a 1m high stone stood upright at one end and propped either side by quartz boulders (Site No. 25). Given the character of this feature, it seems likely that it is a post medieval clearance cairn, which has been adapted at a later date. A list of all the sites identified is given below in Table 6 below (see also Figure 12).

Table 6. Heritage Assets within application site				
Site No.	PRN	Site Type	Condition	Source & period
1		Hedgebank	Still present	Tithe Map 1844
2		Hedgebank	Still present	Tithe Map 1844
3		Hedgebank	Still present	Tithe Map 1844

Table 6. Heritage Assets within application site				
Site No.	PRN	Site Type	Condition	Source & period
4		Quarry	Still present	OS 1 st Edition 1889
5		Hedgebank	Still present	OS 1 st Edition 1889
6		Hedgebank	Still present	Tithe Map 1844
7		Hedgebank	Still present	Tithe Map 1844
8		Hedgebank	Still present	Tithe Map 1844
9		Hedgebank	Still present	OS 1 st Edition 1889
10		House and Garden	Still present	OS Surveyors drawing 1809-1836
11		Track	Still present	Tithe Map 1844
12		Hedgebank	Still present	Tithe Map 1844
13		Hedgebank	Still present	Tithe Map 1844
14		Hedgebank	Still present	Tithe Map 1844
15		Hedgebank	Removed	Tithe Map 1844
16		Hedgebank	Still present	Tithe Map 1844
17		Hedgebank	Still present	Tithe Map 1844
18		Hedgebank	Removed	Tithe Map 1844
19		Hedgebank	Still present	Tithe Map 1844
20		Hedgebank	Still present	Tithe Map 1844
21		Hedgebank	Still present	Tithe Map 1844
22		Hedgebank	Still present	Tithe Map 1844
23		Hedgebank	Still present	Tithe Map 1844
24		Hedgebank	Still present	Tithe Map 1844
25		Clearance cairn?	Turf covered	Site Visit and Post Medieval

5 Assessment of Effects

Direct Physical Effects

- 5.1 The desk based appraisal and site visit has identified no direct physical impact from the proposal on any known individual heritage asset site. However, given the fact that there is plenty of evidence of prehistoric activity in the form of Bronze Age burials in the immediate vicinity, especially at Crosshands, the closest known Bronze Age round barrow lying only 460m to the northwest, it cannot be ruled out that there are not buried archaeological remains relating to the prehistoric periods present within the application site itself. However, because the fields within the application site do appear to have been ploughed fairly recently and repeatedly since the Tithe Map of 1844, any potential buried archaeological remains have very likely been damaged or else destroyed.

Indirect non-physical Effects

- 5.2 Indirect physical effects associated with the development are not considered to be of sufficient magnitude in this instance to warrant separate assessment. There are no known sites within the development site boundary that include fragile deposits (for example waterlogged organic remains) that might be affected by changes in hydrology or from increased erosion. In terms of dislocating certain features from their attendant landscapes, the development will inevitably however introduce a visual component, which is considered under indirect visual effects below.

Indirect Visual Effects

- 5.3 Within the 5km radius from the proposed turbine location, the assessment has identified a total of sixty (60) designated sites. Eighteen (18) of these designated sites are individual Scheduled Ancient Monuments (SAMs). However, a number of these sites, such as the 'Lan Round Barrows' are group sites consisting of multiple barrows, so this total SAM number can be reduced down to twelve (12). Also, forty-two (42) are Listed Buildings (LBs). Each of these designated sites has been appraised in terms of the indirect effect of the proposed development on their setting. To aid this appraisal, a set of Zone of Theoretical Visibility (ZTV) maps were been produced at both hub height and at blade tip only (see Figures 17 and 18).
- 5.4 The ZTV maps predict that only ten (10) of the SAM sites and twenty-seven (27) LB sites will potentially have visibility of the proposed turbine. Apart from one LB Site, the W.R.H. Powell memorial in Llanboidy, which has Grade II* listing, all of the other LB sites are Grade II Listed. Of the total number of listed buildings, twenty are positioned within the Llanboidy village Conservation Area.
- 5.5 Due to the low height of the proposed turbine, it has been predicted that any designated sites over 3km away from the proposed turbine position, will not be *significantly* indirectly affected by the proposal, unless there is evidence that the turbine's position will have an indirect impact on a site's potential group setting or potential intervisibility lines of sight, such as those between prehistoric burial sites and Iron Age hillforts, where views into the wider landscape played an important role in their original setting. However, in this instance there does not appear to be any evidence suggesting that there would be any group settings or intervisibility lines indirectly affected by the proposal. As such, only designated sites and undesignated sites of schedule quality that fall within the 3km radius have been appraised with regards to indirect visual effects. All sites over 3km away which the ZTV maps predict would have visibility will either be screened from intervening landscape components or else the scale of the turbine at this distance would have only a Negligible magnitude of effect and therefore of Minor significance.
- 5.6 This means that only five (5) Scheduled Ancient Monuments (SAMs) within the 3km radius have been appraised further and twenty-seven (27) Listed Buildings (LBs). Given that twenty (20) of these listed buildings are positioned within the Llanboidy Conservation Area (CA), each of these

listed sites have been appraised as a single group within the Conservation Area itself rather than appraised as individual sites.

5.6 Designated Sites indirectly affected

SAM Sites indirectly affected within 3km

- 1) *Lan Round Barrow Group* (SAM Ref: CM187) – Approximately 2.5km northeast of proposed turbine.
- 2) *Llanboidy Motte and Bailey* (SAM Ref: CM098) – 2.63km east of proposed turbine.
- 3) *Lan Enclosure* (SAM Ref: CM294) – Approximately 3km southeast of proposed turbine.
- 4) *Gelli Diogyn Hillfort* (SAM Ref: CM293) – Approximately 1.14km south-south-east of proposed turbine.
- 5) *Crosshands Burial Chamber* (SAM Ref: CM048) – Approximately 530m northeast of proposed turbine.

LB Sites indirectly affected within 3km

- 1) The Rest (LB Ref:25649) – Grade II Listing
- 2) Penrallt (old farmhouse) (LB Ref:25622) – Grade II Listing
- 3) Cilgynydd House (LB Ref:25640) – Grade II Listing
- 4) Outbuilding behind Cilgynydd (LB Ref:25641) – Grade II Listing
- 5) Lofted cartshed at Cilgynydd (LB Ref:25642) – Grade II Listing
- 6) Cowhouse at Cilgynydd (LB Ref:25643) – Grade II Listing
- 7) Outbuilding at N end of yard at Cilgynydd (LB Ref:25648) – Grade II Listing

LB Sites within the Lanboidy Conservation Area

- 1) Church of St. Brynach (LB Ref:25615) - (Grade II Listing)
- 2) W.R.H. Powell memorial in Lanboidy Church yard (LB Ref: 25616) – (Grade II* Listing)
- 3) Churchyard Gates to Lanboidy Church (LB Ref: 25617) – (Grade II Listing)
- 4) The Market Hall (LB Ref: 25618) – (Grade II Listing)
- 5) Ysgol Gynradd Lanboidy (LB Ref: 25619) – (Grade II Listing)
- 6) The Maesgwynne Arms Hotel (LB Ref: 25620) – (Grade II Listing)
- 7) Spencer House (LB Ref: 25625) – (Grade II Listing)
- 8) The War Memorial (LB Ref: 25627) – (Grade II Listing)
- 9) Cartref (LB Ref: 25628) – (Grade II Listing)
- 10) Trinity Independent Chapel (LB Ref: 25629) - (Grade II Listing)

- 11) Vestry to Trinity Chapel (LB Ref: 25630) - (Grade II Listing)
- 12) Bradford House (LB Ref: 25631) - (Grade II Listing)
- 13) Terraced House on N side of square (No.1) (LB Ref: 25632) - (Grade II Listing)
- 14) Terraced House on N side of square (No.2) (LB Ref: 25633) - (Grade II Listing)
- 15) Terraced House on N side of square (No.3) (LB Ref: 25634) - (Grade II Listing)
- 16) Terraced House on N side of square (No.4) (LB Ref: 25635) - (Grade II Listing)
- 17) Llwynonn (LB Ref: 25638) - (Grade II Listing)
- 18) Neuadd Deg (LB Ref: 25639) - (Grade II Listing)
- 19) Row of outhouses behind Nos 1-4 Piccadilly Square (LB Ref: 25646) - (Grade II Listing)
- 20) Dolgarreg (LB Ref: 25647) - (Grade II Listing)

- 5.7 In view of this prediction, each of these SAM sites and LB Sites have been appraised individually on their own merits, with all of the LB sites positioned within the Llanboidy Conservation Area combined together and assessed as part of the Conservation Area itself.

Scheduled Ancient Monuments (SAMs) Indirectly affected

5.8 1) Lan Round Barrows (SAM Ref: CM187)

Location and Context

- 5.9 This group of designated Bronze Age round barrows is positioned at the summit of a low hill at a height of approximately 180m AOD, approximately 2.5km northeast of proposed turbine.

The Site

- 5.10 This barrow group consists of five barrows laid out along the summit of an east-west ridge. Although the scheduling records five individual barrows, only four are visible, the fifth presumed to be beneath a road. The barrows are each generally circular and vary in size from between 16m in diameter to 32m in diameter and on average are between 0.4m and 1m in height. In 1926 one of the barrows (Barrow II) was excavated and produced evidence for a primary, uncontained cremation deposit and a secondary, in-urned cremation. Unfortunately each of the barrows have been divorced visually from each other by having been partially truncated by a road, hedge-banks and modern housing development at the cross roads (see Photo plates in Appendix II).

Immediate and Wider Setting

- 5.12 The immediate setting of this barrow group is at the summit of an east to west running flat ridge. Originally each of these barrows would have had visibility and been visible of to and from the lower areas as well as very probably having had an intervisibility association with the group of round barrows and burial chamber (SAM No. 048) at Crosshands to the southwest and another group of

barrows to the northeast, known as the Pant Glas Round Barrow (SAM No. 133) and the Crug Hywel Round Barrow (SAM No. 132). Unfortunately this wider landscape intervisibility has since been compromised by post medieval landscape components including mature hedgebanks, hedgerows, roads and modern housing development. Views northeast from the Lan Round Barrow Group toward the Pant Glas barrow have also been significantly compromised by the Dyffryn Bodryn Windfarm, which consists of eleven (11) 70m high turbines to blade tip. This windfarm lies approximately 2.2km northeast of the Lan Round Barrows.

Assessment of Effects

- 5.15 The proposed turbine on land north of Ffosddu Fach Farm will lie approximately 2.5km northeast of this designated monument.

Presently, views looking southwest from the Lan Round Barrows have been severely affected by immediate post medieval landscape components, including a road having truncated one of the barrows, 19th century hedgebanks and modern housing at the cross roads. All of these elements screen this group monument from the proposed turbine location to the southwest. As well as this screening, the setting of the Lan Round Barrows has been markedly affected by the Dyffryn Bodryn Windfarm to the northeast.

- 5.16 In view of the above effects and the relatively small scale of the proposed turbine, although the sensitivity of this monument is considered to be high value (of national and regional importance) the indirect visual magnitude of effect is considered to be *Negligible* and it is predicted that the overall significance of effect on this monument would therefore be *Minor* and also temporary for the lifetime of the turbine.

2) Llanboidy Motte and Bailey ; Castell Mawr (SAM Ref: CM098)

Location and Context

- 5.17 This designated Norman Motte & Bailey is positioned on a grassed terraced area of land at the southeastern end of Llanboidy village, at a height of approximately 60m AOD, approximately 2.6km east of the proposed turbine location.

The Site

- 5.18 Castell Mawr or Llanboidy Motte & Bailey, is situated some 220m south-east of the medieval St. Brynach's Church. It comprises earthworks of a medieval motte and bailey castle, laid out along the crest of a north-west to south-east ridge above a stream confluence. The ditched motte is a sub-circular steep sided mound, 36m in diameter and rising some 2.3m to a summit area 14.5m-16m across, and has a sub-rectangular court or bailey, some 46m north-south by 30m, defined by scarps, attached on the west (see Photo plates in Appendix II).

Immediate and Wider Setting

- 5.19 This monument sits in an area of green grass surrounded by tree cover on all sides. Immediately to the northwest is the central core of Llanboidy village, with the church spire in view some 240m

distant. Originally this motte and bailey would have been positioned where it is so as to have clear views looking along the line of river valleys below. When standing on the mound the castle would have had good views along the valley to the north, south, east and west, which must have allowed it a very strong defensive position. Presently, views to the west are fairly heavily wooded with mature trees covering much of the valley slopes and mature trees in the immediate foreground alongside 19th century housing.

Assessment of Effects

- 5.20 The proposed turbine will lie approximately 2.6km west of this designated site. The ZTV maps predict that the proposed turbine will be visible from this monument at both hub height and blade tip.. However, considering that there is fairly good tree cover when looking westwards, it is very likely that much of the turbine hub will be screened from view, but the blade tips will still be fully visible
- 5.21 In view of the above effects, the relatively small scale of the proposed turbine and its distance from the proposed turbine, although the sensitivity of this monument is considered to be high value (of national and regional importance) the indirect visual magnitude of effect is considered to be *Minor* and it is predicted that the overall significance of effect on the setting of this monument would be *Moderate/Minor* and also temporary for the lifetime of the turbine.

3) Lan Enclosure Cropmark (SAM Ref: CM294)

Location and Context

- 5.22 This medieval enclosure is positioned at the side of a country road at a height of approximately 120m AOD, approximately 2.9km southeast of the proposed turbine location.

The Site

- 5.23 This monument is a sub-circular earthwork enclosure, in the region of 50m across overall. Aerial mapping records this site as a concentric ditch enclosure complex with a defined outer circuit approximately 100m across, with a possible in turned entrance facing south-south-west.

Immediate and Wider Setting

- 5.24 The immediate setting of this site one of being positioned in a ploughed field on the eastern side of a hedgebank that runs along the eastern side of a country road that runs along a ridge. The enclosure is set on a slight east facing slope overlooking a river valley to the east. In the field this site is not possible to discern and even on modern aerial photos its form is only faint.

Assessment of Effects

- 5.25 The proposed turbine will lie approximately 2.9km west of this designated site. The ZTV map predicts that when looking northwest the turbine will be visible from the northwestern edge of this monument at both hub height and blade tip. However, due to the fact that this monument is predominantly a designated cropmark with no easily discernable surface features, the indirect effect

from the proposed turbine on this site will be negligible.

- 5.26 Although the sensitivity of this monument is considered to be high value (of national and regional importance) the indirect visual magnitude of effect is considered to be *Negligible* and it is predicted that the overall significance of effect on the setting of this monument would be *Minor* and also temporary for the lifetime of the turbine.

4) Gelli Diogyn Hillfort (SAM Ref: CM293)

Location and Context

- 5.27 This Iron Age Hillfort is positioned on the crest of a hill on the eastern side of a country road at a height of approximately 160m AOD, approximately 1.14km southeast of the proposed turbine location.

The Site

- 5.28 Geili Diogyn Hillfort is an Iron Age enclosure with banks reduced by ploughing. The enclosure is banked and ditched with a rather oval form, 90m north-south by 77m, and has a west facing entrance approached by an embanked antennae feature that extends about 30m to the west.. The complex as a whole extends some 260m north-south by 120m overall and rests on steeply wooded slopes on the southeast with gentler slopes on the south-west and south.

Immediate and Wider Setting

- 5.29 This monument occupies an entire ploughed field and is very hard to discern in the field apart from its being bordered by the road by one of its tall banks surmounted by dense hedgerow. It would appear that this monument would originally have had views looking southeast down the river valley and would have been approached from the north.

Assessment of Effects

- 5.30 The proposed turbine will lie approximately 1.14km northwest of this designated site. The ZTV maps predict that when looking northwest the turbine will be visible from the north and northwestern edge of this monument at both hub height and blade tip. However, due to screening from tall hedgerow, this effect on this area of the hillfort will be greatly diminished. Added to this, the low height of the proposed turbine and the distance of over 1.14km away will also reduce the turbine's prominence.
- 5.31 Although the sensitivity of this monument is considered to be high value (of national and regional importance) the indirect visual magnitude of effect is considered to be *Minor* and it is predicted that the overall significance of effect on the setting of this monument would be *Moderate/Minor* and also temporary for the lifetime of the turbine.

5) Crosshands Burial Chamber; Cefn Brafle (SAM Ref: CM048)

Location and Context

- 5.32 This designated monument is positioned behind a series of modern buildings along the Crosshands cross roads at a height of approximately 190m AOD, approximately 515km southwest of the proposed turbine.

The Site

- 5.33 This monument is represented by a pair of two erect monoliths, 1.9m and 1.4m high, with a third recumbent nearby 1.8m long. These stones are sited close to a group of burial mounds, together with others which are alleged to have once been present. It has been suggested that these stones were once part of Neolithic or Bronze Age Burial Chamber.

Immediate and Wider Setting

- 5.34 This stone pair is positioned behind modern housing and a modern garage building in someone's garden and as such was not accessible at the time of the field visit. However, from the road, it is plain to see that the original setting of this monument has been seriously compromised and has been obviously divorced from its group association from the other round barrows in the immediate vicinity on the other side of the road to the west. This monument and indeed the undesignated other round barrows in this group very likely once had a intervisibility association with the other Lan Round Barrow Cemetery group (SAM Ref: CM187) only 2km to the northeast. Unfortunately this intervisibility has now been compromised by post medieval and modern landscape components.

