

Nant y Maen Hydro-electric Scheme, Tregaron, Ceredigion.

Archaeological Appraisal



By

Richard Scott Jones (*BA, MA, MCIfA*)

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ARCHAEOLOGICAL APPRAISAL

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Prepared for:

Snowdonia Hydro Ltd.

On behalf of:

Mr G. Jones

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Recording Services Wales

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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 Snowdonia Hydro Ltd., to accompany a planning application for the proposed construction of a hydro-electric scheme along part of the Nant y Maen watercourse, near Nant y Maen Farm, east of Tregaron in the county of Ceredigion, centered on SN 76400 58580.

The proposed works has 6 main parts: Weir, intake, penstock, powerhouse, discharge point and cable run.

Dyfed Archaeological Trust (DAT) planning services were consulted, acting as advisors to the council on all heritage and archaeological matters, and recommended that an historic environment appraisal is commissioned by the applicant and its information provided to the authority before the determination of the application. Heritage Recording Services Wales (HRS Wales) were commissioned by Snowdonia Hydro Ltd to undertake this appraisal and duly submitted a project specification to Dyfed Archaeological Trust – Development Management section, who approved its content in July 2016

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

However, the presence of several prehistoric sites in the close vicinity to the proposal and the fact that other potentially prehistoric, medieval and early post medieval features have been recorded in the immediate landscape close to the proposed route, suggests that the area has a very high potential for buried archaeological remains associated with these periods. As such, in order to mitigate against the possibility that buried archaeological remains could be exposed and destroyed during construction of the scheme, it is recommended that during all ground-works for the intake, the pipeline, the powerhouse and the cable trench be undertaken under strict archaeological watching brief conditions.

Also, given that the proposed pipeline lies fairly close to a number of significant archaeological sites, it is recommended that some form of protective fencing or barrier/hazard tape with road irons is put around a number of these features with at least a 5m buffer zone around the site. This is to be done in order to protect the sites, particularly the designated Nant y Maen Standing Stone (SAM Ref: CD243), from possible damage by vehicle and other machinery being used during construction.

With regards to potential indirect effects, in summary, the appraisal has concluded that none of the settings of designated or any undesignated sites would be significantly affected by the proposed development. Due to the scale, character and form of the proposed development, it is predicted that there will be very little indirect visual effects on the setting of any designated and undesignated sites within the immediate vicinity of the Nant y Maen watercourse, nor within the 1km buffer zone.

However, it is recommended that materials used for the construction of the Powerhouse and the Intake, use materials that are in character and sympathetic to the local environment.

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 Snowdonia Hydro Ltd., to accompany a planning application for the proposed construction of a hydro-electric scheme along part of the Nant y Maen watercourse, near Nant y Maen Farm, east of Tregaron in the county of Ceredigion, centered on SN 76400 58580.
- 1.2 The specific objectives of the assessment were to:
- Identify the cultural heritage baseline within and in the vicinity of the proposed development;
 - 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 development 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 1km buffer zone from the proposed development along the watercourse 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, Conservation Areas and Historic Landscapes) within the immediate application area.
- 1.3 The Technical Appendices for this Chapter contains the following information:
- *Appendix I:* Figures;
 - *Appendix II:* Photographs;
 - *Appendix III:* Gazetteer of all known HER sites that lie within a 1km buffer zone from the Nant y Maen watercourse and the route of the proposed pipeline.
 - *Appendix IV:* Archive Cover Sheet
- 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 a brief appraisal focusing on the indirect effect of the proposed development on the setting of designated sites (Scheduled Ancient Monuments, Listed Buildings, Parks & Gardens, Conservation Areas and Registered Historic Landscapes) and undesignated high value sites within a 1km buffer zone from the proposed development along the watercourse. 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, 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 ClfA's Standards and guidance: for an *archaeological desk based assessment*.

The site

- 1.6 The proposed hydro scheme is to be constructed along part of the Nant y Maen watercourse near Nant y Maen farmstead, approximately 8.4km east of the town of Tregaron in the county of Ceredigion. The proposed scheme will abstract water from the watercourse and use the water to generate electricity exclusively for the Nant y Maen farm complex. Nant y Maen is presently off grid. Water will flow from the site of the weir and intake at SN 76504 58881, then through an approx. 700 meter long trenched and buried penstock (350mm pipeline), where the pressured water will run through a turbine Powerhouse at SN 76229 58295. All water will then be discharged back into the Nant y Maen watercourse. An underground electric cable will then take generated 15Kw electricity from the Powerhouse to the Nant y Maen farmstead.
- 1.7 The development site is located at the southern end of the Uplands Ceredigion Registered Historic Landscape (RHL). The proposed development site is not within any Conservation Area and nor is it within any Registered Park and Garden (P&G). Although there are no Scheduled Ancient Monuments (SAMs) along the proposed route of the pipeline or the working corridor, there are two (2) SAM sites within the proposed wider landscape study area and one of these, a Bronze Age Standing Stone (SAM Ref: CD243), is located only 18 meters to the west of the proposed electric cable trench. The nearest Listed Building (LB) lies over 4.2km away to the east.
- 1.8 The proposed development also lies within close proximity to a number of other archaeological and historic interests, a possible medieval enclosure (PRN: 29835) and two Bronze Age Round Barrows (PRN: 48404 / 5552). One of these barrows is also a SAM site (SAM Ref: CD242), perched on the spur of a slope approx. 350m southeast of the proposed Powerhouse area. A series of other designated and undesignated Bronze Age barrows are also positioned along the base of the Blaen Camddwr slope to the northeast of Nant y Maen, between 1km to 2km away, clearly demonstrating the rich prehistoric activity and potential in the immediate area.

Development Proposals

- 1.9 The proposed works has 6 main parts: Weir, Intake, Penstock, Powerhouse, Discharge point and cable run.

Weir & Intake

- 1.9 The weir will be built using concrete shuttering and a stainless steel coanda screen. Construction will happen during a period of dry weather and the stream can be diverted through a temporary channel using sandbags and earth, with settling pools to catch any release of sediment downstream. The owner has full access across the site. During construction of the weir, water will be diverted around the site using a temporary dam, drainage pipe and sandbags.

- 1.10 The intake location has been chosen to give reasonable gradient and power to the system at a location which has existing suitable access. The river here is stepped, creating a suitable natural intake where the geo-morphological impacts are low. However, the site is quite steep with high rocky banks on either side. Therefore the pipe line will need to be carefully laid through the rock to get out of the gorge before it can run its course down the open hillside. The concrete faces of the weir will be clad in local stone and built discreetly with a stainless steel screen. The intake will also be fitted with a fish and eel pass to allow free movement both up and downstream.
- 1.11 The intake weir will not be visible from any public roads or rights of way, care will be taken to construct the weir and pipeline sensitively and the area around the pipeline itself will regenerate swiftly after completion.

Penstock (Pipe route)

- 1.12 The 700 meters(m) of pressure pipe (350mm) will be buried in a mechanically excavated trench no wider than 1m. The working corridor either side of the pipeline trench will be 6m wide to give room to work within the site. Topsoil will be separated from subsoil during digging of the trench in order to ensure that it is returned correctly when burying the penstock. The penstock will only be visible from public rights of way during construction. Following this work the pipe will be buried and the disturbed ground restored. From the area of the intake and weir, the pipeline trench will be excavated in a south-westerly direction through an area of rocky outcrop and grassland following an existing curving trackway for approximately 160m. Following this, the pipeline trench will follow a straight path to the south-south-west for approximately 480m through heavy upland scrub and grassland, until it reaches the bridge that gives access to the Nant y Maen farm complex. From here the pipeline will turn slightly south-west and continue through an area of rocks and large boulders running parallel with the Nant y Maen for approximately 100m where it will meet with the location of the proposed powerhouse.

Powerhouse

- 1.13 The powerhouse is within close proximity to a public footpath therefore care will be taken in accordance with current legislation, to divert the footpaths during construction and revert the site back to its original state as quickly as possible. The footprint for the proposed powerhouse is to measure approximately 4m x 3.5m. The building will have stone cladding and a slate roof.

Discharge Point

- 1.14 From the Powerhouse, the extracted water will be discharged directly back into the watercourse.

Export and Grid Connection

- 1.15 There will be a connection cable from the powerhouse up to the main farmhouse. This trench will measure no wider than 0.60m and will be excavated to the required legal depth. All external cables will be SWA, buried to the legal depth and clearly marked with electrical warning tape.

Access for Plant, materials and workforce.

- 1.16 The landowner has full access across the site. Both the intake, weir and the powerhouse areas are fully accessible with the powerhouse accessed by a tarmac road and the intake via a well-maintained non-tarmac track.

1.6 Planning Background and Consultation

- 1.7 Following submission of a planning application by Snowdonia Hydro Ltd, to Ceredigion County Council (Ref: A160335) in May 2016, Dyfed Archaeological Trust (DAT) planning services were consulted, acting as advisors to the council on all heritage and archaeological matters, and recommended that an historic environment appraisal is commissioned by the applicant and its information provided to the authority before the determination of the application. This will ensure that the council members are fully informed about the impact of the development on the historic environment. The objective of this limited work will be to provide an informed answer to the question whether there is an archaeological dimension and constraint to be considered in the determination of the application, and whether this needs to be clarified through further investigation. In response to this request, Snowdonia Hydro Ltd. withdrew the planning application in June 2016, in order to undertake the requested historic environment appraisal.
- 1.8 Heritage Recording Services Wales (HRS Wales) were commissioned by Snowdonia Hydro Ltd to undertake this appraisal and duly submitted a project specification to Dyfed Archaeological Trust – Development Management section, who approved its content on 14th July 2016

Geology

- 1.9 The geology of the application area is generally of undifferentiated Llandovery Rocks, consisting of interbedded sandstone and conglomerates.

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. There are no Scheduled Ancient Monuments along the route of the proposed pipeline. However, there are two (2) SAM sites within the 1km buffer zone, one of these SAM sites lying only 18m east from the proposed cable trench.

2.3 Town and Country Planning Act 1990

2.4 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.

2.5 Planning (Listed Building and Conservation Areas) Act 1990

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 and nor are there any within the 1km buffer zone.

2.6 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. The nearest Conservation Area is the village of Tregaron, over 8km to the west.

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

2.8 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:

2.9 *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).

- 2.10 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).
- 2.11 In Wales this guidance replaces Planning Policy Guideline (PPG) 16: Archaeology and Planning (1990).

3 Methodology

Methodology of Baseline Survey

Aims and Objectives

- 3.1 In accordance with the ClfA'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.
- 3.2 The rapid desk-based assessment and field walkover established the following:
- Location of known archaeological sites and landscapes within the proposed development area.
 - Potential for palaeo-environmental samples within the proposed development area.
 - The density of undesignated archaeological sites within a 1km buffer zone along the route of the proposed pipe route and the potential that comparable sites may continue along the immediate edge of the proposed working area.
 - Previous disturbance or truncation on the site, which may have affected archaeological remains, including any significant changes in levels from those indicated on old Ordnance Survey maps.
 - Where information is available, the physical impact of the proposed development including the full extent of ground-works associated with construction of the:

1. Intake and weir
2. Penstock (pipeline)
3. Powerhouse
4. Discharge point
5. Cable trench

3.3 With the above in mind the appraisal will look at the following study areas:

- An appraisal of the proposed development area and the methodology.
- An appraisal of the known undesignated and designated archaeological sites within a 1km buffer zone around the route of the proposed development, with reference to the regional Historic Environment Record (HER) held by the Dyfed Archaeological Trust and Cadw. The assessment will consider the potential for comparable sites within the development area.
- Produce mitigation proposals for the preservation of sites *in situ*, or for the investigation, recording and recovery of remains and the publication of results.

3.4 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

3.5 The following cartographic sources were included in the study:

- OS Surveyors drawing (1820-21);
- Tithe apportionment and parish map of Caron (1839-45);
- Ordnance Survey 1st Edition map of 1886-87 (1:2500);
- Ordnance Survey 2nd Edition map of 1905 (1:2500);
- Ordnance Survey Edition map of 1948-1953 (1:2500);
- Ordnance Survey Land Ranger (1:50,000).
- Ordnance Survey Explorer (1:25,000)
- RAF Aerial Photo 1946
- OS Aerial Photo 2014

Photographs

3.6 Aerial photos consulted spanned the years 1946 – 2014.

- 3.7 All photographs appropriated during the site walkover were undertaken using a DSLR in SHQ JPEG format and where considered necessary RAW file format were also appropriated.
- 3.8 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.

Assessment of Direct Impact Methodology

- 3.9 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).
- 3.10 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.
- 3.11 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.

3.12 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.

3.13 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

3.14 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.

3.15 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

Site Inspection

3.16 The site visit set the context of the assessment, identifying:

- The location, character, form and condition of known and previously unknown archaeological sites and features within the proposed development area along the course of the Nant y Maen.
- The current site condition.

Assessment of Indirect Impact Methodology

3.17 Due to the position, nature and scale of the proposed development, it is anticipated that there will not be any great indirect impact on setting dimension to the appraisal. However, any potential indirect impact on any undesignated sites and designated sites that fall within the 1km buffer zone will be taken into consideration and appraised where considered necessary.

3.18 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) .

3.19 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).

3.20 The PPS5, Policy HE10, sections 113 – 117 refers to setting as,

- 3.21 *"...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.*
- 3.22 *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.*
- 3.23 *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.*
- 3.24 *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.*
- 3.25 *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).
- 3.26 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.
- 3.27 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.

- 3.28 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).
- 3.29 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.
- 3.30 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.
- 3.31 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.
- 3.32 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.
- 3.33 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'.
- 3.34 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).
- 3.35 All designated Scheduled Ancient Monuments (SAMs) and undesignated sites of schedulable quality have been assessed as being High Value sites and as such are of National importance.

- 3.36 There are no Listed Buildings (LBs) within the 1km radius that need to be assessed for any indirect effects.

4 Baseline Conditions

4.1 Previous Archaeological Works

- 4.2 Other than general field survey work that has taken place in the wider landscape over the decades, including desk based assessments and walkover surveys for the proposed Pen-y-Maen Windfarm in 2000; the Lynne Brienne Uplands Survey for the RCAHMS in 1995, and; the Forestry Enterprise Welsh Heritage Assets Survey in 2008, no other archaeological field work has been undertaken within the 1km buffer zone from the proposed pipeline route.

4.3 Ceredigion Historic Landscape – LANDMAP (see Figure 14)

- 4.4 The proposed application area falls entirely within one (1) historic Landscape character area within the LANDMAP survey region of Ceredigion. The Ceredigion region survey was surveyed in 2009.
- 4.5 The Ceredigion Historic Landscape was defined at Level 3 according to LANDMAP methodology (Ref 5). 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 Ceredigion Historic Landscape as a whole.

Bryngwyn Bach (LANDMAP Ref id: CRDGNHL099)

- 4.6 This character area was surveyed at Level 3 in 2009 and is described as a Ceredigion rural non-agricultural environment, with marginal land and large tracts of unenclosed upland with other fieldscapes, water and wetland. *Bryngwyn Bach* is a fairly large historic landscape covering approximately 4009 hectares in extant, with earth/turf banks and post and wire fencing forming the traditional boundary type. Significant archaeological interests are confined to buried-dry remains, relict earthworks, relict stone monuments of the prehistoric periods and industrial and agricultural remains of the post medieval and industrial periods. There are several Scheduled Ancient Monuments (SAMs) within this historic landscape, but no Listed Buildings (LBs). There are also no Registered Parks & Gardens or Conservation Areas. However, this historic landscape does lie within the Registered Historic Landscape (RHL) of the Upland Ceredigion (HLW (D) 2).
- 4.7 The area is considered of *Outstanding* value historically and is generally in good condition. The existing management of this area is considered to be generally appropriate with maintenance of existing access and landscape features. The principle management of this landscape area is to retain and conserve all existing historic landscape components. According to LANDMAP evaluation, the landscape is considered to have High integrity, Outstanding survival, Outstanding rarity and is generally of Outstanding value overall. The following table lists the principle evaluation criteria for this

character area. The overall evaluation of this landscape concludes that it is an Outstanding value landscape, which scores Outstanding in three (3) categories and High in one other. The areas Condition and Potential criteria have not been assessed.

Table 2 - LANDMAP Evaluation Criteria (Ref id: CRDGNHL099)					
Integrity	Survival	Condition	Rarity	Potential	Overall Evaluation
High	Outstanding	-	Outstanding	-	Outstanding

4.8 Registered Historic Landscape – Uplands Ceredigion (HLW (D) 2) (see Figure 15)

- 4.9 The proposed development also lies directly within part of the southern end of the Registered Historic Landscape of the Uplands Ceredigion (HLW (D) 2). This designated landscape is further divided into historic landscape character areas (HLCAs). The proposed development lies within the Bryngwyn Bach HLCA.

Bryngwyn Bach HLCA

- 4.10 This extremely large historic landscape character area (3,916 hectares) crosses from Ceredigion into Carmarthenshire. It is entirely upland and included within it are parts of the Bishop of St David's Llanddewi Breifi estate and Strata Florida Abbey's Penardd Grange. It is likely that by the late Medieval Period both of these holdings would have been divided into farms, which were leased out and farmed on a commercial basis. The antiquity, however, of all the upland farms contained within this area is uncertain, and while it is likely that some originated in the Medieval Period in the manner indicated above, others may well have started as squatter settlements in the 18th or early 19th century. The 20th century has witnessed an abandonment of these farms, and only a handful are now occupied. The surviving chapel at Soar y Mynydd testifies to the once more populated nature of this area. The farms are clearly an important element in the landscape, but the vast majority of the land in this area is, and has been for at least the last few centuries, unenclosed, and would have been claimed by the Crown. Crossing the area are important trans-mountain natural route-ways linking the farming communities of Ceredigion with lands and towns to the east. These trans-mountain route-ways are celebrated for their use by drovers in the historical period, but they are likely to be of great antiquity, and not only provided communication across the Cambrian mountain chain, but allowed access onto the high moorland for the establishment of permanent or seasonal settlement, for the grazing of animals and for peat cutting.
- 4.11 This is a very large tract of unenclosed upland with an uneven and widely dispersed settlement pattern of upland farms. At the northern end unenclosed land runs down to as low as 200m, but with heights of over 500m achieved in the central area. On average the height range is between 300 and 450m. The landscape is rarely craggy, and wide stretches of undulating moor with blanket bog on higher levels and peaty hollows are the norm. There is abundant evidence of deserted settlements

across this area, particularly along the route-ways. Occupied farms, of note are Nantymaen, are traditionally stone built, surrounded by a collection of modern farm buildings, and situated within a system of just a few fields. Older boundaries of these fields consist of earth banks, but wire fences now provide the stock-proof barriers. These fields now comprise improved pasture, and there are further blocks of unenclosed improved pasture close to the farms. Apart from a block of recent forestry, this is a treeless landscape.

4.12 The recorded archaeology of this area is rich and varied. Considerable time-depth to the landscape is provided by the numerous Bronze Age monuments that include single round barrows, groups of round barrows and cairns, standing stones and a stone circle. No occupation sites of this date are known, but the density of these ritual and funerary monuments surely indicates a settled landscape. Castell Rhyfel is an Iron Age site situated towards this area's border, and Gwys-yr-Ychen Bannog is a defensive or administrative linear earthwork. Numerous abandoned cottages and other settlement sites indicate a greater level of population across this area through to the 19th century. Agricultural features and evidence of peat cutting testify to this former occupation.

4.13 This is a very well defined area; to the east and west lie very extensive forestry plantations. To the north and northwest there is mainly lower lying enclosed and settled land (Ref 6).

4.14 Heritage Assets within 1km buffer zone (Historic Environment Record) (see Appendix II for further details)

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

4.15 Within the 1km buffer zone around the route of the proposed hydro-electric scheme there are a total of eight (8) known undesignated prehistoric sites, all of which are potentially Bronze Age in date. There are also two (2) designated Bronze Age SAM sites, one burial cairn (SAM Ref: CD242) and one standing stone (SAM Ref: CD243). The undesignated sites include six (6) Bronze Age Round Barrows/Burial Cairns (PRN's: 9019 / 29829 / 5552 / 29830 / 8524 / 29813/ 8524), two (2) standing stones (PRN's: 29819 / 5553 (SAM Ref: CD243) and a possible settlement area (PRN: 32900). These prehistoric sites are scattered fairly evenly over the 1km buffer zone, with all of the burial cairns positioned in upland summit locations, whilst the standing stones and potential settlement area are positioned in low lying areas.

4.16 The two designated sites within the 1km buffer zone include:

- i) *Nant y Maen Standing Stone* (SAM Ref: CD243 / PRN: 5553) – A highly inclined boundary stone, but scheduled as a Bronze Age Standing Stone (Cadw). A report was received by the RCAHMS in 2014 that the stone has 'cracked and fallen' and now lies in two pieces, the lower part still earthfast. The fracture appears to have occurred along a natural fault line (quartz seam) in the rock, probably by natural processes rather than by

any deliberate vandalism. The remains of this stone are positioned only 18m west of the proposed cable trench.

ii) *Cefncerrig Round Cairn* (SAM Ref: CD242 / PRN: 8524) – A loosely structured sub-circular cairn, c.21m NW-SE by 18m and 0.2m high, showing a discontinuous kerb-ring of upright and leaning slabs, having a shooting box set into its centre. This cairn is positioned on the summit of Cefn Cerrig at a height of 445m AOD and is positioned approximately 370m east of the proposed pipeline route on the spur of the slope.

- 4.17 The HER records record no known prehistoric sites along the route of the proposed pipeline or the 4m wide working corridor either side of the pipeline.

Iron Age and Romano-British period

- 4.18 There are no known Iron Age or Romano-British period sites recorded within the HER database or the National Monuments Record (NMR) along the route of the proposed development or within the 1km buffer zone.
- 4.19 However, although this is the case, this does not mean that there are no buried archaeological remains associated with these time periods, especially given that there is especially rich evidence of prehistoric activity in the wider landscape, with possible settlement remains evidence within the 1km buffer zone (PRN: 32900).

Medieval Periods

- 4.20 Within the regional HER database there are nine (9) potentially undesignated medieval sites situated within the 1km buffer zone from the proposed development area. A number of these sites may also have early post medieval origins. Of this total number, four (4) are recorded as being possible medieval longhuts (PRN's: 9285 / 29834 / 29810 / 29818). Two of these longhuts (PRN: 29834 / 9285) are positioned at the northern end of the Nant y Maen watercourse, between 190m and 540m north of the proposed intake and weir.
- 4.21 The other known potentially medieval sites include an area of common land (PRN: 14123), two (2) dry-stone built shelters (PRN: 29811 / 29810) and two (2) dry-stone built walled enclosures (PRN's: 29821 / 29835). Again, as with the longhut remains, these sites may also be early post medieval in date.
- 4.22 There are no designated high value medieval sites within the 1km buffer zone.

4.23 Post-Medieval periods

- 4.24 Within the 1km buffer zone, as well as the medieval sites mentioned in the previous section that may be or else have continued in use into the early post medieval period, there are a further twenty-five (25) undesignated post medieval sites within the HER database.

- 4.25 As would be expected, this chronological period marks the greatest number of known sites within the 1km buffer zone, Site types include: 1 clearance cairn, 1 cottage, 6 drainage ditches, 1 drainage system, 2 farmsteads, 2 field boundaries, 1 longhut, 1 milestone, 5 peat workings, 1 quarry, 1 root vegetable store, 3 trackways.
- 4.26 Of all of these post medieval sites, the closest site to the proposed development is a post medieval sheepfold enclosure (PRN: 29835). This site is positioned on the west bank of the Nant y Maen watercourse, approximately 30m from the proposed pipeline and south of the proposed intake area. This enclosure is of drystone construction with turf covered walls. The walls are constructed from relatively small to middle sized stones. Entrance to the enclosure was gained from the southern side where a natural boulder has been utilized to form part of the enclosure.

4.33 Modern Period

- 4.34 Within the HER database there is only one (1) modern site recorded within the prescribed 1km buffer zone. This site relates to a quarry site (PRN: 29842) at the side of the public road approximately 770m south of the proposed powerhouse.

Unknown Period

- 4.35 Within the HER database there are no sites of unknown periods recorded within the application area nor within the prescribed 1km buffer zone.

4.36 Cartographic Sources

OS Surveyors drawing (1820-21) (Figure 5)

- 4.37 This early Ordnance Survey drawing of 1820-21 shows very little detail apart from the position of Nant y Maen farmstead and a number of its field boundaries, the position of the main watercourses and the position of the designated Nant y Maen Standing Stone (SAM Ref: CD243), marked solely as 'erect stone'. Interestingly there are no further boundary stones marked on this map, which offers further support for this stone being prehistoric rather than a solely a later medieval boundary stone.