Assessment of Effects

- 5.35 The proposed turbine will lie only approximately 490m southwest of this designated site. The ZTV maps predict that the proposed turbine will be visible at both hub height and at blade tip from this site and the other undesignated round barrows in the immediate vicinity. However, due to screening from tall post medieval hedgebanks and modern housing this visibility will have little effect on this monument, and when compared to the significant effect that the existing housing, garage and hedge-banks have already had on the setting of this monument, the introduction of a turbine 490m to the southwest will be fairly insignificant.
- 5.31 Although the sensitivity of this monument is considered to be high value (of national and regional importance) the indirect visual magnitude of effect is considered to be *Minor* and it is predicted that the overall significance of effect on the setting of this monument would be *Moderate/Minor* and also temporary for the lifetime of the turbine.

Listed Buildings (LBs) Indirectly affected

1) The Rest (LB Ref:25649)

Location and Context

- 5.36 This listed farmhouse is positioned at the side of a road and forms part of a working farm complex, at a height of approximately 175m AOD, approximately 650m west-south-west of the proposed turbine location.

The Site

- 5.37 This designated site is a Grade II Listed farmhouse and therefore considered to be of medium value. The house was originally built for the Maesgwynne estate and supposedly named in connection with the racecourse established nearby by W.R.H Powell in the mid 19th century, for which the Maesgwynne Arms Hotel in Llanboidy was also built. Supposedly the horses were rested here after racing.

Immediate and Wider Setting

- 5.38 The Rest farmhouse is positioned within a working farm complex. The house faces northwest and has a barn complex at its northeast end.

Assessment of Effects

- 5.39 The proposed turbine will lie 650m to the east-north-east of this designated site. The ZTV maps predict that the proposed turbine will be clearly visible in full when looking east-north-east from this medium value listed building. However, given that the setting of this building is focused on views to the northwest, with the setting to the northeast being compromised by farm machinery and modern farm buildings, the turbine will essentially be a background feature.
- 5.40 Although the sensitivity of this monument is considered to be medium value (of regional importance) the indirect visual magnitude of effect is considered to be *Minor* and it is predicted that the overall significance of effect on the setting of this monument would be *Minor* and also temporary for the lifetime of the turbine.

2) Penrallt (old farmhouse) (LB Ref:25622)

Location and Context

- 5.36 This listed farmhouse is situated in farmyard beyond a modern farmhouse, down a track running south-south-east from a point about 1km northeast of the village of Login, at a height of approximately 175m AOD, approximately 2.06m northwest of the proposed turbine location.

The Site

- 5.37 This designated site is a Grade II Listed farmhouse and therefore considered to be of medium value. The house is a late 18th century to early 19th century farmhouse with a service range and outbuilding in line. It was listed as a remarkable unaltered early 19th century range of farmhouse and outbuilding in a single-roofed long range, echoing the earlier long-house tradition.

Immediate and Wider Setting

- 5.38 Penrallt old farmhouse is positioned within a working farm complex surrounded by farm outbuildings and a modern farmhouse to the south.

Assessment of Effects

- 5.39 The proposed turbine will lie over 2km to the southeast of this designated site. The ZTV maps predict that the proposed turbine will be visible only at blade tip from this listed building. However, in view of the fact that the modern house is built to the south of this old farmhouse, the blade tips will be well screened from view.
- 5.40 In view of the above effects, the relatively small scale of the proposed turbine and its distance from the proposed turbine, although the sensitivity of this monument is considered to be medium value (of regional importance) the indirect visual magnitude of effect is considered to be *Negligible* and it is predicted that the overall significance of effect on the setting of this monument would be *Negligible/Minor* and also temporary for the lifetime of the turbine.

3) Cilgynydd House, Cow House, Loft House and outbuildings (LB Refs: 25640 / 25641 / 25642 / 25643 / 25648)

Location and Context

- 5.36 This listed country house and its associated buildings is situated at the end of a 1km long track running west from a point some 250m north of Crosshands cross road, at a height of approximately 145m AOD, approximately 1.38m northwest of the proposed turbine location.

The Site

- 5.37 Cilgynydd House and its associated outbuildings are Grade II Listed and therefore considered to be of medium value. The farmhouse was apparently rebuilt on a site in 1830. The Tithe map of 1839 shows the farm of Hen Cilgynydd on another site, but the present site though not marked on the tithe map is identified as 'homestead' in the schedule. The 1831 Colby map apparently shows both similarly. Old Cilgynydd was burnt and abandoned having been the home of one James Lewis, High Sheriff in 1738. It was sold after the death of his niece in 1829. In 1839 it was owned by Daniel Evans. The house is listed as a well preserved Georgina Style farmhouse, the centerpiece of a good farmstead group.

Immediate and Wider Setting

- 5.38 Cilgynydd House and its associated outbuildings are positioned within a working farm complex surrounded by farm outbuildings with tree cover to the east and west of the main house.

Assessment of Effects

- 5.39 The proposed turbine will lie over 1.38km to the southeast of these listed buildings. The ZTV maps predict that the proposed turbine will be visible from these buildings at both hub height and blade tip. Views looking southeast are fairly clear with only intervening hedgerows between the house and the proposed turbine location.
- 5.40 In view of the above effects, the relatively small scale of the proposed turbine and its distance from the proposed turbine, although the sensitivity of this monument is considered to be medium value (of regional importance) the indirect visual magnitude of effect is considered to be *Minor* and it is predicted that the overall significance of effect on the setting of this monument would be *Minor* and also temporary for the lifetime of the turbine.

Llanboidy Conservation Area indirectly affected

Location and context

- 5.41 The Llanboidy Conservation Area is positioned approximately 2.3km east of the proposed turbine location. The village is nestled at the base of a small valley surrounded by hills to the northwest, northeast, southwest and southeast, the valley having been formed by a series of watercourses, but predominantly the Afon Gronw. At the core of the old part of the village is the Church of St. Brynach, which sits on a summit at approximately 92m AOD.

The Site

- 5.37 The Llanboidy Conservation Area occupies an area of approximately 20 hectares and includes 20 listed buildings, nineteen of them Grade II Listed and one of them, the W.R.H. Powell memorial, is Grade II* Listed (see the list of LBs within this CA in Section 5.6). Within the CA there is also a Scheduled Ancient Monument, the Llanboidy medieval Motte & Bailey (SAM Ref: CM098). This SAM site has already been assessed individually in the previous section.
- 5.38 Llanboidy village is a very scenic village with a history that goes back to the Iron Age, as is evident from the remains of hillfort called 'Hafod Camp' (SAM Ref: CM166) located to the southwest of the village. The name Llanboidy is thought to mean 'church' or 'enclosure' of the 'cowshed', and the name is most probably linked to St. Brynach, a 5th century Irish saint who founded several churches in west Wales. In the middle ages Llanboidy became an important drovers route.
- 5.39 An important individual associated with the village is W.R.H. Powell, who was a Victorian MP, who

brought money and jobs to the village and his legacy can be seen at the Market Hall and other fine buildings in the village. The seat of the Powell's was the mansion of Maesgwynne, north of the village. A memorial statue to W.R.H. Powell stands to this day in the Llanboidy parish Church yard. This memorial statue has a Grade II* Listing.

Immediate and Wider Setting

- 5.38 The immediate setting of Llanboidy village and its conservation area perimeter is one focused toward the centre of the village, essentially viewing toward the church which stands at the highest point topographically. Wider views are represented by views looking up and down the Afon Gronw valley and west along a narrow stream valley. All of the valleys that surround the village on all sides are presently fairly densely tree covered, which screens it very well from the wider landscape and confines its views inwards towards the village and the church.
- 5.39 Views looking west from in front of the church are well screened from all adjacent terraced cottages, which all focus their attention on the church itself. With regards to the W.R.H. Powell memorial statue, the same screening and urban setting will screen this statue from any potential effects from the turbine.

Assessment of Effects

- 5.39 The proposed turbine will lie over 2.3km west of all of the listed buildings within the Llanboidy Conservation Area. The ZTV maps predict that the proposed turbine will be visible from all of these buildings at both hub height and blade tip. However, due to the urban setting of these buildings and the fact that their setting is very much inwardly focused on the core of the village, the indirect effect from the proposed turbine will not be significant.
- 5.40 However, beyond the urban setting of the listed buildings, the Conservation Area does extend further west but these areas too will not be significantly indirectly effected due to tree cover and the fact that the proposed turbine is relatively small scale and will stand over 2.3km away.
- 5.40 In view of the above effects, the relatively small scale of the proposed turbine and its distance from the proposed turbine, although the sensitivity of this Conservation Area and all of its associated listed sites is considered to be of high value overall when combined (of national and regional importance) the indirect visual magnitude of effect is considered to be *Negligible* and it is predicted that the overall significance of effect on the setting of this CA and its associated listed buildings would be *Minor* and also temporary for the lifetime of the turbine.

5.41 Summary of Indirect Effects on Designated sites within 5km

- 5.42 The ZTV map predicted that only ten (10) of the SAM sites and twenty-seven (27) LB sites will potentially have visibility of the proposed turbine. Apart from one LB Site, the W.R.H. Powell memorial in Llanboidy, which has Grade II* listing, all of the other LB sites are Grade II Listed. Of

the total number of listed buildings, twenty are positioned within the Llanboidy village Conservation Area. Due to the low height of the proposed turbine, it has been predicted that any designated sites over 3km away from the proposed turbine position, will not be *significantly* indirectly affected by the proposal. As such, only designated sites and undesignated sites of scheduable quality that fall within the 3km radius were appraised with regards to indirect visual effects. All sites over 3km away which the ZTV maps predict would have visibility will either be screened from intervening landscape components or else the scale of the turbine at this distance would have only a *Negligible* magnitude of effect and therefore this would be of *Minor* significance.

5.43 This meant that only five (5) Scheduled Ancient Monuments (SAMs) within the 3km radius were appraised further and twenty-seven (27) Listed Buildings (LBs). Given that twenty (20) of these listed buildings were positioned within the Llanboidy Conservation Area (CA), each of the listed sites were appraised as a single group within the Conservation Area itself rather than appraised as individual sites.

5.7 The appraisal has concluded that none of the designated sites, SAMs, LBs or Conservation Areas will be significantly affected by the proposed turbine at Ffosddu Fach Farm. A summary table giving the results of the assessment is shown in Table 7 overleaf.

7. Summary of Significance of Indirect Effects on Designated Sites within 3km					
Site Ref	Site Name	Site Type	Distance turbine	Magnitude of effect	Significance of Effect
(SAM Ref: CM187)	Lan Round Barrow Group)	Bronze Age Round barrows	2.5km NE	Negligible	Minor (Temporary)
(SAM Ref: CM098)	Llanboidy Motte and Bailey	Medieval Motte & Bailey	2.63km E	Minor	Moderate/Minor (Temporary)
SAM Ref: CM294)	Lan Enclosure	Medieval enclosure	3km SE	Negligible	Minor (Temporary)
(SAM Ref: CM293)	Gelli Diogyn Hillfort	Iron Age Hillfort	1.14km SSE	Minor	Moderate/Minor (Temporary)
(SAM Ref: CM048)	Crosshands Burial Chamber	Neolithic/ Bronze Age burial chamber	530m NE	Minor	Moderate/Minor (Temporary)
(LB Ref: 25649) Grade II	The Rest	Farmhouse	640m SW	Minor	Minor (Temporary)

(LB Ref: 25622) – Grade II	Penrallt (old farmhouse)	Farmhouse	2.05km NW	Negligible	Negligible/Minor (Temporary)
(LB Ref:25640 / 25641 / 25642 / 25643 / 25648) – Grade II Listing	Cilgynydd House and associated outbuildings	Country House and outbuildings	1.3km NW	Minor	Minor (Temporary)
Llanboidy Conservation Area, including all Listed Buildings therein	Llanboidy Conservation Area and Listed Buildings	Conservation Area and Church, Memorial Statue, War Memorial, Hotel, School, Cottages etc	2.3km E	Negligible	Negligible/Minor (Temporary)

5.42 Undesignated Sites indirectly affected

5.43 The only undesignated sites within the 2km radius that are considered to be of schedulable quality and importance are the two round barrows at Crosshands cross roads. These two barrows obviously had an association with the Crosshands burial chamber only approximately 140m to the east. However, given that the setting of these two barrows has been significantly already compromised by modern buildings and the fact that they have been divorced from their associated group setting with the designated burial chamber, the indirect effect on these barrows is considered to be Minor and therefore of Moderate/Minor significance..

5.44 Significance of the remains

5.45 In terms of rarity with regards to sites within the application area, the site visit identified no visible surface sites or features which were deemed to be of any importance, apart from post-medieval field boundaries and what appears to be a post medieval clearance cairn.

5.46 However, given the presence of several prehistoric sites in the immediate vicinity at Crosshands, the potential for discovery of any significant buried remains in the area is considered to be fairly high. However, given the fact that fields in the application area appear to have been repeatedly ploughed over the centuries and the ground vastly improved, any potential buried archaeological remains have most likely been severely damaged or else already destroyed.

6 Mitigation

6.1 The best mitigation for the impact of any development on the archaeological resource is to avoid direct physical impacts upon all known archaeologically significant sites and features. Where avoidance is not considered possible or where the existence, exact location or extent of a feature is uncertain, additional mitigation measures may be required. A number of mitigation measures can be undertaken in advance of a planning application that will both inform, and potentially reduce or remove the need for archaeological mitigation at a later date. These options are outlined

below:

Preservation In situ

- 6.2 This is the preferred option for all significant cultural heritage features and can be achieved by avoiding direct physical impact upon known features through careful consideration at the design stage. In this instance, there are no heritage assets that will be directly impacted upon by the proposed development.

Evaluation

- 6.3 If there is an unavoidable impact upon a known archaeological site, or where it is uncertain if there will be an impact because the existence, exact location or extent of the or any archaeology is not known, then an archaeological evaluation (before the submission of the development scheme for planning approval) may be advisable in order to assess the presence or absence of archaeological features and their vulnerability from the development. The results of the evaluation can then inform decisions as to whether to re-design the scheme in order to avoid the features or to mitigate the development impact through 'preservation by record' (see 'excavation' below). In this instance, there are no known heritage assets that will be directly impacted upon by the proposed development.

Excavation

- 6.4 Where previously identified archaeological features cannot be avoided by the development, or are considered to be of insufficient importance to warrant preservation *in situ*, then 'preservation by record' can be undertaken to excavate and record archaeological deposits before development commences. Such mitigation may also be required as a condition of granting planning consent.

Watching brief

- 6.5 Development impact upon minor sites, or where the absence of archaeological features has not been established by other methods, can be mitigated against by undertaking an archaeological watching brief to record any unforeseen archaeological features that may be encountered during construction. This can however, result in delays during construction while archaeological recording is undertaken.
- 6.6 In this instance, although the site visit and the primary HER database records have shown that there are no *known* sites within the proposed turbine location, nor along the route of the proposed cable trench, the desk based appraisal has clearly shown that that the area has a high potential for buried archaeological remains associated with the prehistoric period, most likely the Bronze Age, considering that there are numerous Bronze Age burial mounds within close vicinity, especially at Crosshands. Although the RAF vertical aerial photos of 1946 do appear to show that the field in which the turbine is proposed to be positioned has been repeatedly ploughed over the years, buried archaeological remains could very well still be present. As such, in order to mitigate against the possibility that buried archaeological remains could be exposed and destroyed further during

construction, it is recommended that during all ground-works for the turbine base and the cable trench be undertaken under strict archaeological watching brief conditions.

7 Assessment of Cumulative Effects

7.1 Within the 5km radius from the proposed application site, there are nine (9) individual cumulative wind turbine sites. Five (5) of these sites are granted, four (4) operational and one (1) site is still pending a planning decision.

7.2 For details of each of these cumulative sites see Table 8 below.

Table 8. Cumulative Sites within 5km radius from the proposed Ffosddu Fach Wind Turbine				
Site Name	Number of Turbines	Blade Height	Turbine distance	Planning Stage
Cwrtau Bach, Llanboidy	1	Unknown	2.58km NNE	Granted
Cilgynydd Wind Turbine	1	17.5m	1.21km NW	Granted
Maesgwyn isaf Wind turbine	1	17.5m	1.27km NE	Granted
Land at Pant Glas	1	34.2m	4.23km NE	Pending
Brynmelyn wind turbine	1	24.8m	2.45km SE	Granted
Rhiw Farm, Login Wind Turbine	1	22.3m	4.38km W	Granted
Dyffryn Bodryn Wind Farm	1	70m	4.85km NE	Operational
Dyffryn Bodryn Wind Farm	1	35m	4.82km NE	Operational
Dyffryn Bodryn Wind Farm	1	46m	4.76km NE	Operational
Dyffryn Bodryn Wind Farm	1	46m	4.97km NE	Operational

7.3 The only site that is considered to potentially have a cumulative effect on it in conjunction with the proposed turbine at Ffosddu Fach, is at Cilgynydd House, where a granted turbine of 17.5m has already been granted. However, the granted turbine will have a far more significant effect on this listed building than the proposed one at Ffosddu fach.

7.4 Other than this turbine, the only other turbines that will have a cumulative effect on a number of sites is the operational Dyffryn Bodryn Windfarm, which consists of eleven (11) wind turbines each 70m to blade tip. These turbines have already had a significant affect on the designated Lan Round Barrow group (SAM Ref: CM187). But the inclusion of the Ffosddu Fach wind turbine will

have little if any extra cumulative effect on this monument.