Tithe Map and Apportionment of the parish of Caron (1839-45) (Figure 6)

- 4.41 As with the early OS Surveyors drawing this mid 19th century tithe map clearly shows the farmstead of Nant y Maen and a number of its still existing field boundaries.
- 4.42 Also shown, as a name only is the designated Nant y Maen standing stone (SAM Ref: CD243), but marked as 'Maen Llwyd' or 'grey stone'. The tithe also shows that this stone appears to have been incorporated into parish boundary with a number of other stones on the south facing spur of Cefn Cerrig. Other features shown on the tithe map include the post medieval sheep enclosure (PRN: 29835) immediately west of the proposed pipeline and the remains of a long hut (PRN: 29834).

Table 3 - Tithe Map and Apportionment details for Caron parish within Application Area				
Tithe No.	Name	Owner	Occupier	Details
Nant y Maen				
2262	Part of Cae danty	Thomas Davies	Daniel Davies	No details given
2263	Maen sheepwalk	Thomas Davies	Daniel Davies	No details given
2264	Esgair wen	Thomas Davies	Daniel Davies	No details given
2265	Esgair Ddu	Thomas Davies	Daniel Davies	No details given
2266	Part of Cae danty	Thomas Davies	Daniel Davies	No details given
2267	Barc tricound	Thomas Davies	Daniel Davies	No details given
2268	Cae Camddwr	Thomas Davies	Daniel Davies	No details given
2269	Cae gwillt	Thomas Davies	Daniel Davies	No details given
2270	Sheepwalk, road and river	Thomas Davies	Daniel Davies	
2271	Esgair Ffrwd	Thomas Davies	Daniel Davies	

OS First Edition map 1:2500 (1886-87) (Figure 7)

- 4.43 This first edition Ordnance Survey map series shows the application area much as it is today, but with bounded fields only to the south and southwest of the farmhouse itself, much as it is shown on the earlier tithe map of 1839-45. Features shown on this map series close to and along the route of the proposed development include the Nant y Maen standing stone (SAM Ref: CD243) and the Nant y Maen sheepfold enclosure (PRN: 29835).

OS second Edition map 1:2500 (1905) (Figure 8)

- 4.44 No great change from the earlier first edition map.

OS 1948-53 Edition map 1:2500 (Figure 9)

- 4.45 No great change from the earlier edition map.

Aerial Photos (Figure 10)

- 4.46 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. No readily apparent crop-marks were identified on any of the aerial photos analysed.

Table 5. Vertical Aerial Photos consulted				
Sheet No.	Sortie	Frame No.	Date	Type
-	106G/UK/1470	4437	04/05/1946	RAF

4.48 Site Visit

4.49 At the time of the site walkover the weather was good, sunny dry and clear. However vegetation i.e. scrub and grass was relatively high.

4.50 The site visit of the proposed development area along the Nant y Maen watercourse, walked along the route of the proposed pipeline and around the position of the proposed intake and powerhouse, within a 25m – 30m corridor. The site visit also assessed the condition and character of the known recorded sites, with special focus on the area immediately surrounding the designated Nant y Maen standing stone (SAM Ref: CD243), where the proposed cable run will lie only 18m to the east of the stone.

4.52 As well as assessing the condition, character and form of known existing sites along the route, such as the designated Nant y Maen standing stone and the post medieval sheepfold enclosure (PRN: 29835), the rapid walkover survey also managed to record the positions of a number of previously unknown features.

4.53 Sites noted within the Application Area

4.54 The cartographic study and site visit identified a total of eleven (11) new sites. A number of these features were identified from both the cartographic work and the site visit. A list of all the new sites identified is given below in Table 6 below (see also Figure 12).

Table 6. Heritage Assets within application site				
Site No.	Period	Site Type	Condition	Source & period
1	Post Medieval	Earth bank (flood defence)	Still present	Site visit
2	Post Medieval	Bridge	Still present	Tithe Map and all later OS maps
3	Post Medieval?	Dry-stone piles / structure	Ruinous	Site visit
4	Post Medieval?	Dry-stone stone piles / structure	Ruinous	Site visit
5	Modern	Trackway.	Existing	Site visit
6	Prehistoric /Medieval	Dry-stone structure	ruin	Site visit
7	Post Medieval	Dry-stone sheepfold (same as PRN: 29835)	Good	Tithe Map 1820-21
8	Post Medieval	Dry-stone wall	Good	Site visit and Tithe Map 1820-21
9	Post Medieval	Drainage ditch & bank	in use	Site visit

Table 6. Heritage Assets within application site				
Site No.	Period	Site Type	Condition	Source & period
10	Prehistoric /Medieval	Boulder and stone scatter. Possible settlement remains	stone spread	Site visit
11	Post Medieval	Drainage ditch & bank	in use	Site visit

- 4.55 The most significant of the new features recorded during the walkover were two dry-stone stone piles (Site No's. 3 and 4). Both these features are positioned on the northern bank of the Nant y Maen watercourse and each appears to be raised on a small platform area, each measuring approximately 4m x 5m in extent. Each feature consists of a pile of local stone partly turf and grass covered. There doesn't appear to be any well defined edge to these features, but they may be the remains of small collapsed stone enclosures rather than clearance or storage cairns. Without further information, the age of these features is uncertain, perhaps medieval or early post medieval. Other abandoned farming materials are in close vicinity to these features, which gives further suspicion to their age and character.
- 4.46 The other significant features recorded from the site walkover were the remains of what appears to be a small 'lluest' (Site No. 6). This feature measures approximately 5m long x 2m wide aligned east to west with its west end incorporated into a natural rocky crag (see Photo plates: 10 and 11). Overall the form of this feature is generally oval. The stones vary in size, from 0.20m – 0.70m in size. A number of the stones at the sides of the feature appear to have once been standing. This feature is positioned on a plateau area overlooking the stream with a fairly extensive boulder scatter to the north (Site No. 10), which gives the impression of a possible former settlement area, perhaps prehistoric. If this is the case, then it may be that this area has been robbed of stones from other stone built structures in order to build the post medieval dry-stone sheepfold that exists only 80m to the north (PRN: 29835). This boulder scatter and this structure lie only approximately 30m west of the proposed pipeline.
- 4.47 No areas of deep peat deposits were encountered along the route of the proposed pipeline. Areas of exposed ground, along the edge of the existing trackway by the intake and around the Nant y Maen farmstead, suggest that the peat in this area is relatively shallow with natural clay lying only approx. 0.40m below the present ground surface.

5 Assessment of Effects

Direct Physical Effects

- 5.1 The desk based appraisal and site visit identified ten (10) archaeological sites of interest adjacent to the route of the proposed micro-hydro scheme. Of these sites, the assessment identified that there will potentially be a slight direct physical impact from groundwork for the pipeline on only one heritage asset. This site is the remains of an earth and stone bank at the side of the stream that appears to be acting as a flood bank (Site No.1). This feature is probably post medieval in date and is contemporary

with the Nant y Maen farm complex

1. *Site No.1 (Flood bank of earth and stone)* – This flood bank is positioned immediately parallel with the Nant y Maen watercourse and runs directly opposite a dry-stone field wall (Site No. 2). The development proposes to mechanically trench a gap through this bank to insert a 350mm pressure pipe. Although the dimensions of this trench will obviously be small, a section of this bank will be disturbed. However, given the length of this bank, which is a medium value feature, it is predicted that the direct impact on this feature as a whole will be of *minor* magnitude and therefore of *minor* significance.

It is also worth bearing in mind that this flood bank will be reinstated following the laying of the pipe.

- 5.2 The construction of the proposed intake and weir will not directly impact on any known sites, features or deposits in this area.
- 5.3 Again, as with the Intake, the construction of the Powerhouse, will not directly impact on any known archaeological sites, features or deposits in this area.
- 5.4 However, as well as the above flood bank feature identified along the route of the proposed pipeline, the fact that there is considerable evidence of prehistoric activity in the form of Bronze Age round barrows, cairns and standing stones and possible settlement remains along the courses of the Nant y Maen and the Camddwr, where ground work will be undertaken, along the route of the pipeline, the powerhouse and the cable run, then it cannot be ruled out that there aren't any buried archaeological remains, features or deposits relating to both the prehistoric and medieval periods present along the route of the proposed development that could become exposed or even damaged from the proposed groundwork.
- 5.5 As long as the proposed route of the penstock and the positions of the intake, powerhouse and cable run do not deviate significantly from the proposed route and positions depicted on the site plan, then it is predicted that no further direct impact on any known or newly discovered sites will occur.
- 5.6 Regarding the route of the proposed cable run, it is proposed that this trench will leave the powerhouse and use an existing gateway between a dry-stone field wall and run parallel with an existing drainage ditch and bank (Site No. 11). At its closest point this trench will run approximately 20m east of the designated Bronze Age Nant y Maen Standing Stone (SAM Ref: CD243) and its scheduled area. Although the proposed trench will not in any way disturb this standing stone and its designated area, because of its close proximity to groundwork, there is a high chance that significant prehistoric deposits and finds may well become exposed in this area.

Registered Historic Landscape – Uplands Ceredigion

- 5.7 With regards to the *Bryngwyn Bach* historic landscape character area (HLCA) within the designated Uplands Ceredigion landscape, the proposal will only directly affect an area of approximately 750 square meters of area (pipeline, powerhouse and cable run). Given that the *Bryngwyn Bach* HLCA is a very large HLCA that covers 3,916 hectares (39,160,000 square meters) in extent, the direct impact from the proposals on the HLCA will be insignificant and given also that no known heritage assets will be directly affected to any significant degree, then it is predicted that the proposed development will have a *Negligible* magnitude of effect on this HLCA and therefore of only *Minor* significance.

Indirect non-physical Effects

- 5.8 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 very slight visual component, which is considered under indirect visual effects below.

Indirect Visual Effects

- 5.9 Due to the scale, character and form of the proposed development, it is predicted that there will be very little indirect visual effects on the setting of any designated and undesignated sites within the immediate vicinity of the Nant y Maen watercourse, or within the 1km buffer zone, apart from the designated Nant y Maen Standing Stone (SAM Ref: CD243). However, each element of the proposed work has been assessed in accordance with the Matrix of Significance in Table 1.

Intake & Weir

- 5.10 It is predicted that once constructed, the intake and weir will have a *No Change* magnitude of effect on the setting of any other medium value or high value sites in the immediate vicinity or within the 1km buffer zone, and as such the significance of effect will be *Negligible*.

Penstock (pipe route)

- 5.11 Given that this length of pipe will be buried following construction, it is predicted that the proposed pipeline will have a *No Change* magnitude of effect on the setting of any medium value sites or High value sites in the immediate vicinity or within the 1km buffer zone from the proposed pipeline route, and as such the significance of effect will be *Negligible*.

Powerhouse and Discharge Point

- 5.12 The proposed powerhouse is to measure approximately 4m (L) x 3.5m (W) x 3.15m (H). It is to be constructed within close proximity to a public footpath therefore care will be taken in accordance with current legislation, to divert the footpaths during construction and revert the site back to its original state as quickly as possible. The proposed powerhouse will have stone cladding and a slate roof.

- 5.13 The powerhouse will be positioned only approximately 35m south of the designated *Nant y Maen Standing Stone* (SAM Ref: CD243) and this is the only site that will have its setting slightly indirectly affected by the proposed powerhouse once it is operational.
- 5.14 The *Nant y Maen Standing Stone* appears to have been deliberately positioned topographically by its original builders, between the confluence of the two watercourses, the Camddwr and the Nant y Maen. This allows visibility from and towards the stone to the west along the Blaen Camddwr, to the east toward the Cefn Cerrig rocky outcrop and to the south where the Nant Ffrwd and the Nant y Cwr watercourses meet. Interestingly, to the west along the banks of the Camddwr, there are several known Bronze Age burial cairns and there are also a number of burial cairns, one of them designated (SAM Ref: CD242) positioned atop the rocky ridge of Cefn Cerrig. Given this fact, this may suggest that, if the Nant y Maen standing stone is contemporary in date to these burial sites, then it very likely played an important ritualistic role in conjunction with these ritual sites. Unfortunately, the Nant y Maen standing stone has suffered somewhat over the centuries with it having become steeply inclined to the north, which has led to it having recently broken into two separate large pieces, the stone having cracked along a natural fault line of a seam of quartz due to its heavy lean. The base of the stone however is still earth fast.
- 5.15 The powerhouse is to be positioned approximately 35m south of this designated standing stone, but given the building's low height and the fact that it will be positioned at a slightly lower level from the stone's setting at stream level and the fact that it will be clad in locally sourced stone, the effect on the setting of the stone from the powerhouse once it is operational will only be very slight. As such, it is predicted that the presence of the proposed powerhouse will have only a *Negligible* magnitude of effect on this designated site and as such of only *Minor* significance.
- 5.16 The indirect effect from the powerhouse once it is constructed on all other heritage assets close to the proposed development and on those within the 1km buffer zone, will be of *No Change* magnitude and therefore of only *Negligible* significance

Access track

- 5.17 Initial access to the site for construction and maintenance will be using existing farm tracks. As there will be no need to create new tracks or lay any temporary surface down and the machinery and 4x4's being used will only be light, then it is predicted that there will be no indirect effect on any known sites in this area. In accordance with the significance criteria, it is predicted that access to the site will have a *No Change* magnitude of effect on any known HER sites and therefore a *Negligible* significance of effect.

Registered Historic Landscape – Uplands Ceredigion

- 5.18 With regard to the predicted indirect effects from development proposals on the Registered Historic Landscape of the uplands Ceredigion and in particular the *Bryngwyn Bach* HLCA, due to its scale,

low direct impact, the fact that the pipeline will be buried, the only elements of the development that will potentially indirectly affect the historic landscape character area will be the powerhouse and the intake. However, due to their positioning and sympathetic character with regards to local stone being used, the predicted indirect effect on the HLCA will be of *Negligible* magnitude and therefore of only *Minor* significance.

5.19 Assessment of Residual Effects

- 5.20 The long-term residual effects of the proposed development are considered to be neutral with regard to direct effects on cultural heritage.
- 5.21 There will be no loss of known cultural heritage assets, due to the position of the proposed development.
- 5.22 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.

5.23 Significance of the remains

- 5.24 In terms of rarity with regards to sites within the application area, the site walkover identified a number of interesting features that have not been noted before. Two of these features (Site No's. 3 and 4) are positioned on the west bank of the Nant y Maen watercourse close to the footbridge/trackway that gives access to and from the Nant y Maen farm complex. The form and character of these dry-stone features is hard to define, but they do appear to have once been small structures or small enclosures of some kind or other, which have since fallen into ruin and collapsed which gives the impression that they are old clearance cairns, but given their position immediately at the water's edge, this seems unlikely. Other dry-stone collapsed features are present similar to these in the wider setting of this historic landscape and as such they are relatively significant remains that give depth of history to this landscape.
- 5.25 Two other sites noted along the route of the Nant y Maen, was the remains of a possible 'Lluest', or a small encampment structure (Site No.6) positioned within an area of boulder scatter (Site No. 10). Given the topographic position of the dry-stone structure and the character of the boulder spread over a fairly large natural terrace area, may well suggest that this area marks the remains of a former prehistoric settlement area that has since had the majority of its settlement stones removed in the early post medieval period in order to construct the dry-stone sheepfold enclosure immediately to the north of this area (Site No. 7). If this area is the remains of an early settlement, then this is a significant site and what remains of it should be preserved, but without further investigation and more detailed survey this interpretation is far from conclusive. The proposed pipeline will be positioned approximately 20-30m northwest of this boulder scatter.
- 5.26 Given the presence of several Bronze Age burial cairns and a number of standing stones and

possible prehistoric settlement remains in the immediate area of the proposed development, the potential for the discovery of significant buried remains during groundwork in the area is considered to be high.

- 5.27 The assessment of effects section predicted that only one site, a post medieval flood bank of earth and stone (Site No.1) will be directly affected by the proposed pipeline groundwork. This feature is a linear feature serving a function as a flood bank and although it is a fairly significant feature, given that it is the only one close to the Nant y Maen farm complex, it is of medium value and only a small part of it will be directly affected, but this will also be reinstated following groundwork.

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 of any significance 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 significant heritage assets that will be directly impacted upon by the proposed development that warrant pre-determination evaluation work.

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. In this instance, there are no known significant heritage assets that will be directly impacted upon by the proposed development that warrant excavation at the pre or post-planning stage.

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 should significant remains or deposits become exposed.
- 6.6 In this instance, the primary HER database records have shown that there are *known* significant undesignated sites within the immediate area and within the vicinity of the proposed hydro scheme (pipeline, powerhouse and cable run). These sites include one designated Bronze Age standing stone (SAM Ref: CD243) positioned very close to the proposed cable run, three collapsed and ruined dry-stone built structures of unknown date (Site No's 3, 4 and 6) and an area of boulder scatter, that may or may not be an area of prehistoric settlement (Site No. 10). All of these sites are positioned along the route of the Nant y Maen watercourse, with a number of them positioned only 18m – 30m away from any proposed groundwork. The presence of these sites alone clearly shows that the area has a *high* potential for buried archaeological remains associated with the prehistoric, medieval and post medieval periods. Also, given the presence of known prehistoric sites, both designated and undesignated, in the immediate landscape surrounding the proposed development areas, the potential for buried archaeological remains associated with these periods increases even further. As such, in order to mitigate against the possibility that buried archaeological remains could be exposed and destroyed during construction of the scheme, it is recommended that during all ground-works for the intake, the pipeline, the powerhouse and the cable trench, be undertaken under strict archaeological watching brief conditions.
- 6.7 Also, given that the proposed pipeline lies fairly close to a number of significant archaeological sites, it is recommended that some form of protective fencing or barrier/hazard tape with road irons is put around these features with at least a 5m buffer zone around the site. This is to be done in order to protect the sites, particularly the designated Nant y Maen Standing Stone (SAM Ref: CD243), from possible damage by straying vehicle and other machinery being used during construction. Protective fencing or barrier tape should be erected around the following sites and areas:

- 1) Nant y Maen Standing Stone (CD243)
- 2) Boulder Scatter (Site No. 10) – Encompasses Site No. 6
- 3) Dry-stone structures (Site No's. 3 and 4)

7 Summary of Effects and Conclusions

7.1 Direct Effects and Conclusions

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

7.3 However, the presence of several prehistoric sites in the close vicinity to the proposal and the fact that other potentially prehistoric, medieval and early post medieval features have been recorded in the immediate landscape close to the proposed route, suggests that the area has a *very high* potential for buried archaeological remains associated with these periods. As such, in order to mitigate against the possibility that buried archaeological remains could be exposed and destroyed during construction of the scheme, it is recommended that during all ground-works for the intake, the pipeline, the powerhouse and the cable trench be undertaken under strict archaeological watching brief conditions.

7.4 Also, given that the proposed pipeline lies fairly close to a number of significant archaeological sites, it is recommended that some form of protective fencing or barrier/hazard tape with road irons is put around these features with at least a 5m buffer zone around the site. This is to be done in order to protect the sites, particularly the designated Nant y Maen Standing Stone (SAM Ref: CD243), from possible damage by vehicle and other machinery being used during construction.

7.5 Indirect Effects and Conclusions

7.6 In summary, the appraisal has concluded that none of the settings of designated or any undesignated sites would be significantly affected by the proposed development. Due to the scale, character and form of the proposed development, it is predicted that there will be very little indirect visual effects on the setting of any designated and undesignated sites within the immediate vicinity of the Nant y Maen watercourse, nor within the 1km buffer zone.

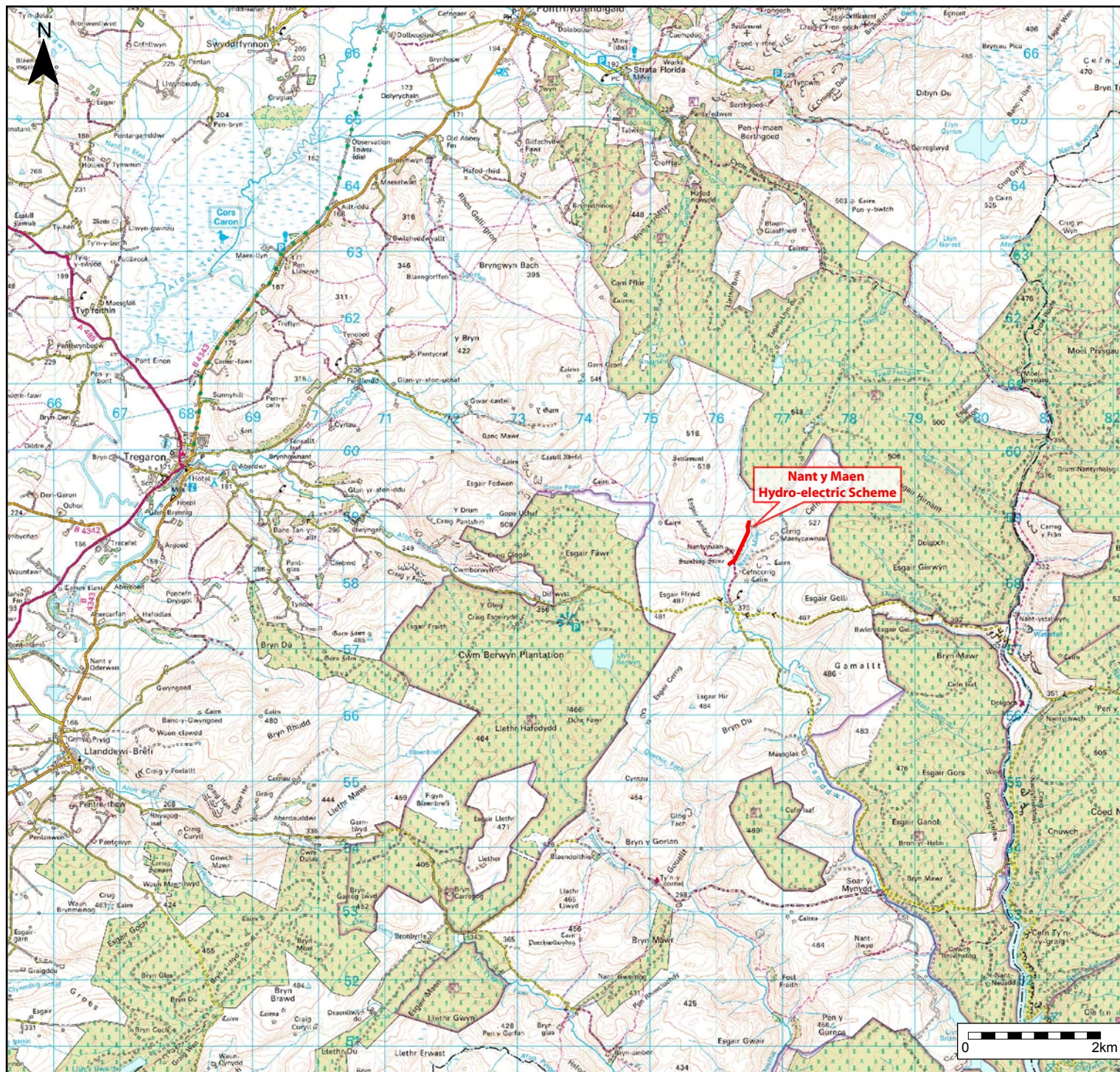
7.7 However, it is recommended that materials used for the construction of the Powerhouse and the Intake, use materials that are in character and sympathetic to the local environment.