8 Assessment of Residual Effects

- 8.1 The long-term residual effects of the proposed development are considered to be neutral with regard to direct effects on cultural heritage.
- 8.2 There will be no loss of known cultural heritage assets, due to the position of the proposed turbine, access track, cable trench and electrical box.
- 8.3 Taking into account the known baseline and the archaeological mitigation, the residual direct effect on the archaeological resource is assessed to be of a *No Change* magnitude and therefore of *Negligible* significance. In terms of the residual in-direct effect on all of the assessed designated sites, this will inevitably only be temporary and only lasting the lifetime of the wind turbine. As such, the residual effect is considered to be *Negligible* and temporary, therefore of *Negligible* significance.

9 Summary of Effects and Conclusions

9.1 Direct Effects and Conclusions

- 9.2 In summary, the appraisal has concluded that there will be no direct physical impacts on any known individual heritage assets from any elements of the proposed development..
- 9.3 The assessment of the application site has also concluded that although the site visit and the primary HER database records have shown that there are no *known* sites within the proposed turbine location, nor along the route of the proposed cable trench, the desk based appraisal has clearly shown that that the area has a high potential for buried archaeological remains associated with the prehistoric period, especially as there is a cluster of Bronze Age round barrows at Crosshands. As such, in order to offer mitigation against the possibility that buried archaeological remains could be exposed and destroyed further during construction, it is recommended that during all ground-works for the turbine base and the cable trench is undertaken under strict archaeological watching brief conditions.

9.4 Indirect Effects and Conclusions

- 9.5 In summary, the appraisal has concluded that none of the settings of designated Scheduled Ancient Monuments (SAMs), Listed Buildings, Conservation Area or any undesignated sites of schedulable quality, would be significantly affected by the proposed development. It was predicted that the most noticeable effect on any designated site within the 5km radius, would be the indirect effect on the high value SAM sites of *Llanboidy Motte & Bailey* (SAM No: CM08), the *Lan Enclosure* (SAM No. CM294) and the *Crosshands Burial Chamber* (SAM No. CM048), which were all predicted to be of *Minor* magnitude and therefore of *Moderate/Minor* significance, but also temporary for the lifetime of the turbine.
- 9.6 The appraisal also concluded that there would be no significant indirect effect from the proposal on the *Llanboidy Conservation Area*.

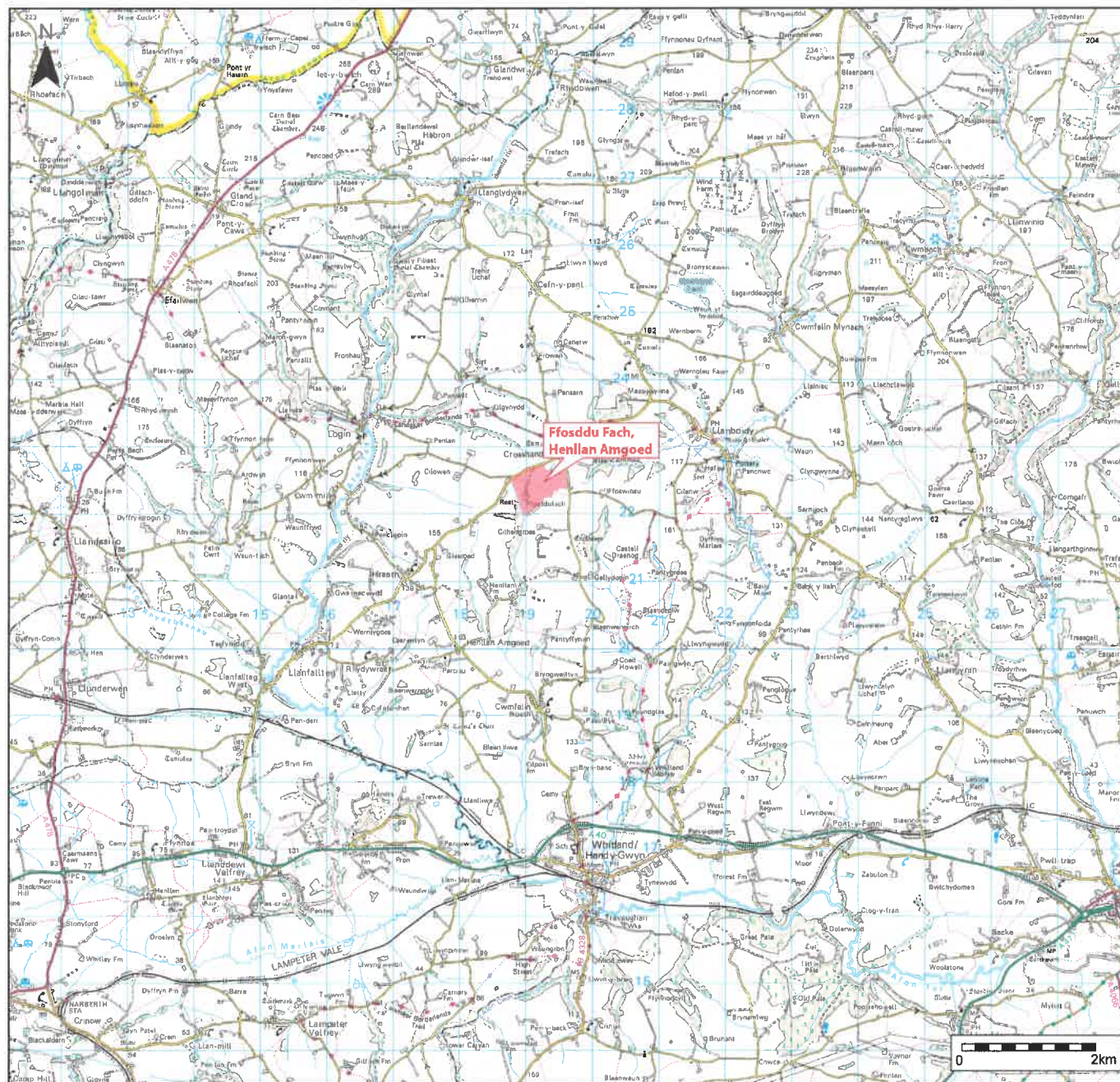
- 9.7 With regards to potential cumulative effects, the inclusion of the proposed turbine on land at Ffosddu Fach, along with the existing operational cumulative turbine sites that are scattered widely across the 5km radius, including the operational Dyffryn Bodryn Windfarm to the northeast would not *significantly* affect any of these designated sites.

10 References

- Ref 1 Welsh Office Circular 60/96 (Planning and the Historic Environment: Archaeology)
Ref 2 *Design Manual for Roads and Bridges* (DMRB, Volume 11, Section 3, part 2 HA 208/07)
Ref 3 *Planning Policy Statement 5 (PPS5)*, March 2010, *Planning for the Historic Environment: Historic Environment Planning Practice Guide (2010)*
Ref 4 Colcutt, S 1999, *The setting of Cultural Heritage Features*.
Ref 5 Samuel Lewis in 'A *Topographical Dictionary of Wales*' (1833).
Ref 6 Carmarthenshire LANDMAP Historic Landscape

APPENDIX I:

Figures



Legend

Study Area

Approximate Scale (@ A4): 1:60,000

Date: September 2014

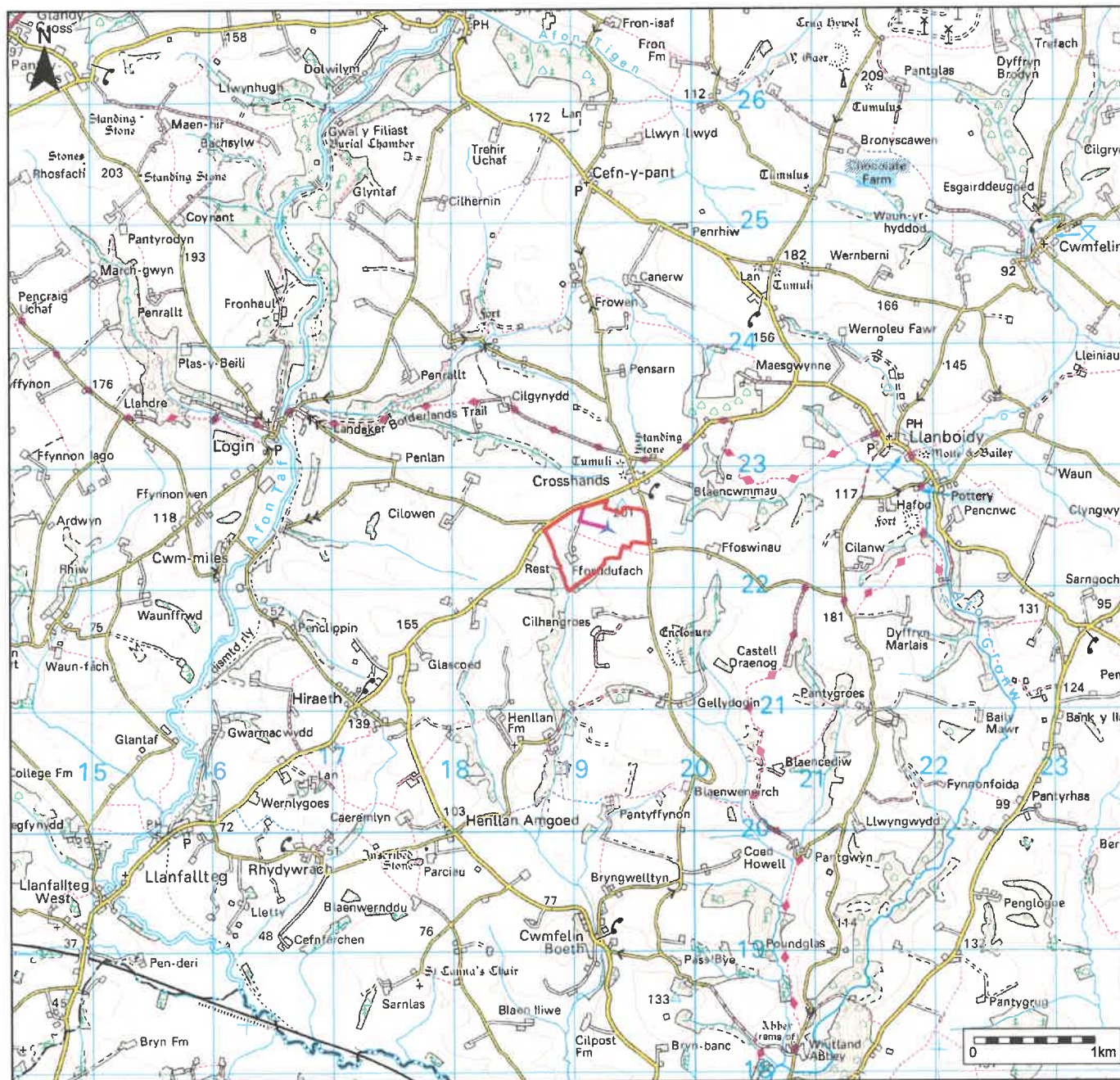
Prepared by:
Heritage
Recording Services Wales

Client:
Fine Energy Ltd

On behalf of:
Mr Harris

Project Title:
Ffosddu Fach Wind Turbine

Figure 1. Site Location



Legend

- Study Area
- ★ Turbine Location
- Access track

Approximate Scale (@ A4): 1:60,000

Date: September 2014

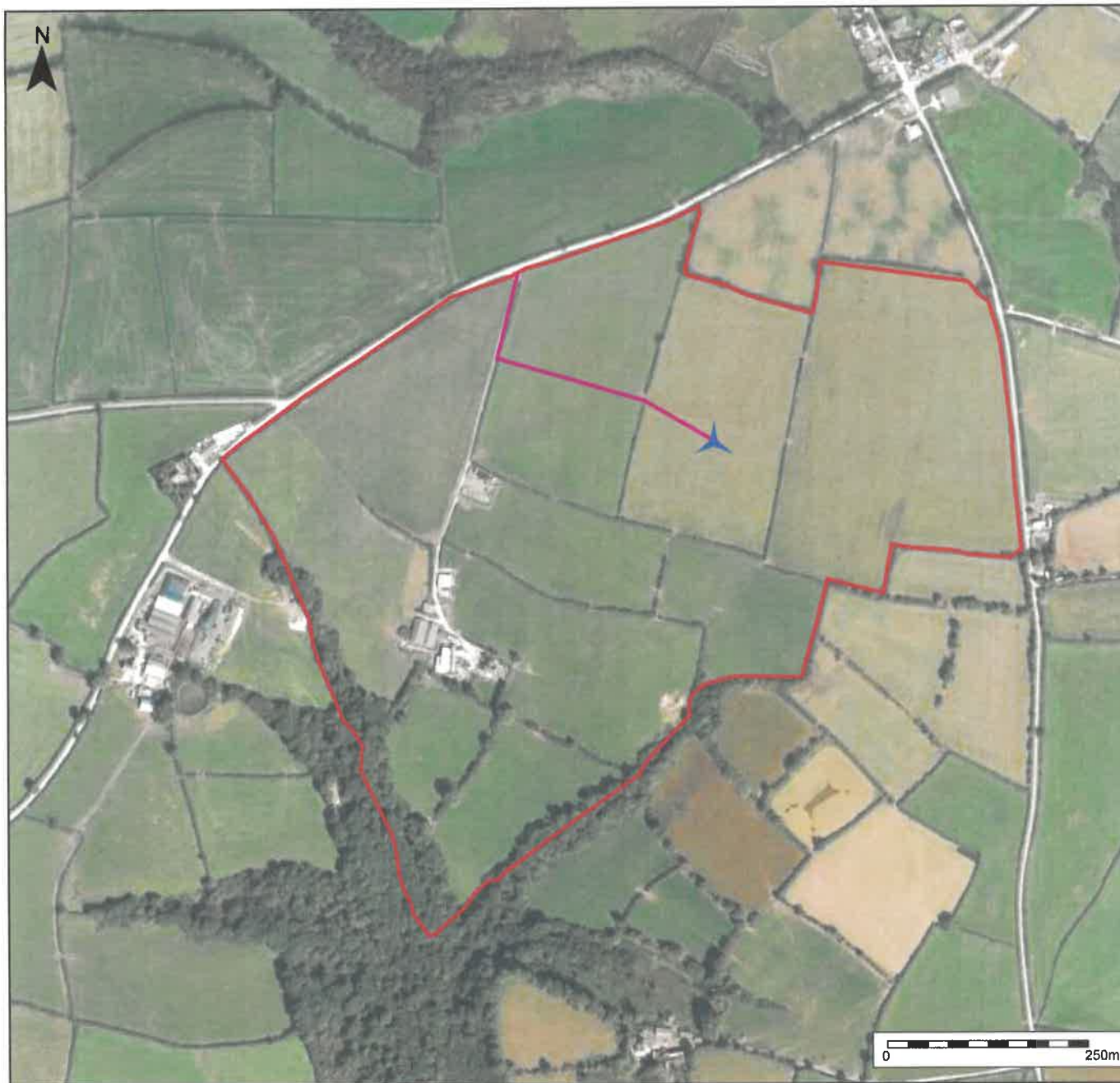
Prepared by:
Heritage
 Recording Services Wales

Client:
 Fine Energy Ltd

On behalf of:
 Mr Harris

Project Title:
 Ffosddu Fach Wind Turbine

Figure 2. Study area and proposed turbine and access track position



Legend

- Study Area
- ★ Turbine Location
- Access track

Approximate Scale (@ A4): 1:2,000

Date: September 2014

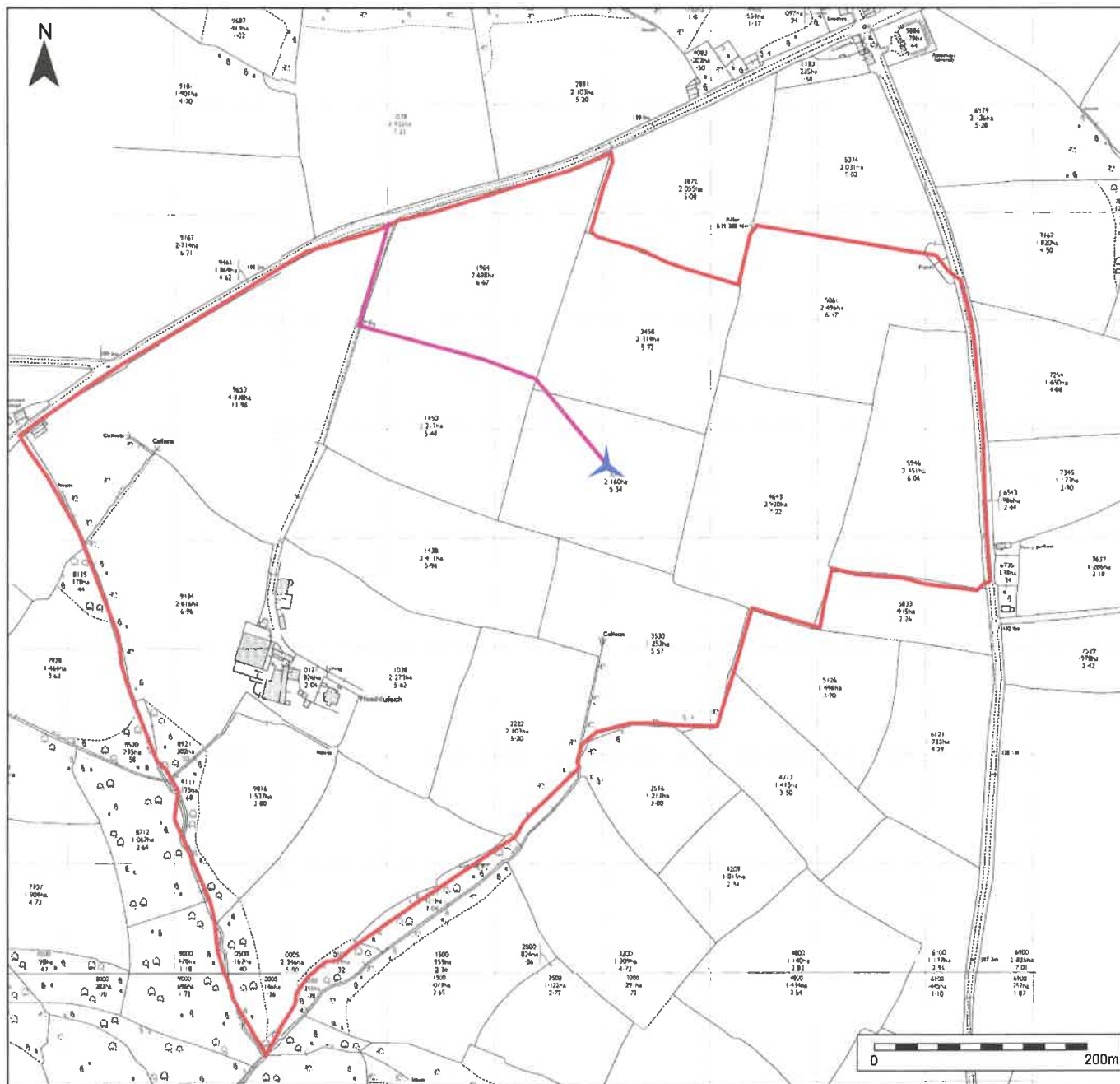
Prepared by:
Heritage
 Recording Services Wales