8 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 Ceredigion LANDMAP Historic Landscape
- Ref 6 Register of Landscapes of Historic Interest in Wales

APPENDIX I:

Figures



Legend

— Study Area

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

Date: July 2016

Prepared by:

Heritage
Recording Services Wales

Client:

Snowdonia Hydro

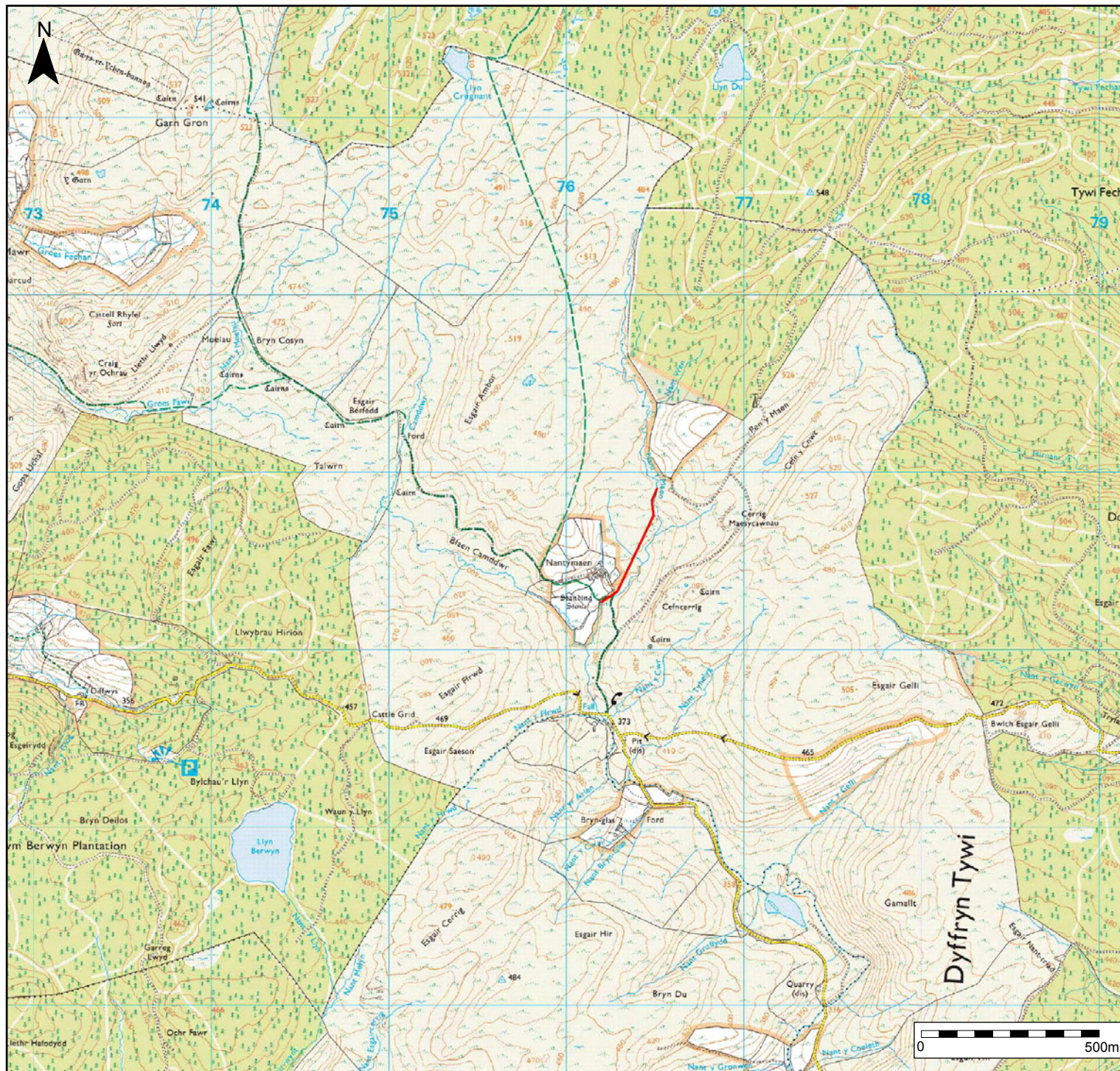
On behalf of:

Mr G. Jones

Project Title:

Nant y Maen Hydro Scheme

Figure 1. Site Location



Legend

— Proposed pipeline

* Base Map = OS 1:25,000 Explorer Map

Approximate Scale (@ A4): 1:28,000

Date: July 2016

Prepared by:

Heritage
Recording Services Wales

Client:

Snowdonia Hydro

On behalf of:

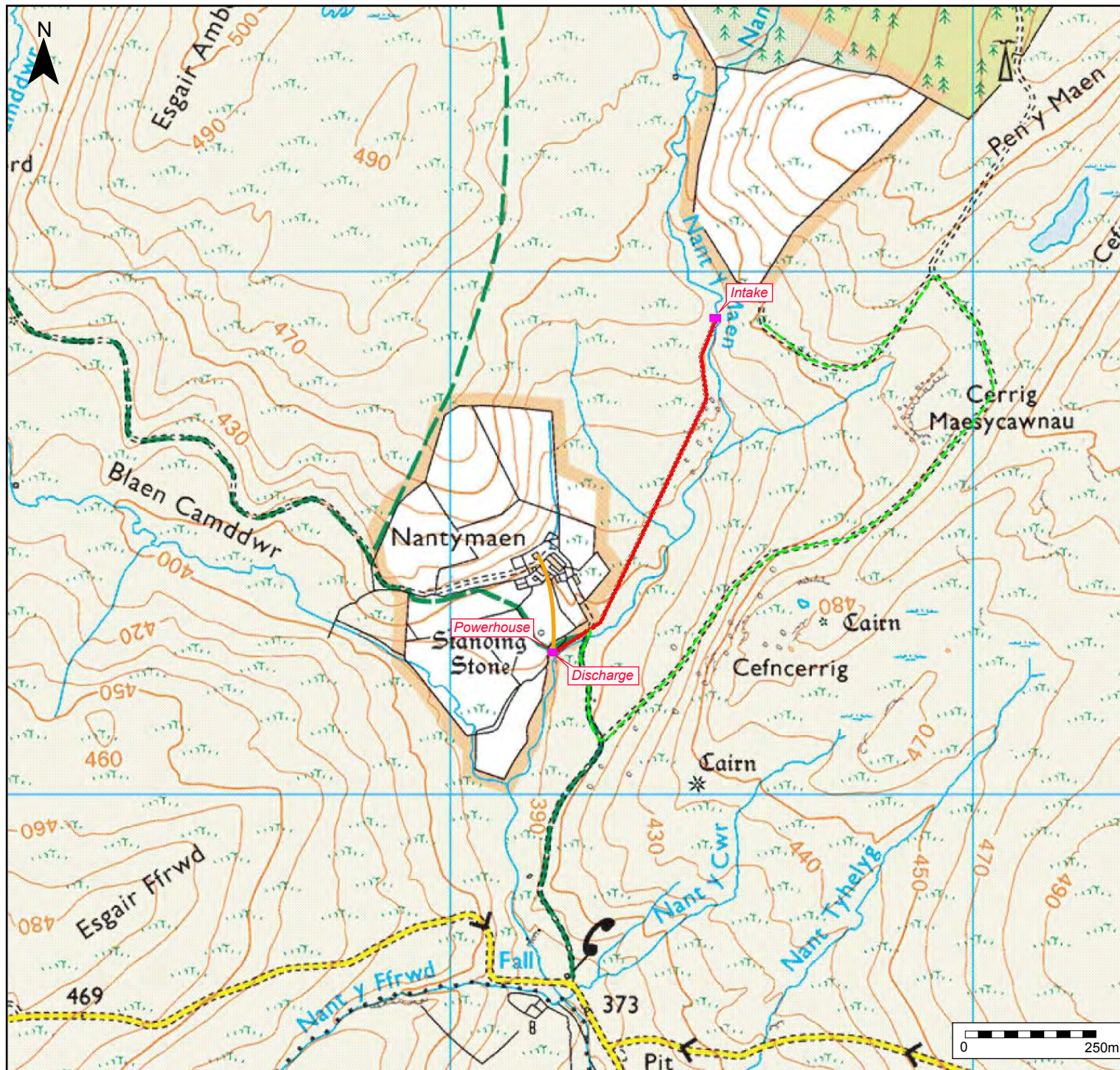
Mr G. Jones

Project Title:

Nant y Maen Hydro Scheme

Figure 2.

Site Location Map



Legend

- Proposed pipeline
- - - 6 meter wide working corridor
- - - Access Track
- Intake and Powerhouse
- Cable trench

* Base Map = OS 1:25,000 Explorer Map

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

Date: July 2016

Prepared by:

Heritage
Recording Services Wales

Client:

Snowdonia Hydro

On behalf of:

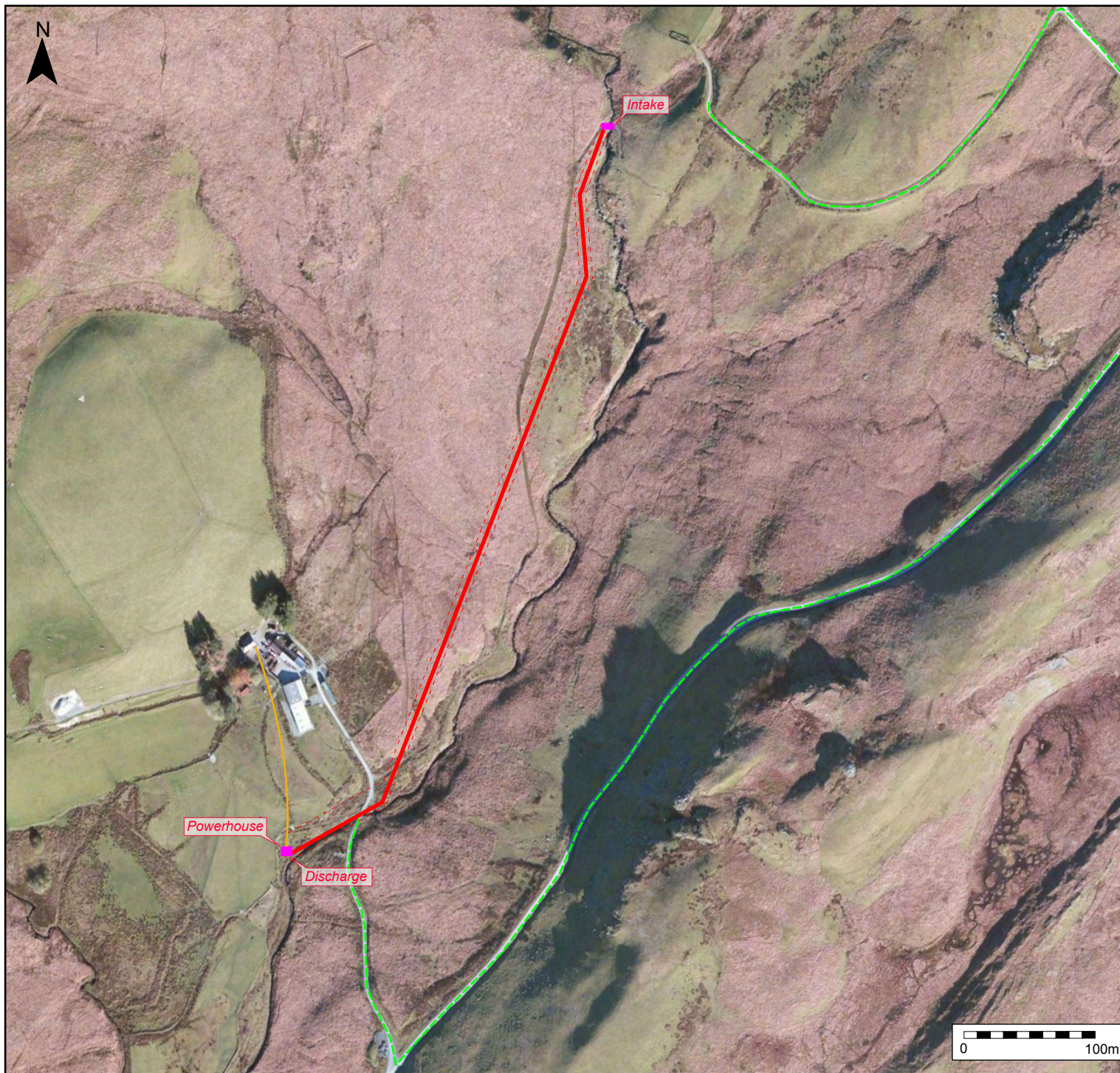
Mr G. Jones

Project Title:

Nant y Maen Hydro Scheme

Figure 3.

Site Design



Legend

- Proposed pipeline
- - - 6 meter wide working corridor
- - - Access Track
- Intake and Powerhouse
- Cable trench

Approximate Scale (@ A4): 1:4,000

Date: July 2016

Prepared by:



Client:

Snowdonia Hydro

On behalf of:

Mr G. Jones

Project Title:

Nant y Maen Hydro Scheme

Figure 4.

OS Aerial Photo (2014)



Legend

 Proposed pipeline

Approximate Scale (@ A4): 1:50,000

Date: July 2016

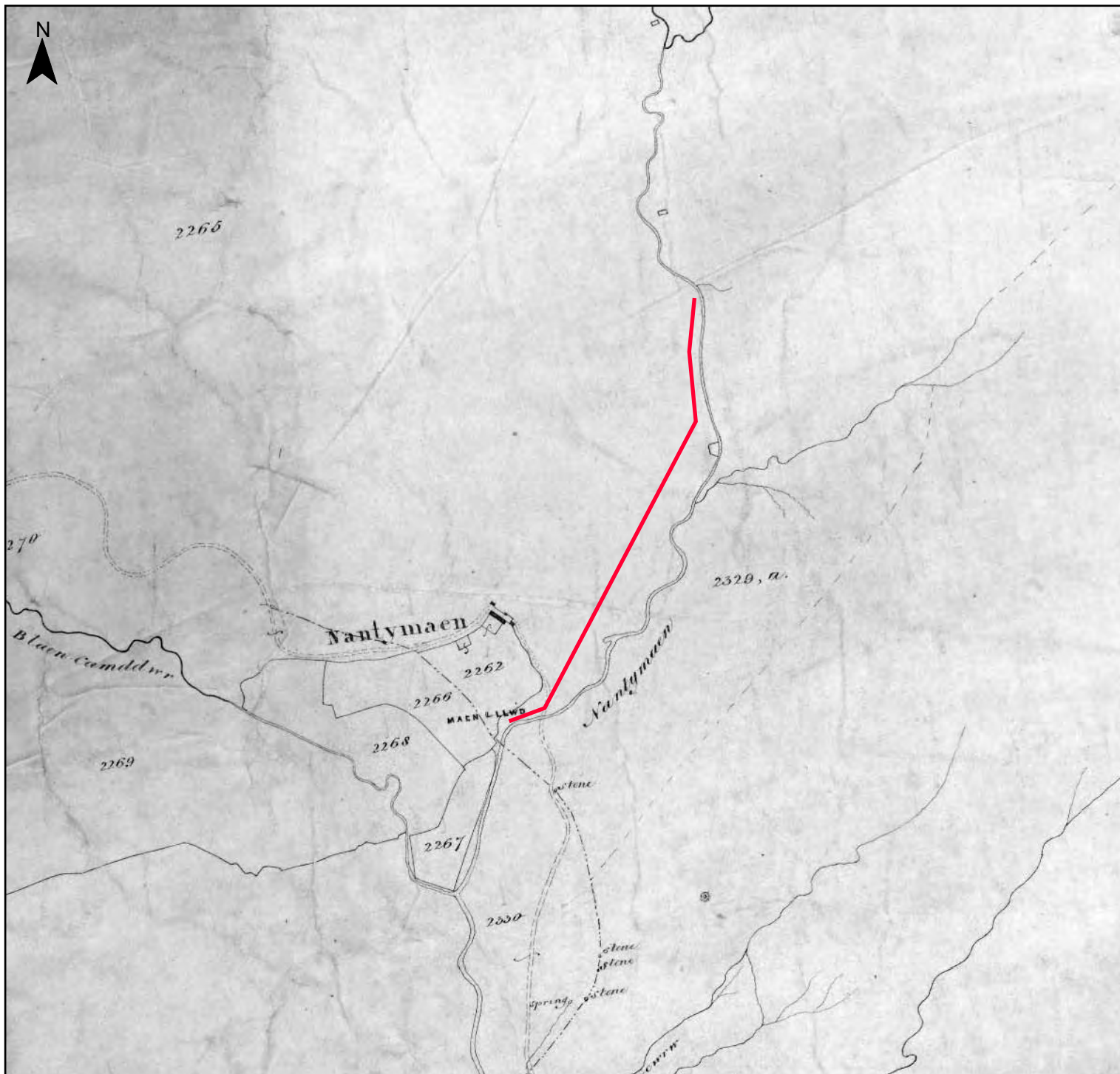
Prepared by:


Client:
Snowdonia Hydro

On behalf of:
Mr G. Jones

Project Title:
Nant y Maen Hydro Scheme

Figure 5. OS Surveyors Drawing (1820-21)



Legend

— Proposed pipeline

Approximate Scale (@ A4): 1:5,000

Date: July 2016

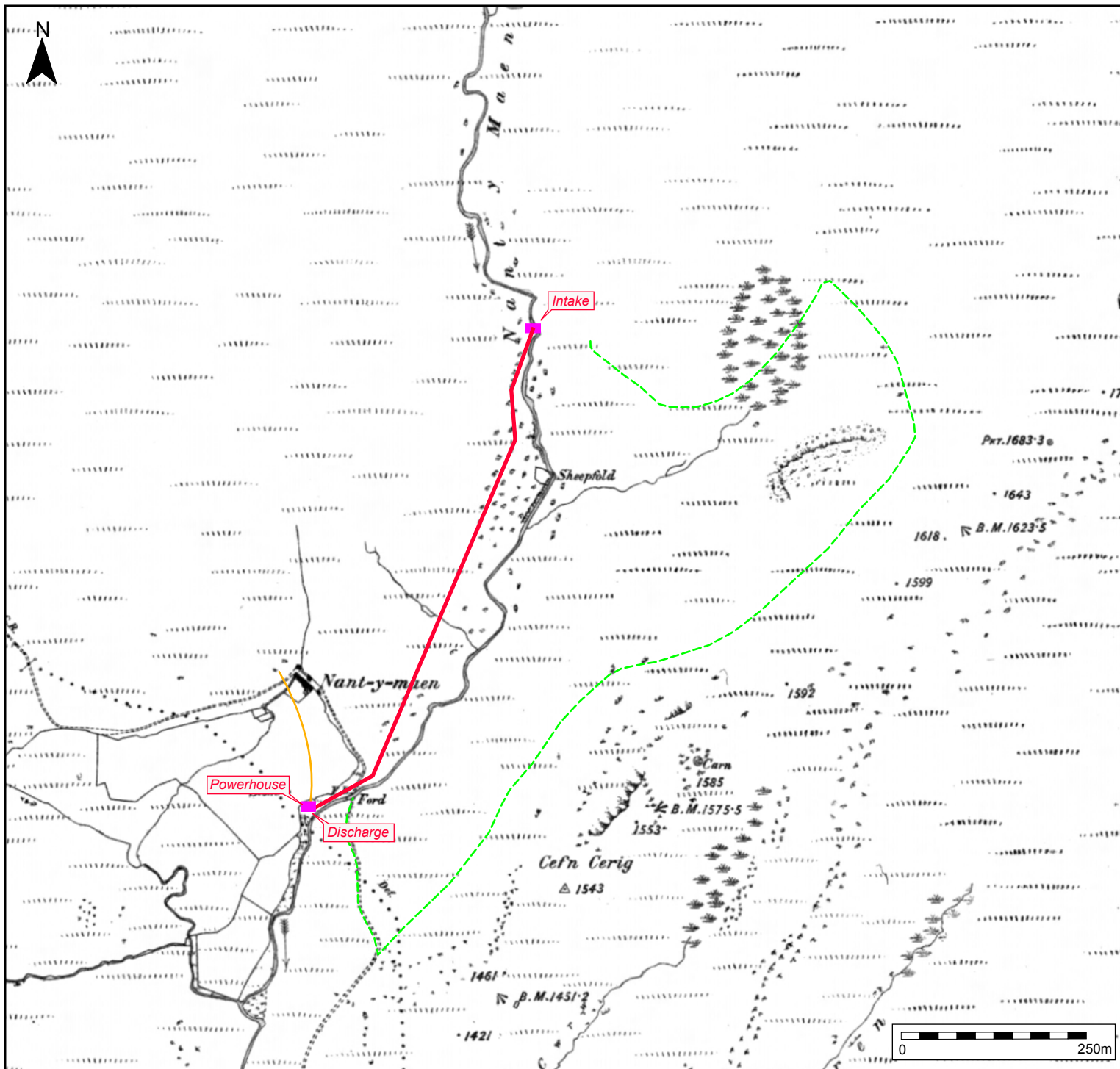
Prepared by:


Client:
 Snowdonia Hydro

On behalf of:
 Mr G. Jones

Project Title:
 Nant y Maen Hydro Scheme

Figure 6.
 Part of Tithe Map for Caron Parish (1845)



Legend

- Proposed pipeline
- 6 meter wide working corridor
- Access Track
- Intake and Powerhouse
- Cable trench

Approximate Scale (@ A4): 1:5,000

Date: July 2016

Prepared by:

Heritage
Recording Services Wales

Client:

Snowdonia Hydro

On behalf of:

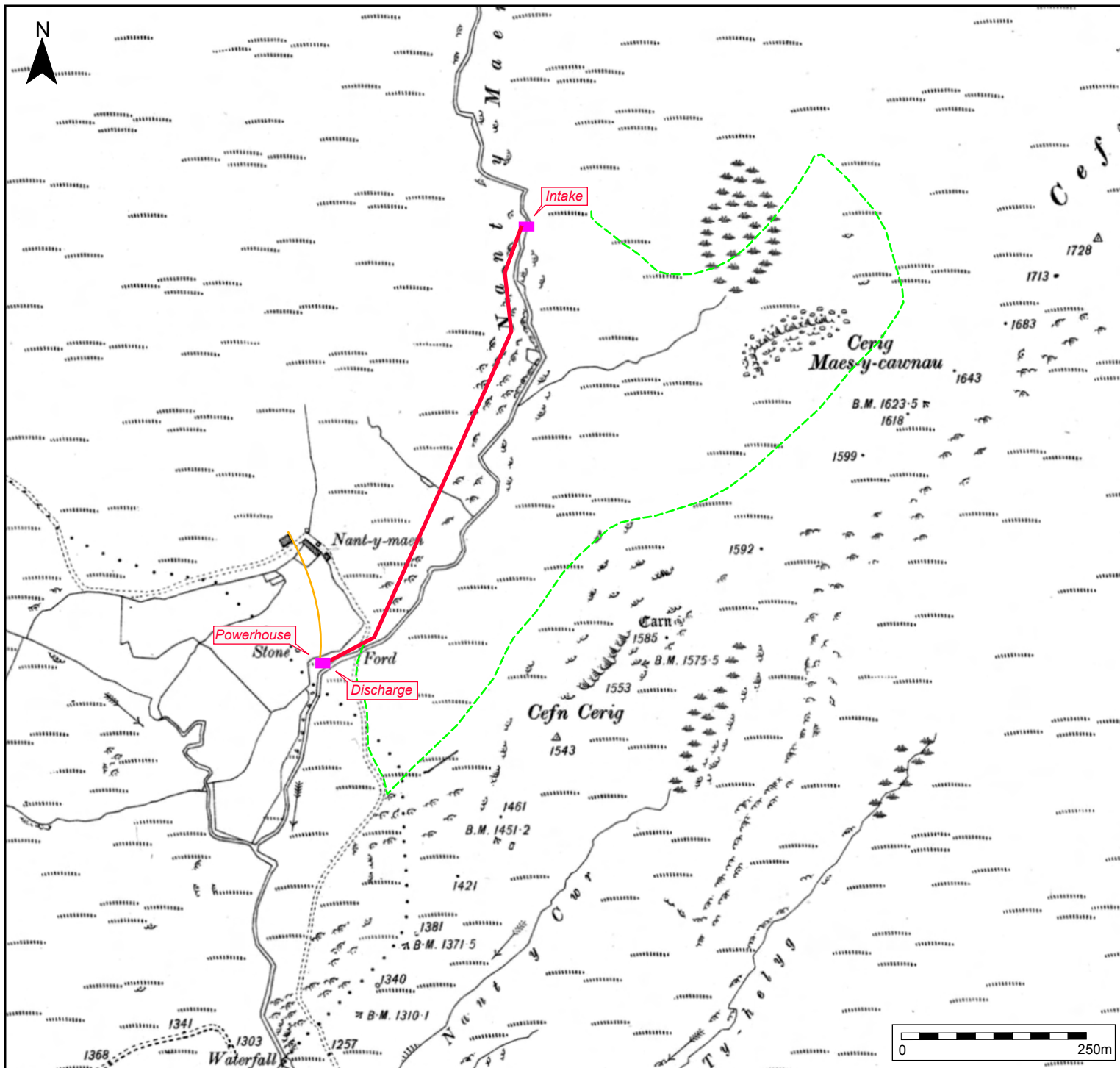
Mr G. Jones

Project Title:

Nant y Maen Hydro Scheme

Figure 7.