Client:
 Fine Energy Ltd

On behalf of:
 Mr Harris

Project Title:
 Ffosddu Fach Wind Turbine

Figure 3. Aerial photo (2009) with turbine position and access track



Legend

- Study Area
- ★ Turbine Location
- Access track

Approximate Scale (@ A4): 1:2,000

Date: September 2014

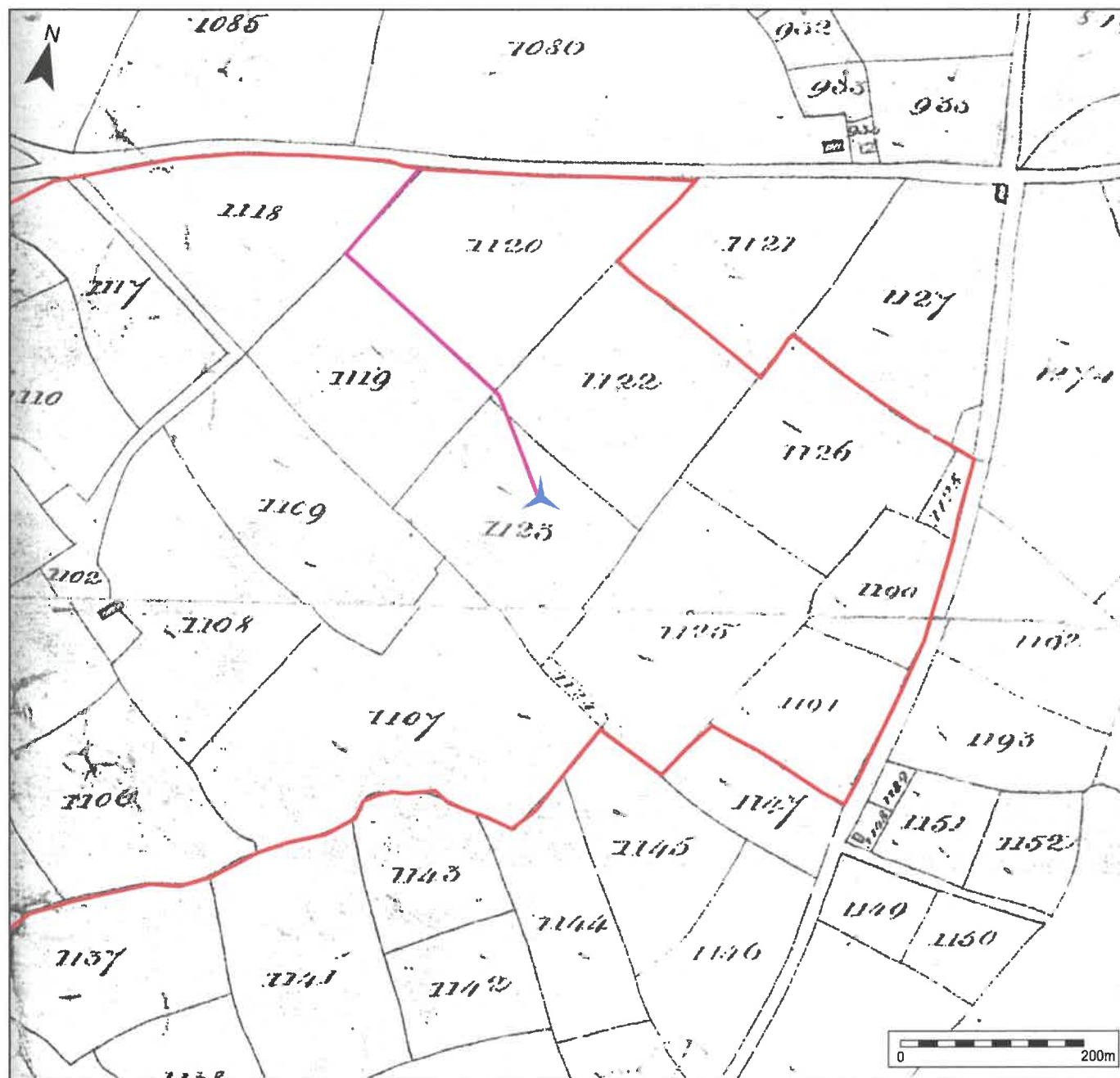
Prepared by:
Heritage
 Recording Services Wales

Client:
 Fine Energy Ltd

On behalf of:
 Mr Harris

Project Title:
 Ffosddu Fach Wind Turbine

Figure 4. Site plan overlying OS 1977 1:10,000 map



Legend

- Study Area
- ★ Turbine Location
- Access track

Approximate Scale (@ A4): 1:2,000

Date: September 2014

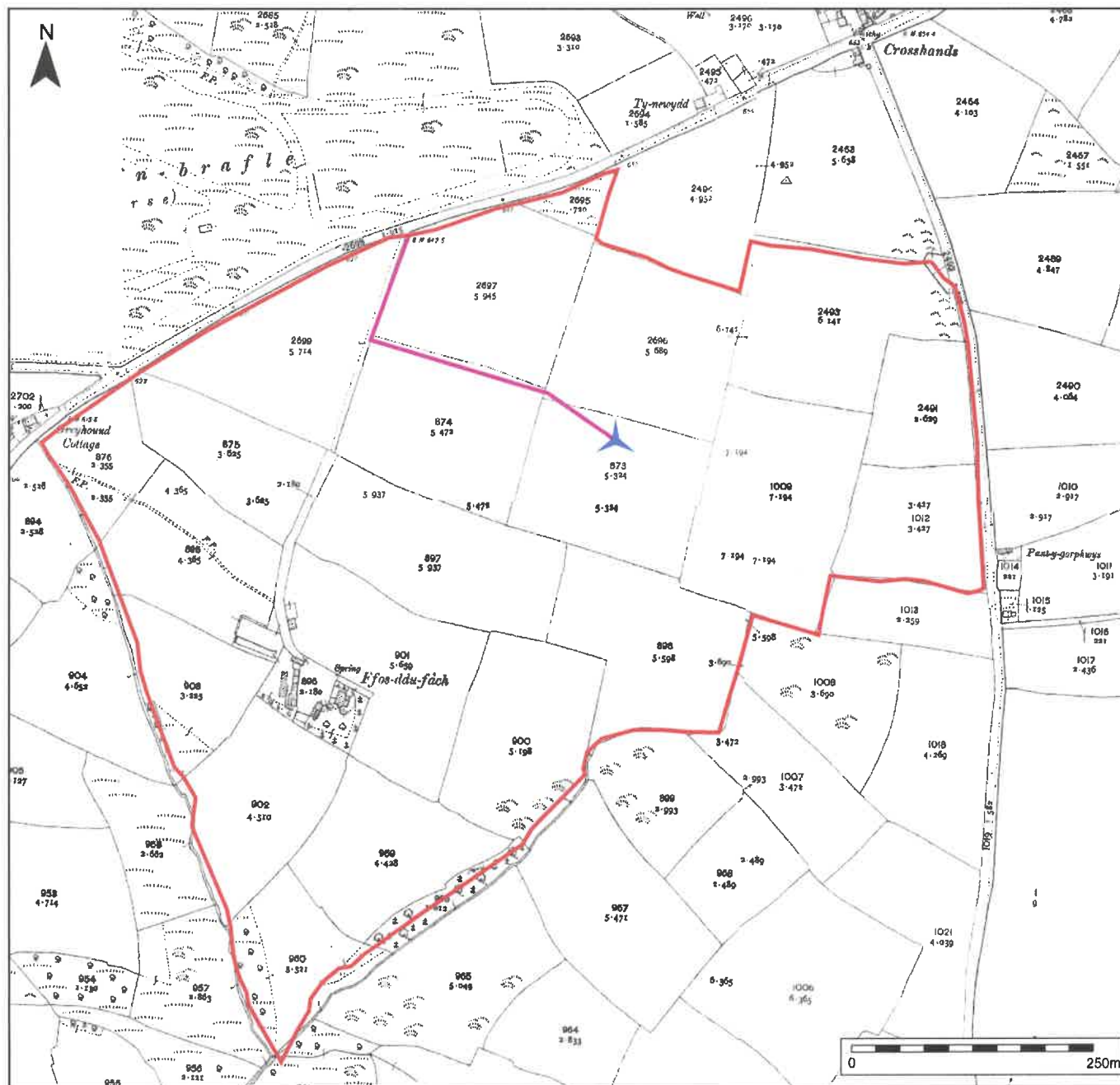
Prepared by:
Heritage
Recording Services Wales

Client:
Fine Energy Ltd

On behalf of:
Mr Harris

Project Title:
Ffosddu Fach Wind Turbine

Figure 5. Tithe Apportionment Map (1844)



Legend

- Study Area
- ★ Turbine Location
- Access track

Approximate Scale (@ A4): 1:2,000

Date: September 2014

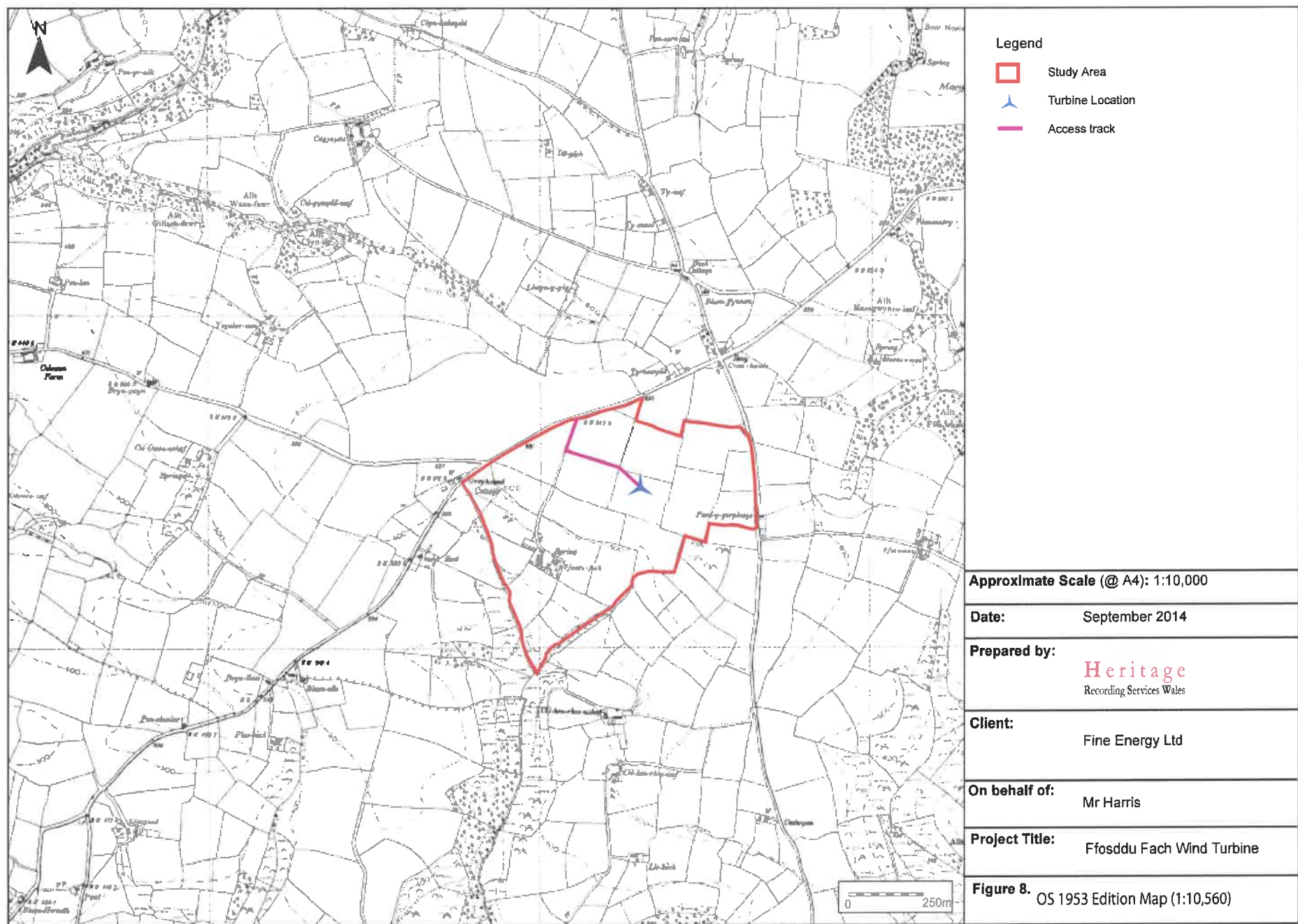
Prepared by:
Heritage
Recording Services Wales

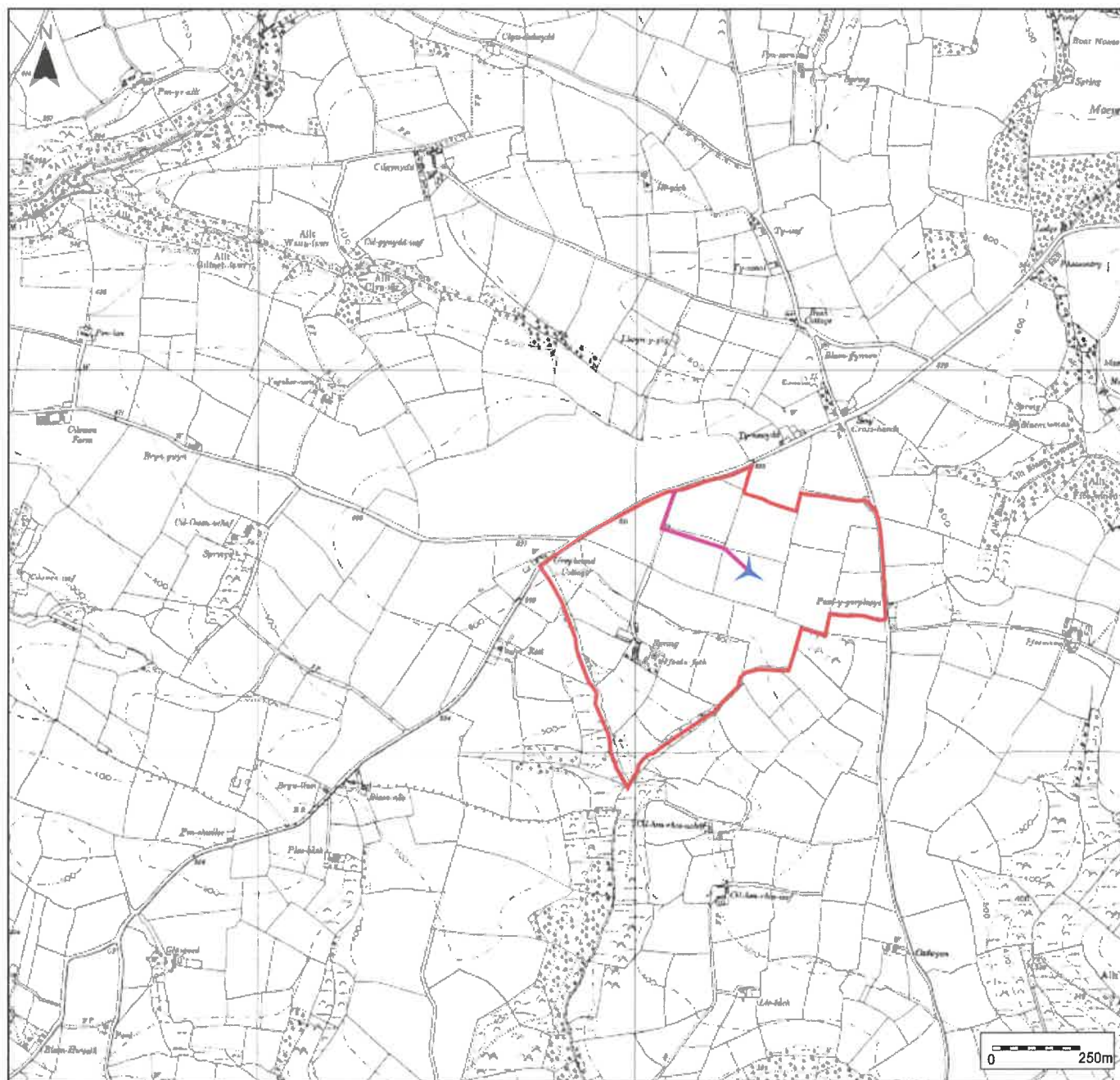
Client:
Fine Energy Ltd

On behalf of:
Mr Harris

Project Title:
Ffosddu Fach Wind Turbine

Figure 7. OS Second Edition Map of 1907 (1:2500)