OS First Edition Map (1887)



Legend

- Proposed pipeline
- 6 meter wide working corridor
- Access Track
- Intake and Powerhouse
- Cable trench

Approximate Scale (@ A4): 1:5,000

Date: July 2016

Prepared by:

Heritage
Recording Services Wales

Client:

Snowdonia Hydro

On behalf of:

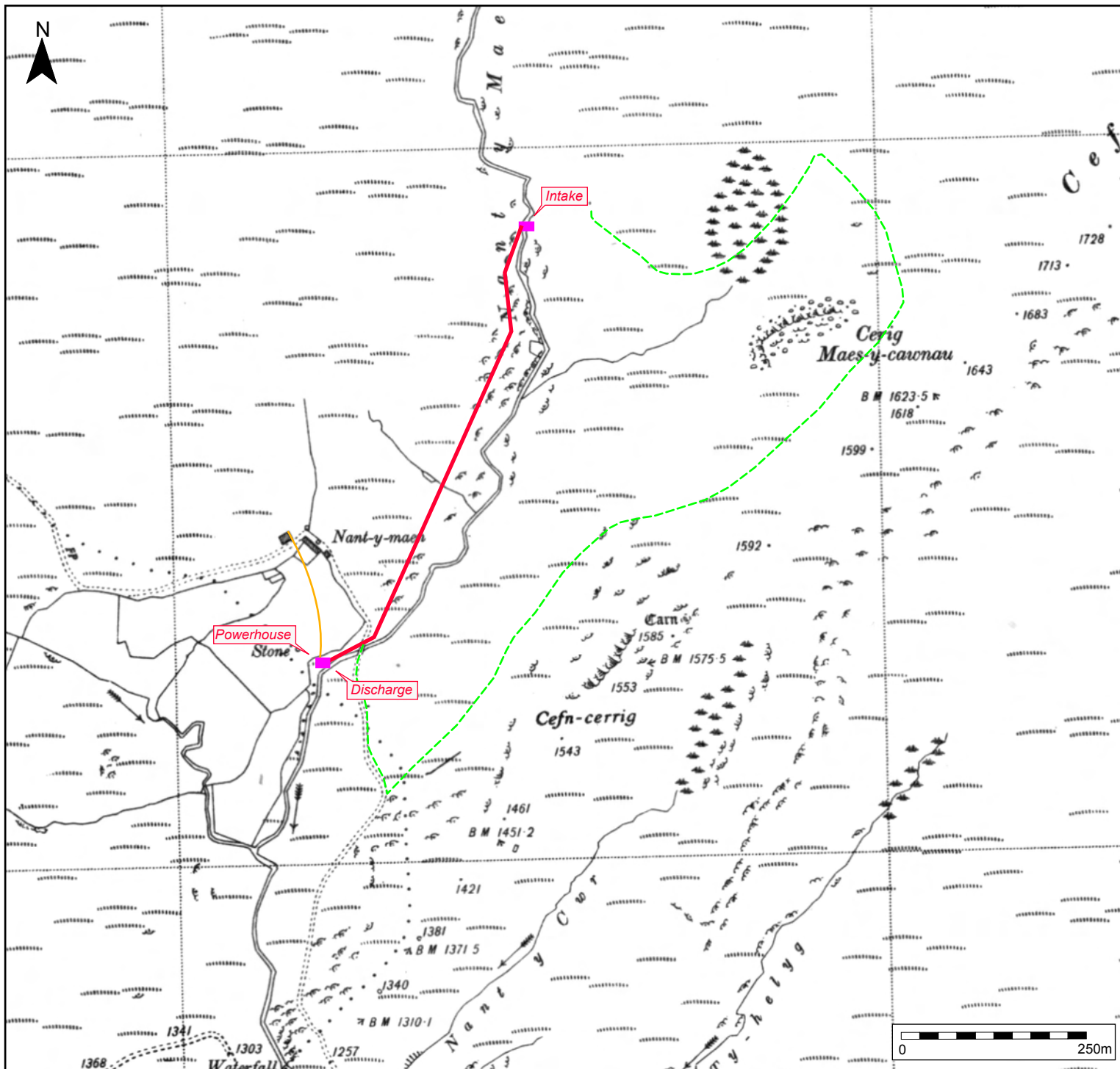
Mr G. Jones

Project Title:

Nant y Maen Hydro Scheme

Figure 8.

OS Second Edition Map (1905)



Legend

- Proposed pipeline
- 6 meter wide working corridor
- Access Track
- Intake and Powerhouse
- Cable trench

Approximate Scale (@ A4): 1:5,000

Date: July 2016

Prepared by:



Client:

Snowdonia Hydro

On behalf of:

Mr G. Jones

Project Title:

Nant y Maen Hydro Scheme

Figure 9.

OS 1948-1953 Edition Map



Legend

— Proposed pipeline

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

Date: July 2016

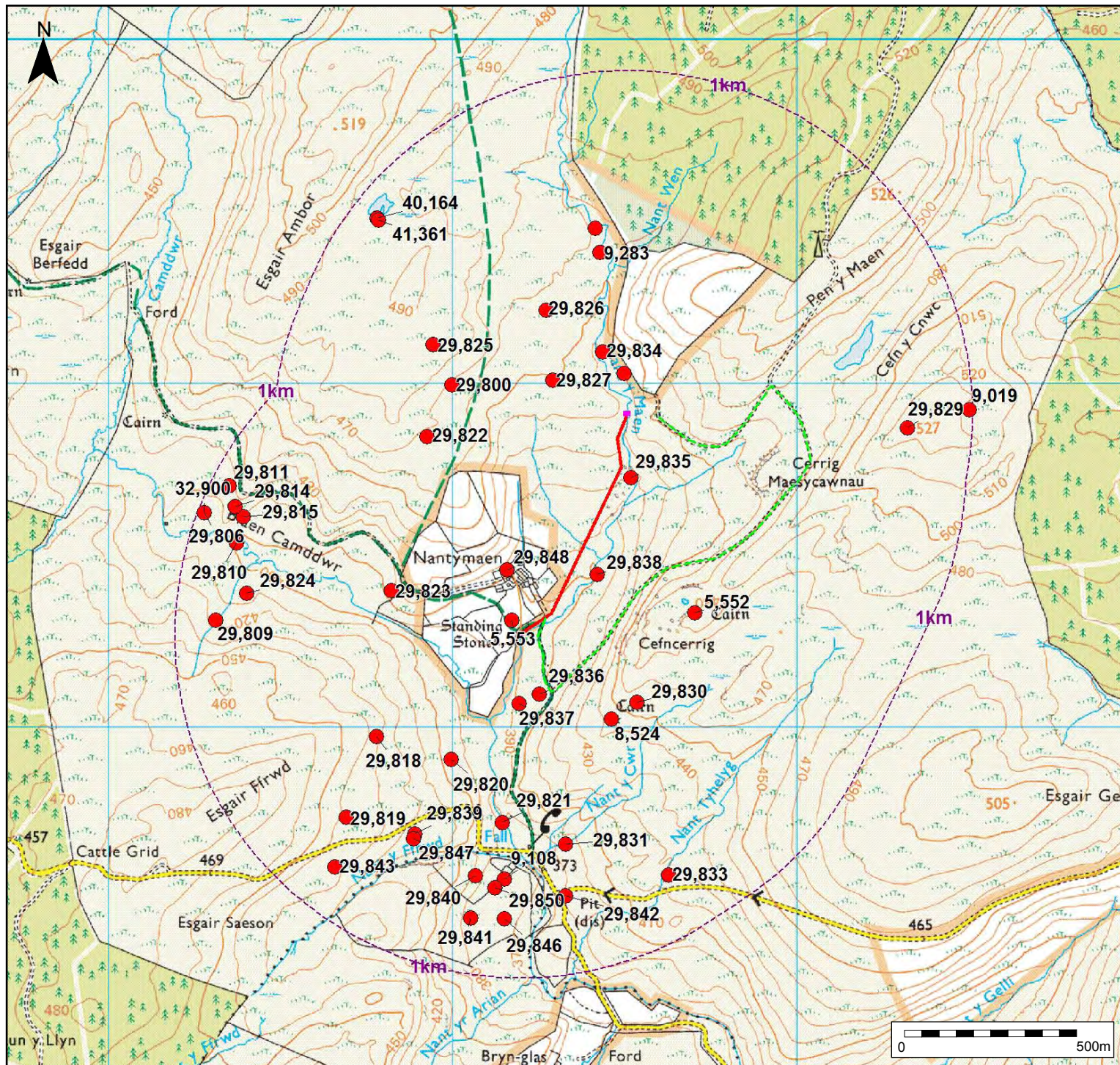
Prepared by:


Client:
Snowdonia Hydro

On behalf of:
Mr G. Jones

Project Title:
Nant y Maen Hydro Scheme

Figure 10.
RAF Vertical Aerial Photo (1946)



Legend

- Proposed pipeline
- - - 6 meter wide working corridor
- - - Access Track
- Intake and Powerhouse
- - - Cable trench
- - - 1km Buffer Zone
- Historic Environment Record Sites (HER)

Approximate Scale (@ A4): 1:16,000

Date: July 2016

Prepared by:



Client:

Snowdonia Hydro

On behalf of:

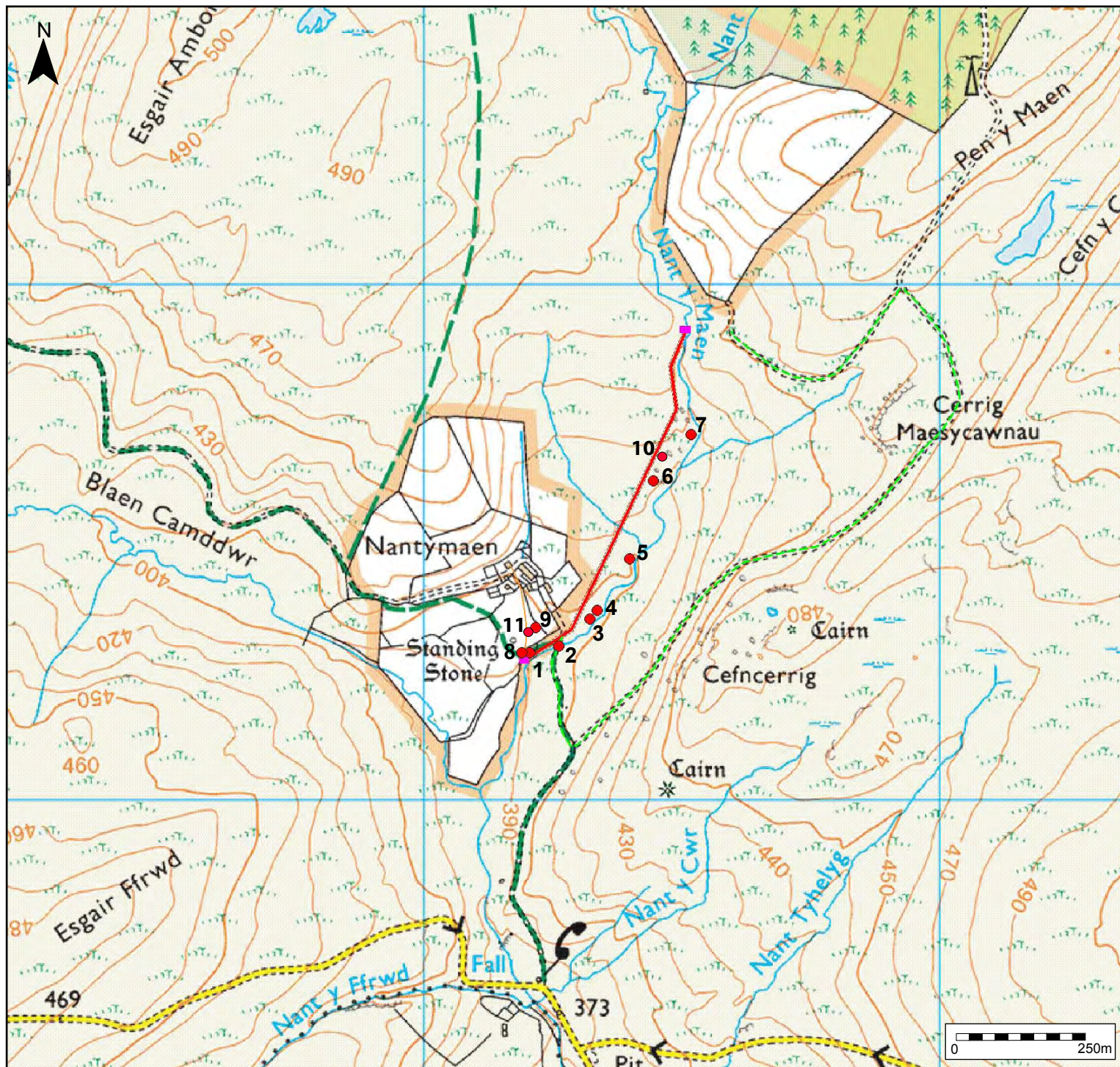
Mr G. Jones

Project Title:

Nant y Maen Hydro Scheme

Figure 11.