Legend

- Study Area
- ▲ Turbine Location
- Access track

Approximate Scale (@ A4): 1:10,000

Date: September 2014

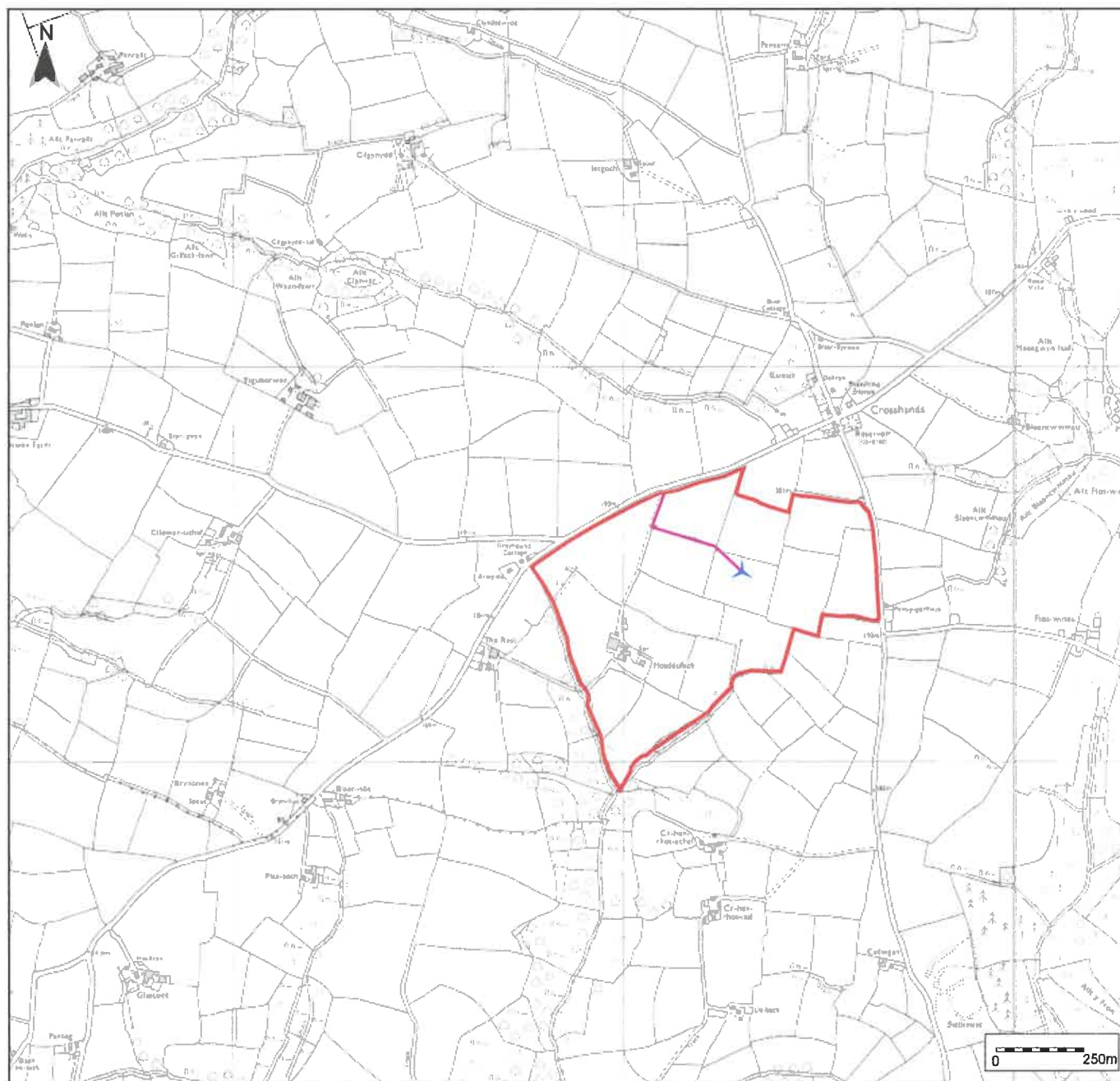
Prepared by:
Heritage
 Recording Services Wales

Client:
 Fine Energy Ltd

On behalf of:
 Mr Harris

Project Title:
 Ffosddu Fach Wind Turbine

Figure 9. OS 1964 Edition Map (1:10,560)



Legend

- Study Area
- ▶ Turbine Location
- Access track

Approximate Scale (@ A4): 1:10,000

Date: September 2014

Prepared by:
Heritage
 Recording Services Wales

Client:
 Fine Energy Ltd




On behalf of:
 Mr Harris

Project Title:
 Ffosddu Fach Wind Turbine

Figure 10. OS 1977 Edition Map (1:10,000)



Legend

-  Study Area
-  Turbine Location
-  Access track

Approximate Scale (@ A4): 1:20,000

Date: September 2014

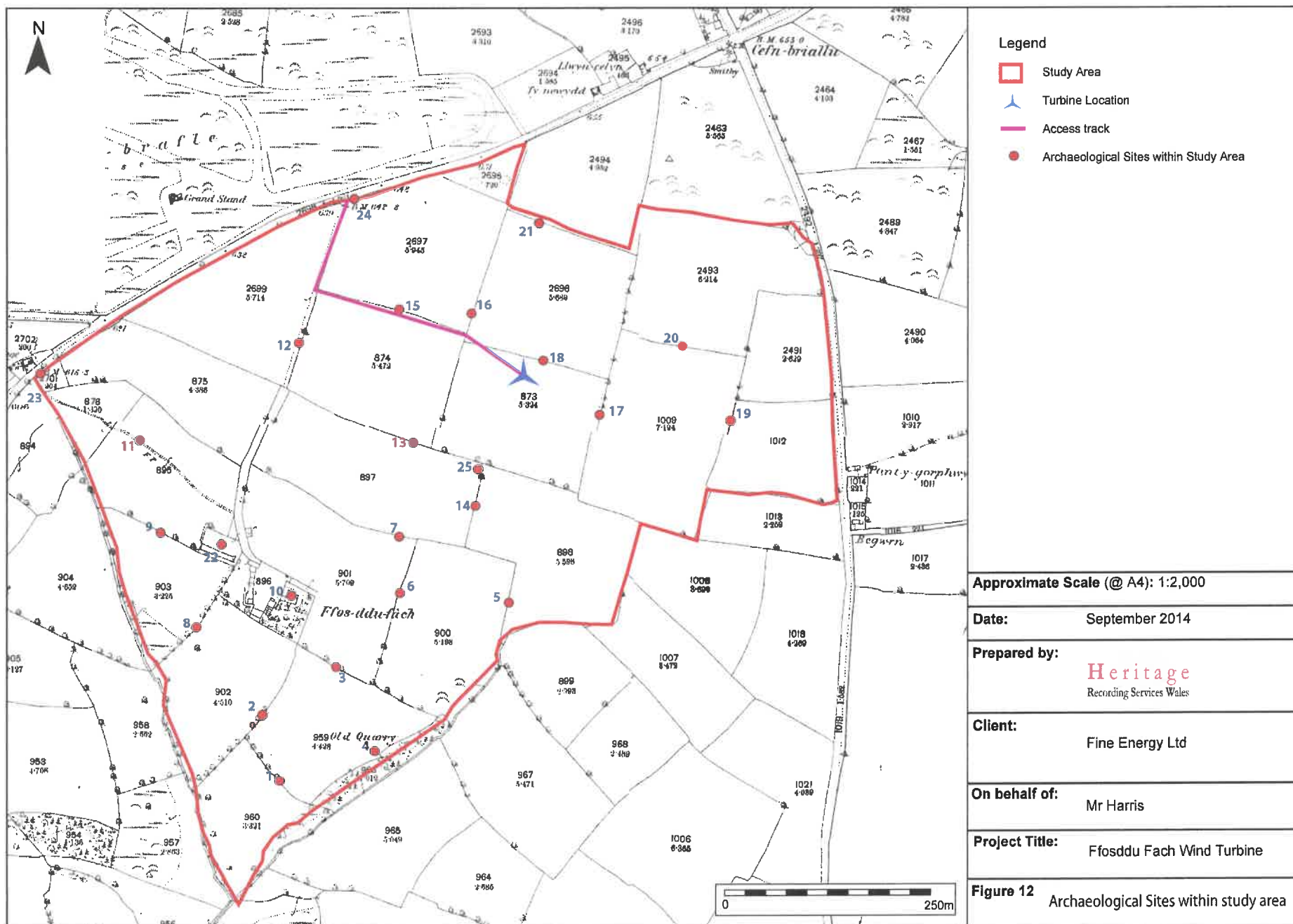
Prepared by:

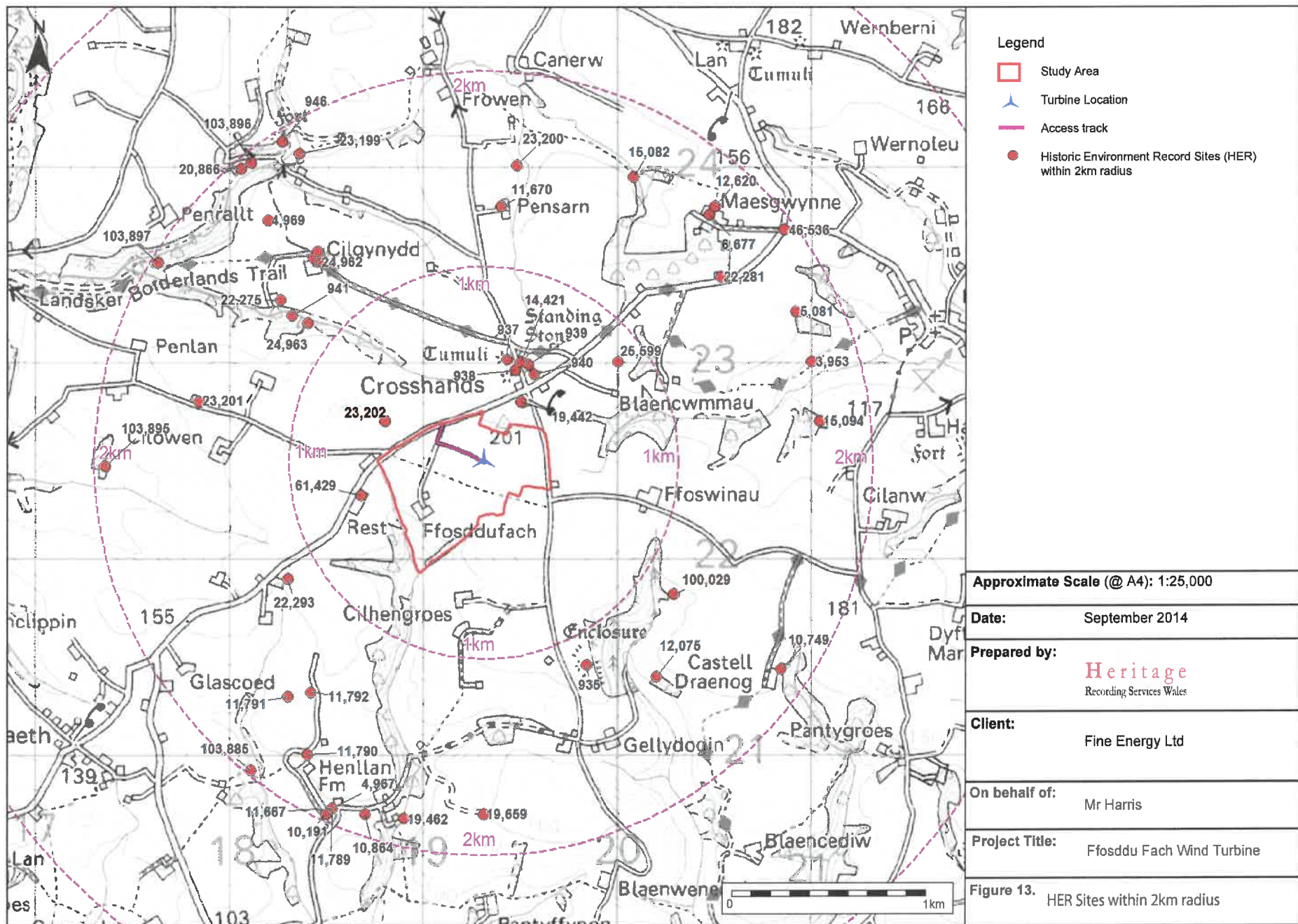

Client:
Fine Energy Ltd

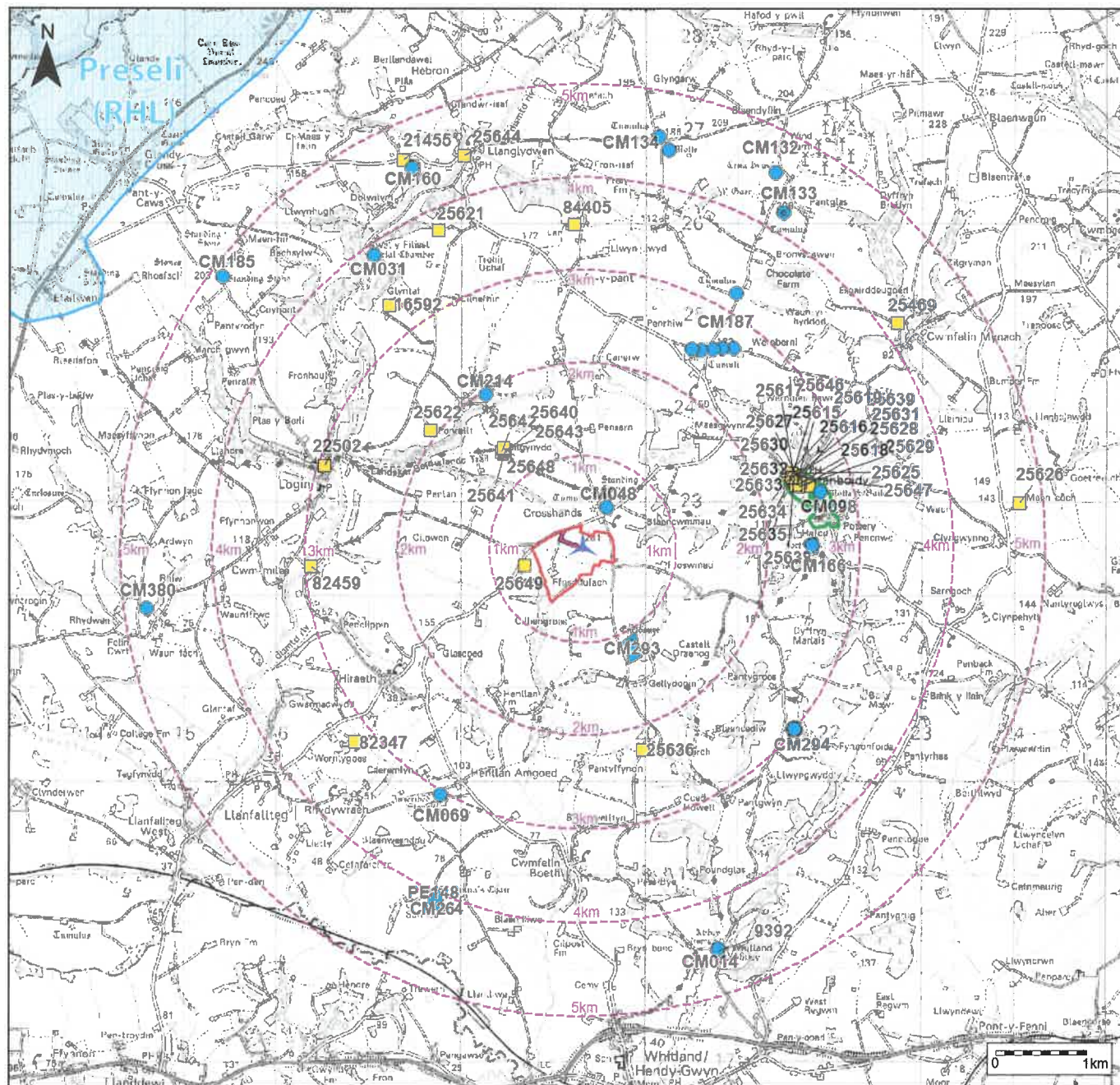
On behalf of:
Mr Harris

Project Title:
Ffosddu Fach Wind Turbine

Figure 11. RAF Vertical Aerial Photo (1946)







Legend

- Study Area
- ✈ Turbine position
- Buffer Zone (Km)
- Scheduled Ancient Monument (SAM)
- Scheduled Area
- Listed Building (LB)
- Registered Historic Landscape (RHL)
- Llanboidy Conservation Area (CA)

Approximate Scale (@ A4): 1:55,000

Date: September 2014

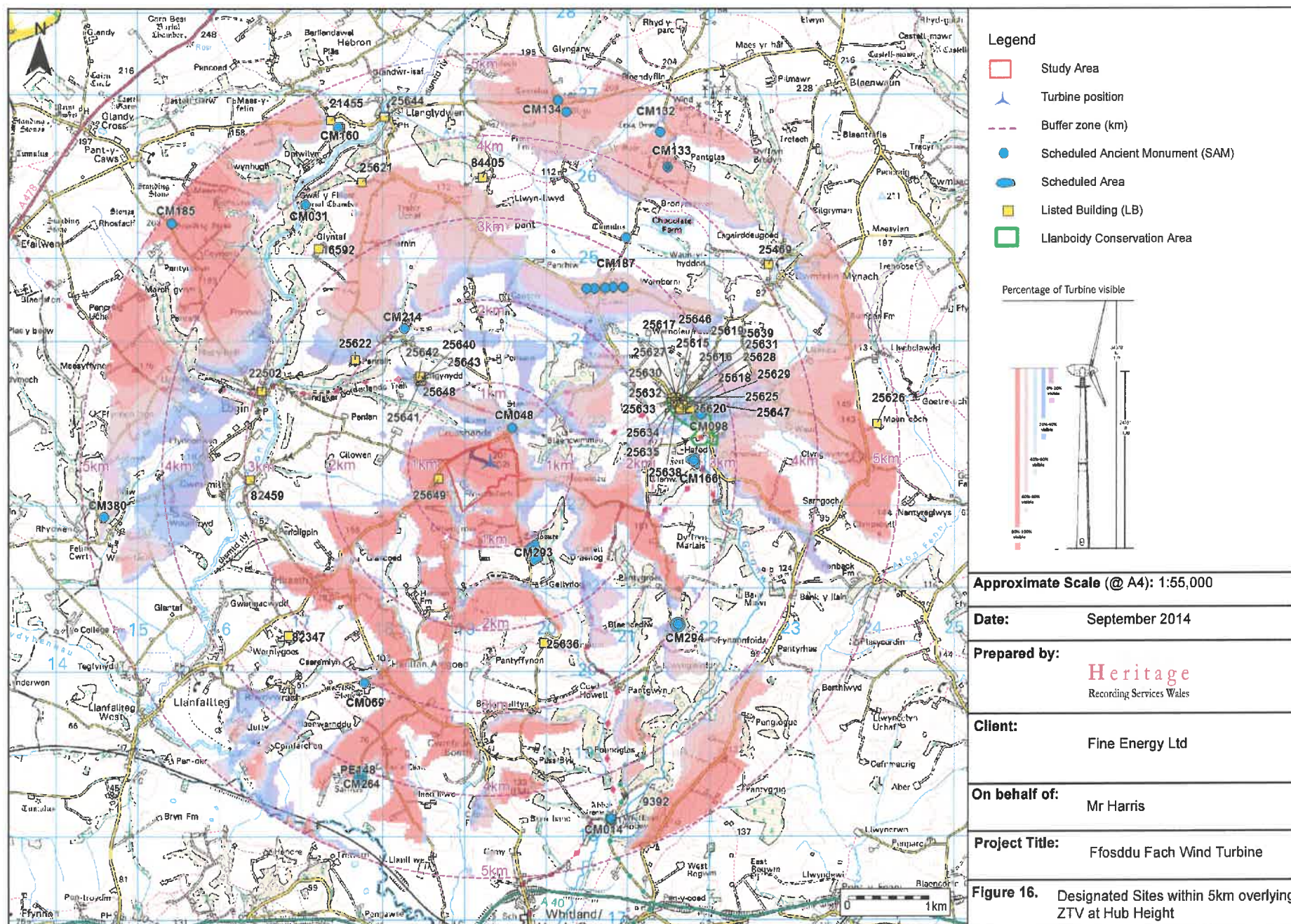
Prepared by:
Heritage
Recording Services Wales

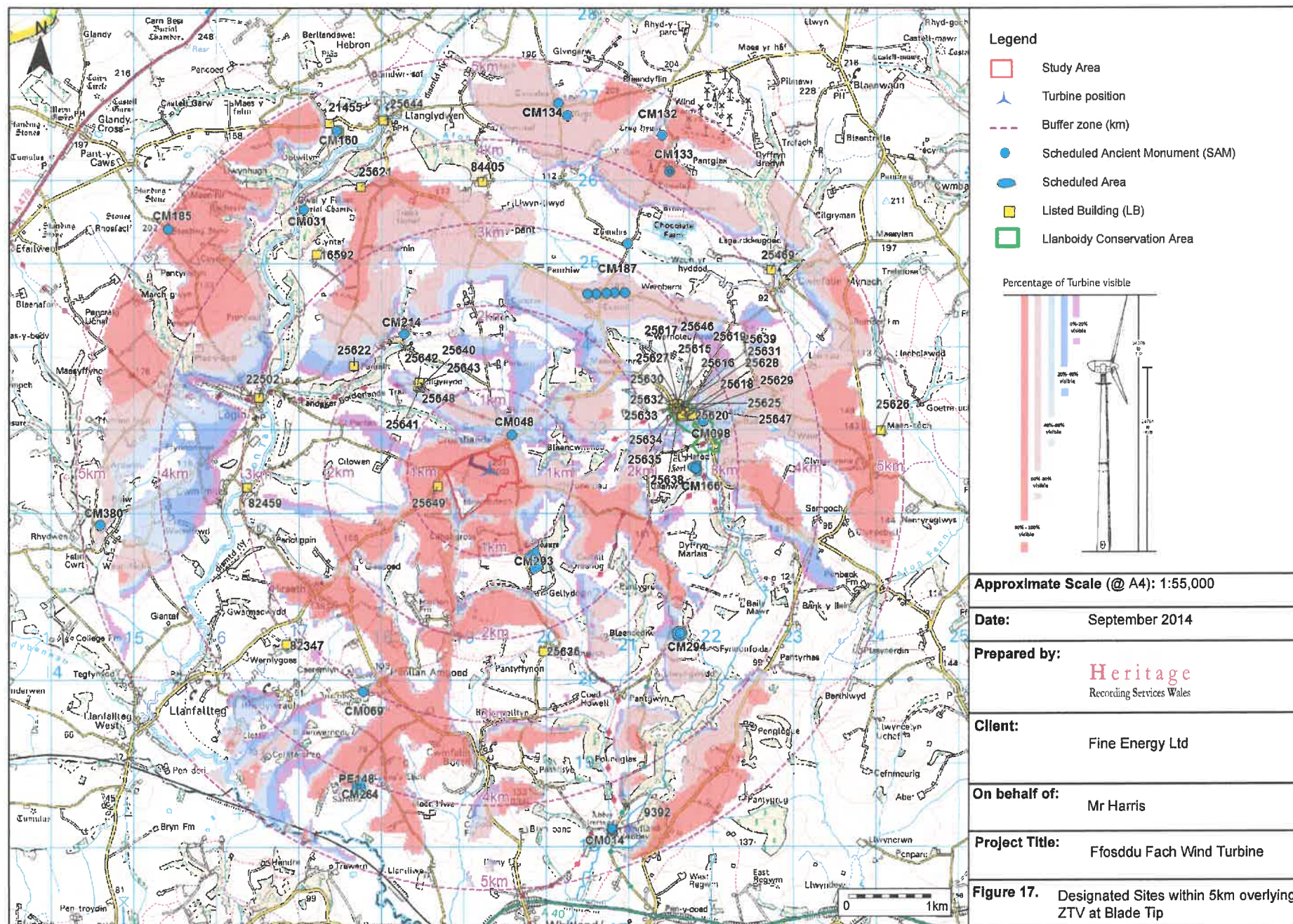
Client:
Fine Energy Ltd

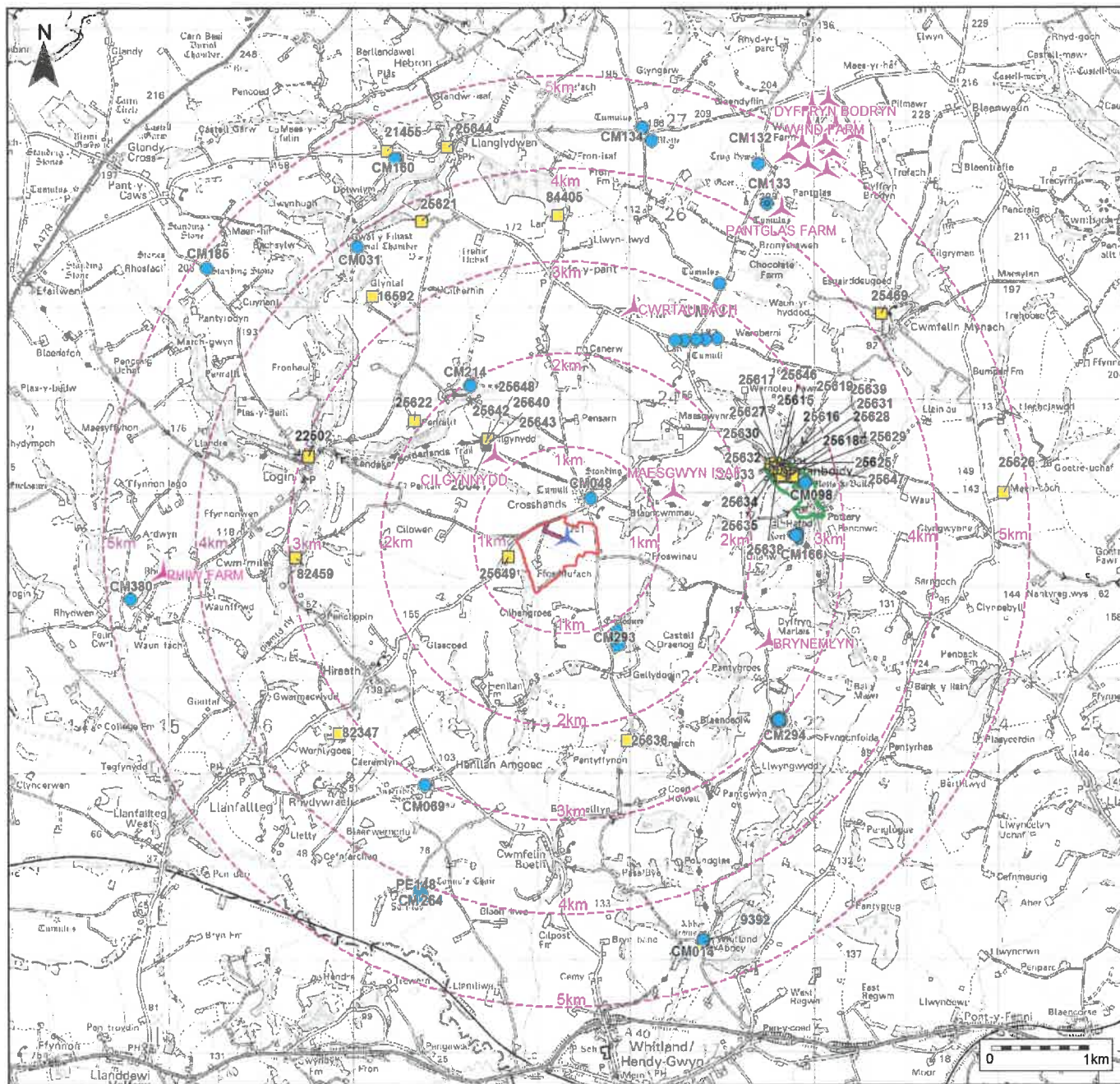
On behalf of:
Mr Harris

Project Title:
Ffosddu Fach Wind Turbine

Figure 14.
SAMs, LBs, RHL and CA within 5km radius







Legend

- Study Area
- ▲ Turbine position
- Buffer zone (km)
- Scheduled Ancient Monument (SAM)
- Scheduled Area
- Listed Building (LB)
- Llanboidy Conservation Area
- ★ Cumulative Turbine sites

Approximate Scale (@ A4): 1:55,000

Date: September 2014

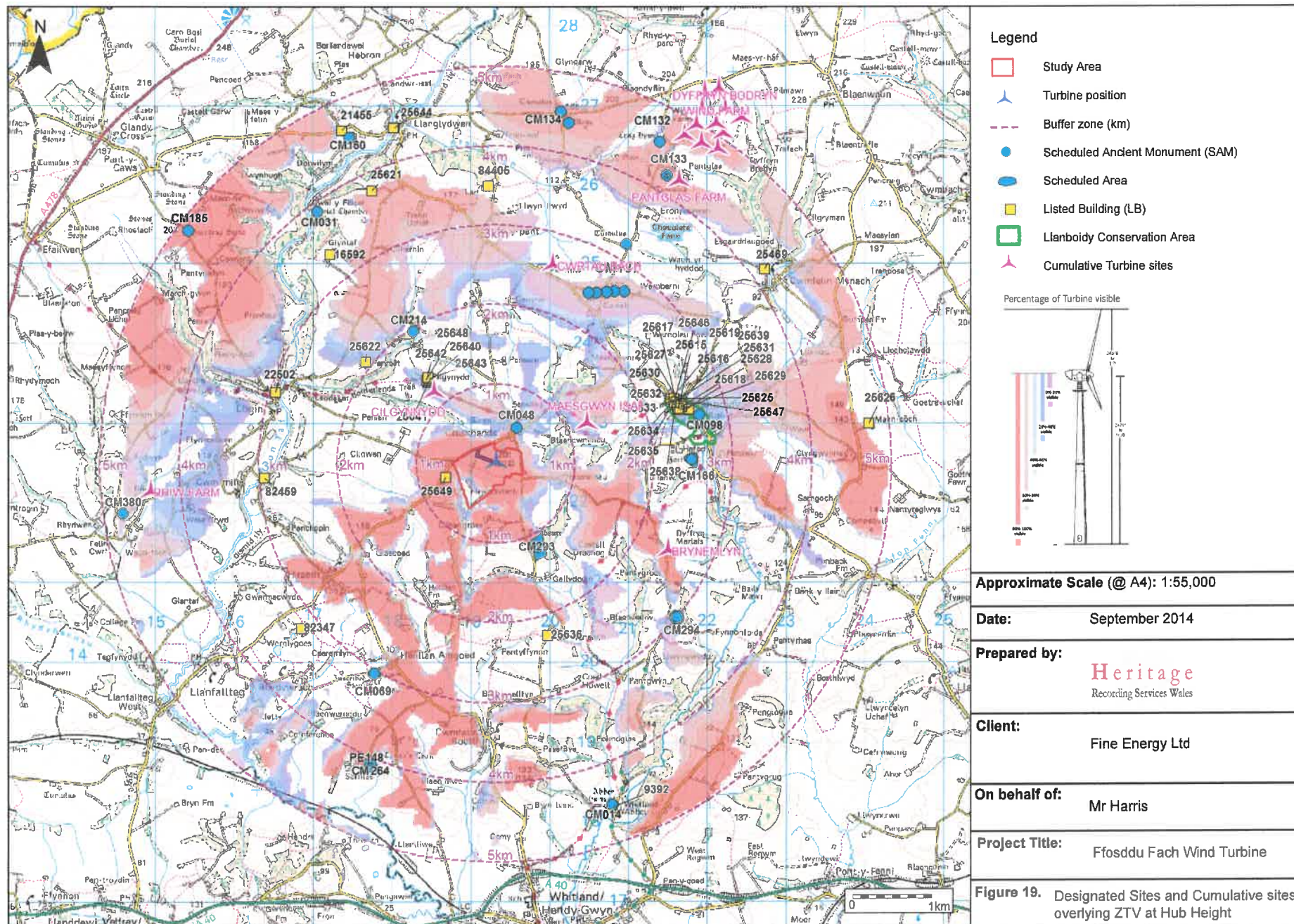
Prepared by:
Heritage
Recording Services Wales

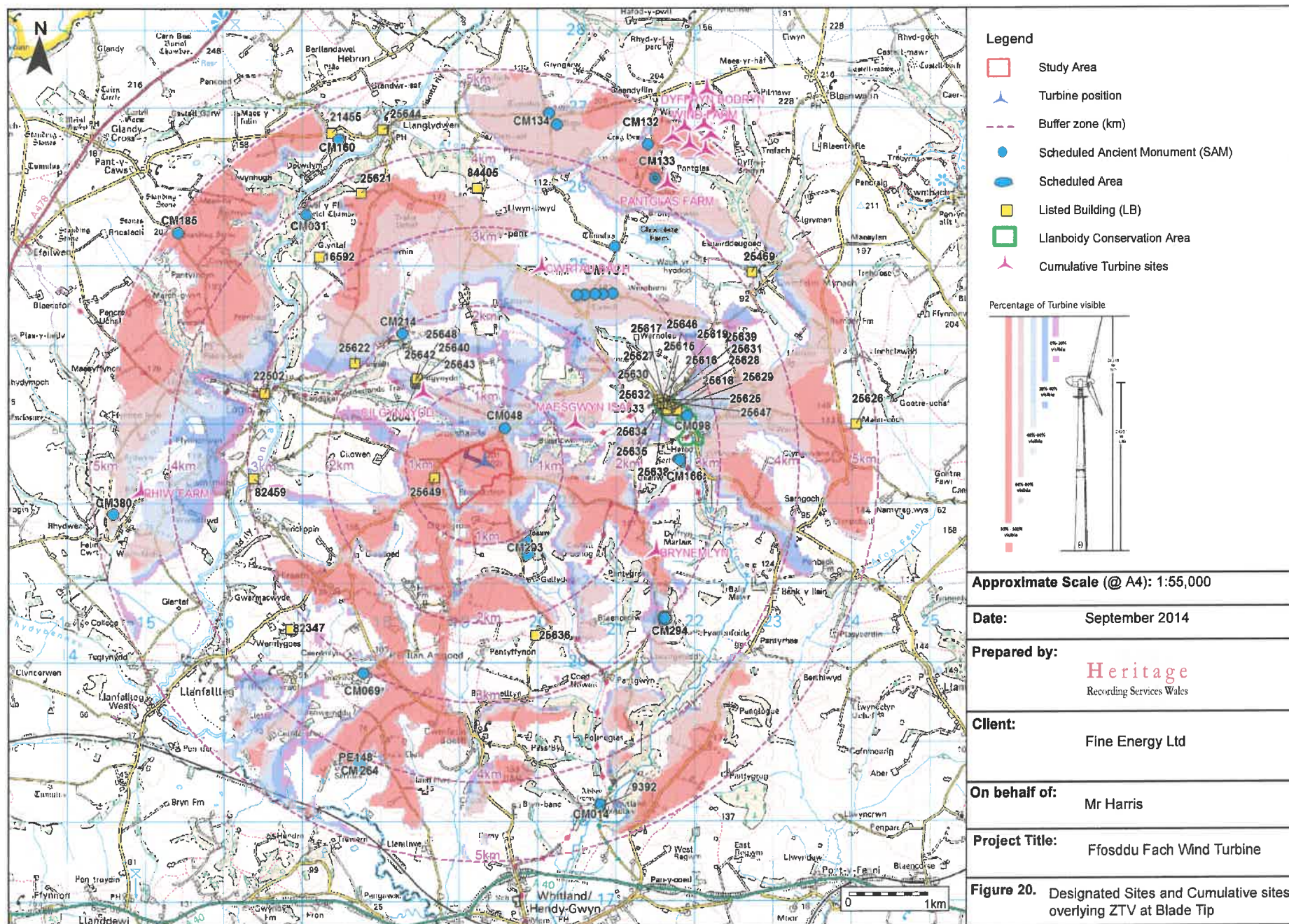
Client:
Fine Energy Ltd

On behalf of:
Mr Harris

Project Title:
Ffosddu Fach Wind Turbine

Figure 18. Designated Sites in conjunction with Cumulative Turbine sites





APPENDIX II:

Photo plates

SE

S

SW



Plate 1. View of Turbine location. Looking south-west to south-east.

NE

E

SE



Plate 2. View of Turbine location. Looking south-east to north-east.

Project Title: Ffosddu Fach Wind Turbine

Date taken: September 2014

Photographer: Richard Scott Jones

Photo Plates No. 1 and 2

Heritage
Recording Services Wales



Plate 3. View looking towards the position of the designated Crosshands Bronze Age burial Chamber (CM048). Monument is hidden behind modern dwelling. Looking northeast toward monument from crosshands.



Plate 4. View looking toward proposed turbine position (approx. 490m southwest), from road in front of house that screens the designated Crosshands Bronze Age burial Chamber (CM048).



Plate 5. View of the designated Grade II Listed property known as 'The Rest' (LB Ref: 25649). Looking east from side of road.



Plate 6. View of the working farm complex attached to the listed property known as 'The Rest' (LB Ref: 25649). Looking eastwards.

Project Title: Ffosddu Fach Wind Turbine

Date taken: September 2014

Photographer: Richard Scott Jones

Photo Plates No. 3 - 6

Heritage
Recording Services Wales



Plate 7. View road alongside Gelli Diogyn Hillfort (SAM Ref: CM293), acting as screening buffer. Looking north-north-east toward proposed turbine location.



Plate 8. View road alongside Gelli Diogyn Hillfort (SAM Ref: CM293), acting as screening buffer. Looking north-north-east toward proposed turbine location.



Plate 9. View of designated Llanboidy Mound & Bailey Castle (CM098). Looking northwest



Plate 10. View of designated Llanboidy Mound & Bailey Castle (CM098). Looking southeast.

Project Title: Ffosddu Fach Wind Turbine

Date taken: September 2014

Photographer: Richard Scott Jones

Photo Plates No. 7 - 10

Heritage
Recording Services Wales



Plate 11. View from designated monument of Llanboidy Motte & Bailey Castle (SAM Ref: CM098). Looking northwest to west toward turbine location.

Project Title: Ffosddu Fach Wind Turbine

Date taken: September 2014

Photographer: Richard Scott Jones

Photo Plates No. 11

Heritage
Recording Services Wales



Plate 12. View of Llanboidy Church, 'Church of St. Brynach' (LB Ref: 25615). Looking northeast.



Plate 13. View from front of Llanboidy parish church, Church of St. Brynach' (LB Ref: 25615). Looking southwest toward proposed turbine location.

Project Title: Ffosddu Fach Wind Turbine

Date taken: September 2014

Photographer: Richard Scott Jones

Photo Plates No. 12-13

Heritage
Recording Services Wales



Plate 14. View of easternmost Lan Round Barrow (CM187). Looking northeast.



Plate 15. View of central Lan Round Barrow (CM187). Looking west.

SW

W



Plate 16. Wider landscape view from central Lan Round Barrow (SAM Ref: CM187). Looking West to Southwest toward area of proposed turbine location.

Project Title: Ffosddu Fach Wind Turbine

Date taken: September 2014

Photographer: Richard Scott Jones

Photo Plates No. 14-16

Heritage
Recording Services Wales



Plate 17. View of crossroads that dissects the Lan Round Barrow cemetery site (SAM Ref: 187). Looking southwest.



Plate 18. View of the area of the westernmost Lan Round Barrow (SAM Ref: 187). Looking west to southwest toward proposed turbine location.

Project Title: Ffosddu Fach Wind Turbine

Date taken: September 2014

Photographer: Richard Scott Jones

Photo Plates No. 17 and 18

Heritage
Recording Services Wales

APPENDIX III:

Site Gazetteer

APPENDIX III

Site Gazetteer

of

Historic Environment Record (HER) Sites within 2km from turbine location

&

Scheduled Ancient Monuments (SAMs) and Listed Buildings (LBs) within 5km radius

A) Historic Environment Record (HER) Sites within 2km from turbine location

PRN: 935 **Site Type:** Defended Enclosure **Period:** Iron Age **NGR:** SN19842146

Site Name: GELLI DIOGYN

Summary: A large concentric enclosure situated at the southern end of a spur of land at approximately 170m above sea level. It consists of a central sub-circular shaped enclosure, c.80m in diameter, defined by at least two lines of bank and ditches.

Site Status: scheduled ancient monument

Community: Llanboidy

PRN: 937 **Site Type:** Round Barrow **Period:** Bronze Age **NGR:** SN1942723013

Site Name: CROSS HANDS II

Summary:

Site Status:

Community: Llanboidy

PRN: 938 **Site Type:** Round Barrow **Period:** Bronze Age **NGR:** SN19472296

Site Name: CROSS HANDS I

Summary:

Site Status:

Community: Llanboidy

PRN: 939 **Site Type:** Round Barrow **Period:** Bronze Age **NGR:** SN19542299

Site Name: CROSSHANDS III

Summary: No archaeological traces of a monument exists in the area indicated by the grid reference, nor in the immediately surrounding area. Site destroyed. NB. 2001.

Site Status:

Community: Llanboidy

PRN: 940 **Site Type:** Chambered Tomb **Period:** Neolithic **NGR:** SN19572294

Site Name: CEFN BRAFLE

Summary:

Site Status: scheduled ancient monument

Community: Llanboidy

PRN: 941 **Site Type:** Enclosure;defended enclosure? **Period:** Iron Age?;Early medieval?;Medieval?;Post

Site Name: ALLT CLYN-IAR;CILGYNYDD

Summary: Allt Clyn-iar or Cilgynydd is a possible defensive site lying on an outcrop of shale situated on the floor of a narrow valley at 122m above sea level. J F Jones in 1961 described the stream channels either side of the outcrop as having been formed into mounds.

Site Status: **Community:** Llanboidy

PRN: 946 **Site Type:** Promontory Fort **Period:** Iron Age **NGR:** SN18272413
Site Name: PEN-GAER;PARC GAER
Summary: A small inland promontory fort situated on a hillslope, at some 110m above sea level. It is located on a promontory on ground sloping gently to the south-east in the angle created by the confluence of two streams.

Site Status: scheduled ancient monument **Community:** Llanboidy

PRN: 3953 **Site Type:** Findspot **Period:** Roman **NGR:** SN2123
Site Name: LLANBOIDY
Summary:

Site Status: **Community:** Llanboidy

PRN: 4967 **Site Type:** Church **Period:** Post-Medieval **NGR:** SN18532073
Site Name: HENLLAN AMGOED PARISH CHURCH;ST DAVID'S
Summary:

Site Status: **Community:** Henllanfallteg

PRN: 4969 **Site Type:** Round Barrow **Period:** Bronze Age **NGR:** SN18202373
Site Name: PARC CARN
Summary:

Site Status: **Community:** Llanboidy

PRN: 5081 **Site Type:** Holy Well **Period:** Medieval **NGR:** SN2091823262
Site Name: FFYNNON FRYNACH
Summary: Recorded in 1917 as a spring located about a half mile west of Llanboidy parish church and referred to as the "saint's well". Traditionally its waters were 'good for sick people' It is shown on the 1889 1st edition and 1907 2nd edition Ordnance Survey maps.

Site Status: **Community:** Llanboidy

PRN: 6677 **Site Type:** Mansion **Period:** Post-Medieval **NGR:** SN20472376
Site Name: MAESGWYNNE
Summary:

Site Status: listed building **Community:** Llanboidy

PRN: 10191 **Site Type:** Deleted **Period:** Unknown **NGR:** SN185207
Site Name: ST DAVID DEDICATION
Summary: Record deleted during Cadw Early Medieval Ecclesiastical Sites Project PRN 44753. Record now merged with PRN 11667. NDL 2003

Site Status: **Community:** Henllanfallteg

PRN: 10749 **Site Type:** Farmstead **Period:** Medieval;Post-Medieval **NGR:** SN20842144
Site Name: CASTELLDRAENOG
Summary: Farmstead complex of probable mediaeval origin. In 1230 the area was known as "Maenor Castell Draenog in Traian Morgan in the Lordship of St Clears." Now an L-shaped farmstead complex. Home of Phillipps family between c.1520 and c.1700. RPS August 2001

Site Status: **Community:** Llanboidy

PRN: 10864 **Site Type:** Standing Stone **Period:** Bronze Age **NGR:** SN187207
Site Name: PARK MAIN
Summary:

Site Status: **Community:** Henllanfallteg

PRN: 11667 **Site Type:** Church **Period:** Medieval **NGR:** SN18532073
Site Name: HENLLAN AMGOED PARISH CHURCH;ST DAVID'S
Summary: Sources for the medieval Henllan Amgoed parish church PRN 4967, which is now in Henllanfallteg parish. The church was largely rebuilt in the later 19th century, retaining some earlier fabric (not closely dateable), as post-medieval PRN 4967.

Site Status: **Community:** Henllanfallteg

PRN: 11670 **Site Type:** Road **Period:** Unknown **NGR:** SN194238
Site Name: PEN-SARN
Summary:

Site Status: **Community:** Llanboidy

PRN: 11789 **Site Type:** Churchyard **Period:** Early Medieval **NGR:** SN18532073
Site Name: HENLLAN AMGOED PARISH CHURCH;ST DAVID'S
Summary: Early medieval B site, ie. medium-probability early medieval origins. Churchyard occupied by the medieval Henllan Amgoed parish church PRN 11667 (now in Henllanfallteg parish), largely rebuilt in the later 19th century as post-medieval PRN 4967.

Site Status: **Community:** Henllanfallteg

PRN: 11790 **Site Type:** Defended Enclosure **Period:** Prehistoric?;Iron Age? **NGR:** SN18242115
Site Name: HENLLAN FARM I
Summary: This is a good example of a small, univallate defended enclosure with a concentric annexe. It lies on a south-facing slope at 105m -120m above sea level in improved pasture. It was discovered from the air in 1984 when it was visible as a faint cropmark.

Site Status: **Community:** Henllanfallteg

PRN: 11791 **Site Type:** Defended Enclosure **Period:** Roman;Prehistoric?;Iron Age? **NGR:** SN18302130
Site Name: HENLLAN FARM II
Summary: This is an oval shaped defended enclosure occupying a gentle south-facing slope at 130m above sea level. It lies 100m north of enclosure PRN11790 and 50m southwest of enclosure PRN11792. It was discovered during aerial survey.

Site Status: **Community:** Henllanfallteg

PRN: 11792 **Site Type:** Defended Enclosure;Defended Enclosure? **Period:** Roman;Iron Age?;Roman?;Medieval **NGR:** SN18422132
Site Name: HENLLAN FARM III
Summary: This cropmark enclosure site was discovered during aerial survey in 1984. It lies towards the crest of a south-facing slope at 140m above sea level, 50m northeast of enclosure PRN11791 and 150m north of enclosure PRN11790.

Site Status: **Community:** Henllanfallteg

PRN: 12075 **Site Type:** Monastic Land **Period:** Medieval;Post-Medieval **NGR:** SN20202140
Site Name: FRON MYNACH
Summary:

Site Status:**Community:** Llanboidy**PRN:** 12620 **Site Type:** Grange;Manor House**Period:** Medieval**NGR:** SN205238**Site Name:** MAESGWYNNE
Summary:**Site Status:****Community:** Llanboidy**PRN:** 14421 **Site Type:** Round Barrow Cemetery**Period:** Bronze Age**NGR:** SN195230**Site Name:** CROSS HANDS**Summary:** Barrows 937 and 938 are denuded and spread but still visible in the field and two further smaller and very denuded barrows, possibel satellite mounds, were noted just to the east of 938. No archaeological traces of a monument exists in the area indicated.**Site Status:****Community:** Llanboidy**PRN:** 15082 **Site Type:** Gravel Pit**Period:** Post-Medieval**NGR:** SN20082395**Site Name:**
Summary:**Site Status:****Community:** Llanboidy**PRN:** 15094 **Site Type:** Quarry**Period:** Post-Medieval**NGR:** SN21042270**Site Name:** CHWAR HAFOD**Summary:** Post medieval quarry workings shown on the 1st edition OS map and named Chwar Hafod. It includes 2 distinct quarries, a large spoil heap and a curving track connecting the two quarries. By the 2nd edition the track is no longer shown.**Site Status:****Community:** Llanboidy**PRN:** 19442 **Site Type:** Blacksmiths Workshop**Period:** Post-Medieval**NGR:** SN195228**Site Name:**
Summary:**Site Status:****Community:** Llanboidy**PRN:** 19462 **Site Type:** Mill
Site Name: FELIN-HENLLAN-AMGOED**Period:** Post-Medieval**NGR:** SN18902068**Summary:****Site Status:****Community:** Henllanfallteg**PRN:** 19659 **Site Type:** Quarry**Period:** Post-Medieval**NGR:** SN19312070**Site Name:**
Summary:**Site Status:****Community:** Llanboidy**PRN:** 20866 **Site Type:** Mill**Period:** Post-Medieval**NGR:** SN18062399**Site Name:** FELIN-FACH
Summary:**Site Status:****Community:** Llanboidy**PRN:** 22275 **Site Type:** Cottage**Period:** Post-Medieval**NGR:** SN18262332**Site Name:** GILGYNNYDD ISAF**Summary:** Single storey dwelling recorded as being in poor condition in 1984. RPS August 2001

Site Status: **Community:** Llanboidy

PRN: 22281 **Site Type:** Lodge **Period:** Post-Medieval **NGR:** SN20532344
Site Name: LODGE MAESGWYNNE
Summary:

Site Status: **Community:** Llanboidy

PRN: 22293 **Site Type:** Blacksmiths Workshop **Period:** Post-Medieval **NGR:** SN183219
Site Name: BLAEN-NOS
Summary:

Site Status: **Community:** Henllanfallteg

PRN: 23199 **Site Type:** Woollen Mill **Period:** Post-Medieval **NGR:** SN18362407
Site Name: BRYNAFON FACTORY
Summary:

Site Status: **Community:** Llanboidy

PRN: 23200 **Site Type:** Quarry **Period:** Post-Medieval **NGR:** SN19482401
Site Name:
Summary:

Site Status: **Community:** Llanboidy

PRN: 23201 **Site Type:** Dwelling **Period:** Post-Medieval **NGR:** SN17842280
Site Name: NOBLE COURT
Summary: Dwelling shown on 1907 6" OS map. Present condition unknown. RPS September 2001

Site Status: **Community:** Llanboidy

PRN: 23202 **Site Type:** Racecourse **Period:** Post-Medieval **NGR:** SN18802270
Site Name: RHEDEGFA CEFN-BRAFLE
Summary: A racecourse is marked as dis-used on the 1st edition Ordnance survey map (1889). Grandstand is also identified. Modern aerial photograph coverage (2009) suggests that the ground is under cultivation and little surface remains can be seen.

Site Status: **Community:** Llanboidy

PRN: 24962 **Site Type:** Country House **Period:** Post-Medieval **NGR:** SN1845423516
Site Name: CILGYNYDD
Summary: First-recorded in the first half of the 18th Century as home of the Lewis family. F. Jones.

Site Status: listed building **Community:** Llanboidy

PRN: 24963 **Site Type:** Mansion **Period:** Post-Medieval **NGR:** SN184232
Site Name: HEN CILGYNYDD
Summary: Colbys Map 1831 marks HEN CILGYNYDD a few hundred yards south of CILGYNYDD (24962). "The Mansion house of Cilgynydd was burnt to the ground and not rebuilt." F. Jones.

Site Status: **Community:** Llanboidy

PRN: 25599 **Site Type:** Park **Period:** Post-Medieval **NGR:** SN2023
Site Name: MAES GWYNNE
Summary:

Site Status: **Community:** Llanboidy

PRN: 46536	Site Type: Toll Gate	Period: Post-Medieval	NGR: SN20862368
Site Name: MAES GWYNNE			
Summary: The second toll gate to be attacked by Rebeccaites, Saturday 15th June, 1839. The gate was chopped to pieces.			
Site Status:		Community: Llanboidy	
PRN: 61421	Site Type: Outbuilding	Period: Post-Medieval	NGR: SN1846523523
Site Name: OUTBUILDING BEHIND CILGYNYDD			
Summary: Grade II listed outbuilding			
Site Status: listed building		Community: Llanboidy	
PRN: 61422	Site Type: Cartshed	Period: Post-Medieval	NGR: SN1843123539
Site Name: LOFTED CARTSHED AT CILGYNYDD			
Summary: Grade II listed cartshed			
Site Status: listed building		Community: Llanboidy	
PRN: 61423	Site Type: Cowhouse	Period: Post-Medieval	NGR: SN1846123556
Site Name: COWHOUSE AT CILGYNYDD			
Summary: Grade II listed cowhouse			
Site Status: listed building		Community: Llanboidy	
PRN: 61428	Site Type: Outbuilding	Period: Post-Medieval	NGR: SN1845323572
Site Name: OUTBUILDING AT N END OF YARD AT CILGYNYDD			
Summary: Grade II listed outbuilding			
Site Status: listed building		Community: Llanboidy	
PRN: 61429	Site Type: Farmhouse	Period: Post-Medieval	NGR: SN1867822323
Site Name: THE REST			
Summary: Grade II listed farmhouse			
Site Status: listed building		Community: Llanboidy	
PRN: 100029	Site Type: Farmstead	Period: Post-Medieval	NGR: SN20292182
Site Name:			
Summary: An abandoned farmstead is recorded at this location on the Ordnance Survey 1st edition map (1891). Present condition unknown.			
Site Status:		Community: Llanboidy	
PRN: 103885	Site Type: Cottage	Period: Post-Medieval	NGR: SN18112092
Site Name: CWM			
Summary: 'Cwm' cottage recorded on the historic Ordnance Survey maps. Shown only in outline on mastermap, presumed abandoned.			
Site Status:		Community: Henllanfallteg	
PRN: 103895	Site Type: Farmstead	Period: Post-Medieval	NGR: SN17362247
Site Name: CIL-OWEN-ISAF			
Summary: 'Cil-Owen-isaf' farmstead recorded on the historic Ordnance Survey maps. Not shown on mastermap, presumed abandoned.			
Site Status:		Community: Llanboidy	
PRN: 103896	Site Type: Mill Race	Period: Post-Medieval	NGR: SN18112402

Site Name: FELIN FACH
Summary: Mill race associated with Felin Fach (PRN 20866)

Site Status: **Community:** Llanboidy

PRN: 103897 **Site Type:** Cottage **Period:** Post-Medieval **NGR:** SN17632351

Site Name:
Summary: Possible cottage recorded on the historic Ordnance Survey maps but shown only in outline on mastermap, presumed abandoned.

Site Status: **Community:** Llanboidy

B) Listed Buildings (LBs) within 5km of proposed turbine location

LB No. 16592	Name: Glyn Taf	Eastings: 217208	Northings: 225113
Location:	Approximately 1.7 km SSW of Llanglydwen, to W of minor road to Login, overlooking River Taf.		
Grade: II	Community: Llanboidy		
LB No. 21453	Name: Church of St Cledwyn	Eastings: 217480	Northings: 226586
Location:	Approximately 500m W of Llanglydwen, on the E side of a drive leading to Dolwilym.		
Grade: II	Community: Cilymaenllwyd		
LB No. 21454	Name: Lychgate at St Cledwyn's Church	Eastings: 217457	Northings: 226611
Location:	At the NW entrance to St Cledwyn's churchyard.		
Grade: II	Community: Cilymaenllwyd		
LB No. 21455	Name: Archway to drive, Dolwilym	Eastings: 217363	Northings: 226684
Location:	About 500m W of Llanglydwen, at the entrance to the drive to Dolwilym and the parish church.		
Grade: II	Community: Cilymaenllwyd		
LB No. 22502	Name: Calfaria Baptist Chapel	Eastings: 216512	Northings: 223388
Location:	Situated on a SE facing hillside on the W side of the Afon Taf valley some 200m W of Login.		
Grade: II	Community: Cilymaenllwyd		
LB No. 25469	Name: Ty-isaf	Eastings: 222717	Northings: 224924
Location:	Situated on the track to Waunrhyddod, some 220m N of the bridge over the Afon Gronw in the centre of Cwmfelin Mynach,		
Grade: II	Community: Llanwinio		
LB No. 25615	Name: Church of Saint Brynach	Eastings: 221642	Northings: 223235
Location:	Situated in the centre of Llanboidy village.		
Grade: II	Community: Llanboidy		
LB No. 25616	Name: W.R. H. Powell memorial in churchyard and iron railings	Eastings: 221662	Northings: 223238
Location:	Situated in the churchyard in Llanboidy village, to the E of the parish church.		
Grade: II*	Community: Llanboidy		
LB No. 25617	Name: Churchyard gates to Llanboidy churchyard	Eastings: 221610	Northings: 223225
Location:	Situated at W entry to Llanboidy churchyard in Llanboidy village.		

Grade: II		Community: Llanboidy		
LB No. 25618	Name: The Market Hall	Eastings:	221718	Northings: 223171
Location:	Situated towards the lower end of the village, on the S side of the road.			
Grade: II	Community: Llanboidy			
LB No. 25619	Name: Ysgol Gynradd Llanboidy	Eastings:	221533	Northings: 223300
Location:	Situated on the W side of the road some 100m NW of the parish church.			
Grade: II	Community: Llanboidy			
LB No. 25620	Name: The Maesgwynne Arms Hotel	Eastings:	221760	Northings: 223178
Location:	Situated at the S edge of the village on the E side of the road.			
Grade: II	Community: Llanboidy			
LB No. 25621	Name: Penbontbren	Eastings:	217740	Northings: 225925
Location:	Situated some 250m down disused drive to Dolwilym running W from point some 200m down lane to Login.			
Grade: II	Community: Llanboidy			
LB No. 25622	Name: Penrallt (old farmhouse)	Eastings:	217662	Northings: 223769
Location:	Situated in farmyard beyond modern farmhouse, down track running SSE from point about 1 km NE of Login.			
Grade: II	Community: Llanboidy			
LB No. 25625	Name: Spencer House	Eastings:	221576	Northings: 223312
Location:	Situated opposite Llanboidy primary school on E side of road in Llanboidy village.			
Grade: II	Community: Llanboidy			
LB No. 25626	Name: Maencoch	Eastings:	224041	Northings: 222995
Location:	Situated down track running E from point about 300m N of Clyngwynne crossroads.			
Grade: II	Community: Llanboidy			
LB No. 25627	Name: The War Memorial	Eastings:	221671	Northings: 223215
Location:	Situated on the S boundary of the churchyard overlooking the road running S.			
Grade: II	Community: Llanboidy			
LB No. 25628	Name: Cartref	Eastings:	221622	Northings: 223175
Location:	Situated in village some 40m S of Post Office on E side of lane to sports field.			
Grade: II	Community: Llanboidy			
LB No. 25629	Name: Trinity Independent Chapel	Eastings:	221645	Northings: 223165
Location:	Situated in large graveyard, across road to S of churchyard.			
Grade: II	Community: Llanboidy			
LB No. 25630	Name: Vestry to Trinity Chapel	Eastings:	221623	Northings: 223187
Location:	Situated at NW corner of chapel graveyard, attached to N end of Cartref.			
Grade: II	Community: Llanboidy			
LB No. 25631	Name: Bradford House	Eastings:	221572	Northings: 223263
Location:	Situated opposite Piccadilly Square on W side of the road.			
Grade: II	Community: Llanboidy			
LB No. 25632	Name:	Eastings:	221576	Northings: 223283

Location:	First house of terrace of four on N side of square, about 70m up from churchyard gates.			
Grade: II	Community: Llanboidy			
LB No. 25633	Name:	Eastings:	221581	Northings: 223286
Location:	The second house of terrace of four on N side of square some 70m up from churchyard.			
Grade: II	Community: Llanboidy			
LB No. 25634	Name:	Eastings:	221585	Northings: 223288
Location:	The third house of terrace of four on N side of square, about 70m up from churchyard.			
Grade: II	Community: Llanboidy			
LB No. 25635	Name:	Eastings:	221590	Northings: 223291
Location:	The fourth house of terrace of four on N side of square, about 70m up from churchyard.			
Grade: II	Community: Llanboidy			
LB No. 25636	Name: Blaenweneirch	Eastings:	219965	Northings: 220342
Location:	Situated on W side of lane about 1.3 km NE of Cwmfelinboeth.			
Grade: II	Community: Llanboidy			
LB No. 25638	Name: Llwynonn	Eastings:	221601	Northings: 223289
Location:	Situated on the E side of the square, attached to Dolgarreg.			
Grade: II	Community: Llanboidy			
LB No. 25639	Name: Neuadd Deg	Eastings:	221595	Northings: 223264
Location:	Situated on the SW corner of the square, some 60m up from churchyard.			
Grade: II	Community: Llanboidy			
LB No. 25640	Name: Cilgynydd	Eastings:	218454	Northings: 223516
Location:	Situated at end of track of 1 km running W from point some 250m N of Crosshands crossroads.			
Grade: II	Community: Llanboidy			
LB No. 25641	Name: Outbuilding behind Cilgynydd	Eastings:	218465	Northings: 223523
Location:	Situated immediately E of farmhouse in yard at Cilgynydd.			
Grade: II	Community: Llanboidy			
LB No. 25642	Name: Lofted cartshed at Cilgynydd	Eastings:	218431	Northings: 223539
Location:	Situated on W side of farmyard at Cilgynydd.			
Grade: II	Community: Llanboidy			
LB No. 25643	Name: Cowhouse at Cilgynydd	Eastings:	218461	Northings: 223556
Location:	Situated across E side of farmyard at Cilgynydd.			
Grade: II	Community: Llanboidy			
LB No. 25644	Name: Pont Llanglydwen	Eastings:	218026	Northings: 226724
Location:	Situated in Llanglydwen village, partly in Cilymaenllwyd community.			
Grade: II	Community: Llanboidy			
LB No. 25646	Name: Row of outhouses behind Nos 1-4 Piccadilly Square	Eastings:	221578	Northings: 223293
Location:	Situated immediately behind Nos 1-4, built into bank.			
Grade: II	Community: Llanboidy			
LB No. 25647	Name: Dolgarreg	Eastings:	221605	Northings: 223282

Location: Situated on the E side of the square, attached to Llwynonn.
Grade: II **Community:** Llanboidy

LB No. 25648 **Name:** Outbuilding at N end of yard at Cilgynydd **Eastings:** 218453 **Northings:** 223572

Location: Situated at N end of farmyard at Cilgynydd, at right angles to long cowshed range.
Grade: II **Community:** Llanboidy

LB No. 25649 **Name:** The Rest **Eastings:** 218678 **Northings:** 222323

Location: Situated on E side of road about 1 km ESE of Crosshands crossroads.
Grade: II **Community:** Llanboidy

LB No. 82347 **Name:** Lan **Eastings:** 216843 **Northings:** 220428

Location: Approximately 2km NE of Llanfallteg West, reached by farm road SE of a minor road between Llanfallteg and Llanboidy.
Grade: II **Community:** Henllanfallteg

LB No. 82459 **Name:** Pont Cwm-miles **Eastings:** 216370 **Northings:** 222311

Location: Spanning the Afon Taf approximately 1.1km SSW of Login, carrying a minor road between Cwmfelin Boeth and Login.
Grade: II **Community:** Cilymaenllwyd

LB No. 82460 **Name:** Pont Llanglydwen **Eastings:** 218018 **Northings:** 226724

(partly in Llanboidy Community)
Location: Spanning the river Taf in the centre of the hamlet.
Grade: II **Community:** Cilymaenllwyd

LB No. 84405 **Name:** Lan Farmhouse **Eastings:** 219219 **Northings:** 225986

Location: Some 0.75 km north of Cefn y pant, down a short track off the west side of a narrow lane that runs north from the centre of the hamlet. The house is situated in a small farmyard, with its farm-buildings forming a range parallel to the back of the house.
Grade: II **Community:** Llanboidy

LB No. 9392 **Name:** Remains of Whitland Abbey including garden walls to S **Eastings:** 220791 **Northings:** 218180

Location: Situated some 2 km NE of Whitland, across lane from Whitland Abbey mansion.
Grade: II **Community:** Llanboidy

C) Scheduled Ancient Monuments (SAMs) within 5km of proposed turbine location

SAM No. CM014 **Site Type:** Abbey **Period:** Medieval **NGR:** SN207182
SAM Name: Whitland Abbey
Community: Llanboidy

SAM No. CM031 **Site Type:** Chambered tomb **Period:** Prehistoric **NGR:** SN170256
SAM Name: Dol-Wilym Burial Chamber
Community: Llanboidy

SAM No. CM048 **Site Type:** Chambered tomb **Period:** Prehistoric **NGR:** SN195229
SAM Name: Burial Chamber near Cross Hands
Community: Llanboidy

SAM No. CM069 **Site Type:** Inscribed stone **Period:** Early Medieval **NGR:** SN177198

SAM Name: Inscribed Stone N of Parciau Farmhouse
Community: Henllanfallteg

SAM No. CM098	Site Type: Motte & Bailey SAM Name: Llanboidy Mound & Bailey Castle Community: Llanboidy	Period: Medieval	NGR: SN218231
SAM No. CM132	Site Type: Round barrow SAM Name: Crug Hywel Round Barrow Community: Llanboidy	Period: Prehistoric	NGR: SN214265
SAM No. CM133	Site Type: Round barrow SAM Name: Pant-Glas Round Barrow Community: Llanboidy	Period: Prehistoric	NGR: SN214261
SAM No. CM134	Site Type: Round barrow SAM Name: Two Round Barrows near Crossroads N of Eglwsfair-a-Churig Church Community: Llanboidy	Period: Prehistoric	NGR: SN201269
SAM No. CM160	Site Type: Cross SAM Name: Llanglydwen Churchyard Cross Community: Cilymaenllwyd	Period: Early Medieval	NGR: SN174265
SAM No. CM166	Site Type: Promontory Fort - inland SAM Name: Hafod Camp Community: Llanboidy	Period: Prehistoric	NGR: SN218225
SAM No. CM185	Site Type: Standing stone SAM Name: Standing Stone 495m NW of Coynant Community: Cilymaenllwyd	Period: Prehistoric	NGR: SN154254
SAM No. CM187	Site Type: Round barrow SAM Name: Lan Round Barrows Community: Llanboidy	Period: Prehistoric	NGR: SN207246
SAM No. CM214	Site Type: Promontory Fort - inland SAM Name: Pen-Gaer Promontory Fort Community: Llanboidy	Period: Prehistoric	NGR: SN182241
SAM No. CM264	Site Type: Enclosure SAM Name: Llangan Church Cropmark Enclosure Community: Henllanfallteg	Period: Prehistoric	NGR: SN177186
SAM No. CM293	Site Type: Hillfort SAM Name: Gelli Diogyn Hillfort Community: Llanboidy	Period: Prehistoric	NGR: SN198214
SAM No. CM294	Site Type: Enclosure SAM Name: Lan Enclosure Community: Llanboidy	Period: Medieval	NGR: SN216205
SAM No. CM380	Site Type: Promontory Fort - inland SAM Name: Defended Enclosure 300m NW of Clobach Community: Cilymaenllwyd	Period: Prehistoric	NGR: SN145218
SAM No. PE148	Site Type: Inscribed stone SAM Name: St Canna's Chair Community: Henllanfallteg	Period: Early Medieval	NGR: SN177187

APPENDIX IV:
Archive Cover Sheet

ARCHIVE COVER SHEET
Ffosddu Fach Wind Turbine
Carmarthenshire

ARCHIVE DESTINATION – HRS Wales

Site Name:	Ffosddu Fach
Site Code:	FF/2014/AA
PRN:	
NPRN :	N/A
SAM:	N/A
Other Ref No:	HRSW Report No. 146
NGR:	SN 19311 22492
Site Type:	Varied landscape
Project Type:	Archaeological Appraisal
Project Manager:	Richard Scott Jones
Project Dates:	September 2014
Categories Present:	N/A
Location of Original Archive:	HRS Wales
Location of duplicate Archives:	Dyfed Archaeological Trust
Number of Finds Boxes:	
Location of Finds:	
Museum Reference:	
Copyright:	HRS Wales
Restrictions to access:	None