HER Sites within 1km



Legend

- Proposed pipeline
- 6 meter wide working corridor
- Access Track
- Intake and Powerhouse
- Cable trench
- Heritage Assets (cartographic and walk-over)

Approximate Scale (@ A4): 1:5,000

Date: July 2016

Prepared by:



Client:

Snowdonia Hydro

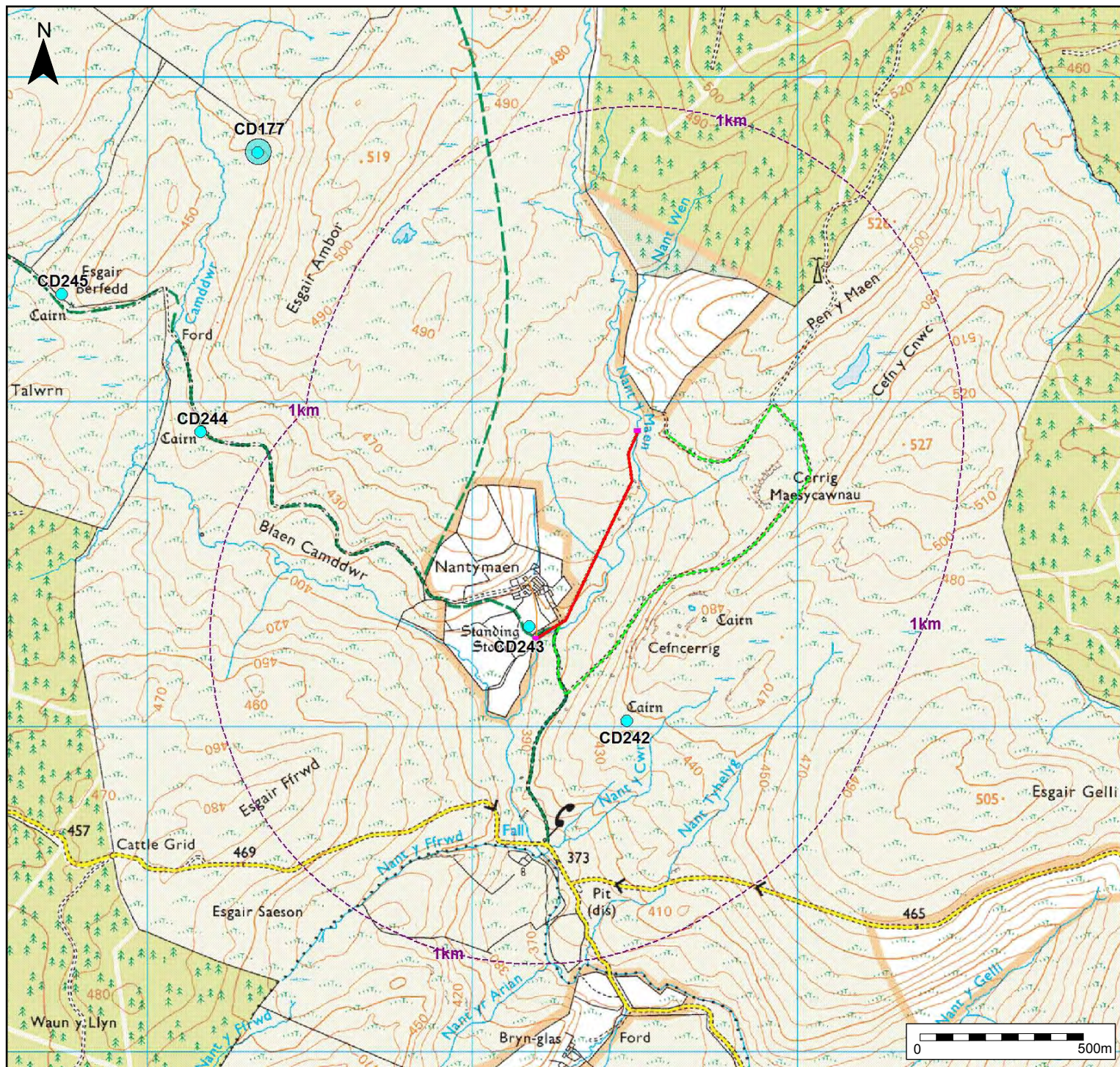
On behalf of:

Mr G. Jones

Project Title:

Nant y Maen Hydro Scheme

Figure 12. Heritage Sites identified along route of proposed development



Legend

- Proposed pipeline
- - - 6 meter wide working corridor
- - - Access Track
- Intake and Powerhouse
- Cable trench
- - - 1km Buffer Zone
- Scheduled Ancient Monuments (SAMs)
- ▭ Scheduled Area

Approximate Scale (@ A4): 1:12,000

Date: July 2016

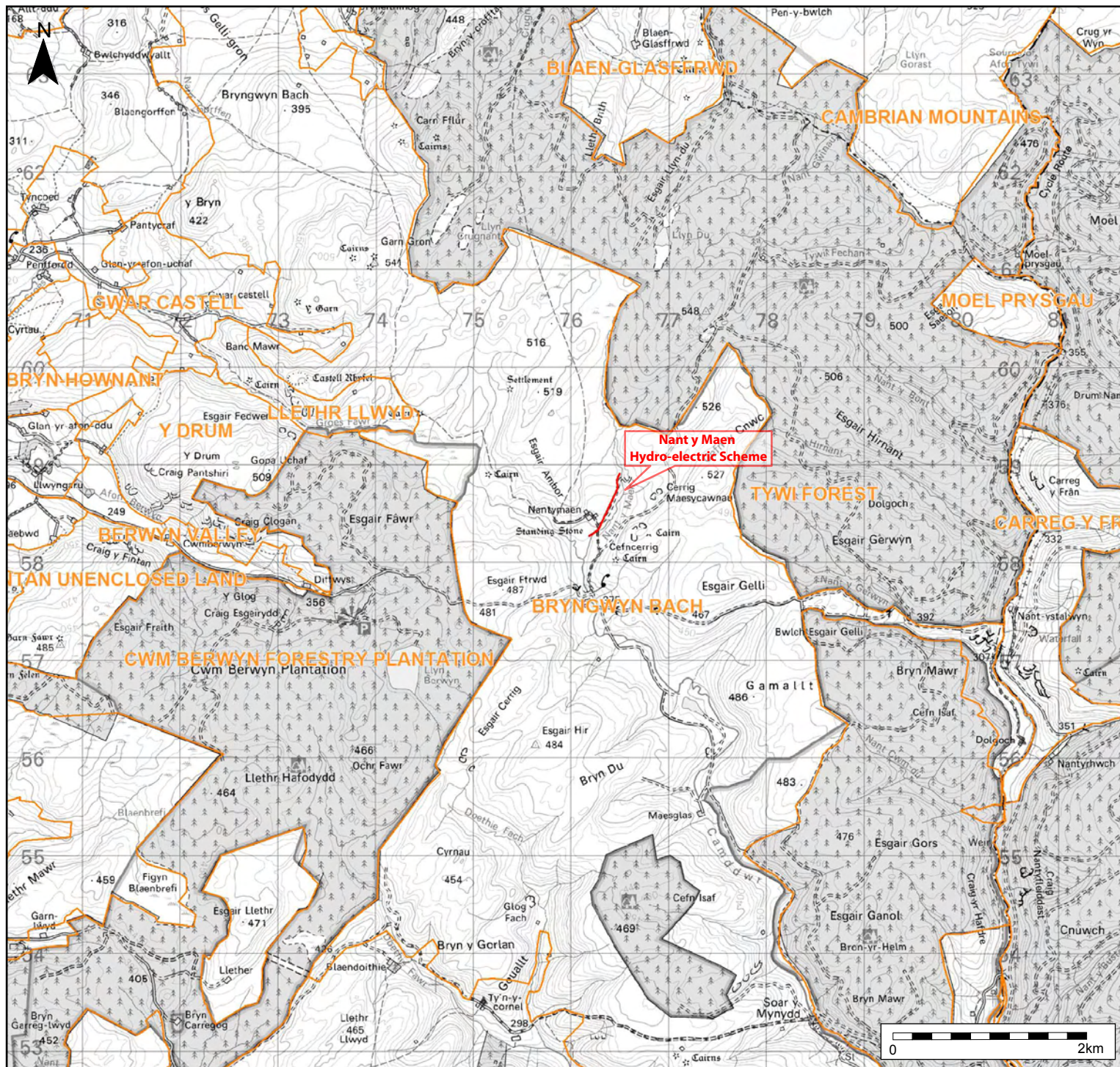
Prepared by:


Client:
 Snowdonia Hydro

On behalf of:
 Mr G. Jones

Project Title:
 Nant y Maen Hydro Scheme

Figure 13. Designated Sites within 1km



Legend

- Proposed pipeline
- LANDMAP (Historic Landscape)

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

Date: July 2016

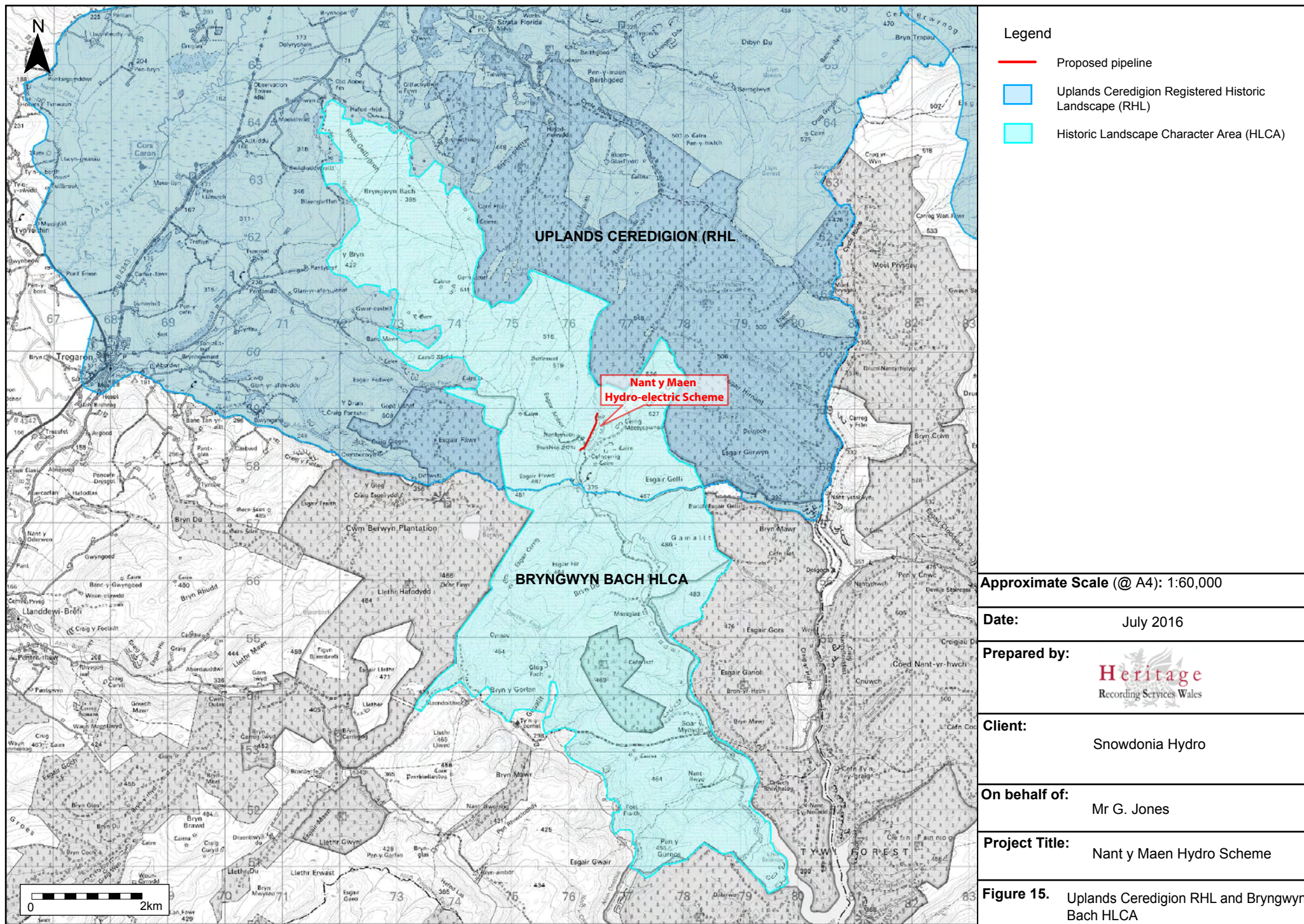
Prepared by:


Client:
 Snowdonia Hydro

On behalf of:
 Mr G. Jones

Project Title:
 Nant y Maen Hydro Scheme

Figure 14. LANDMAP (Historic Landscape)



APPENDIX II:

Photo plates



Plate 1. Spliced view of proposed Intake and Weir location along Nant y Maen watercourse. Looking south.



Plate 2. Spliced view of proposed Intake and Weir location along Nant y Maen watercourse. Looking north.

Project Title: Nant y Maen Hydro-electric Scheme

Date taken: July 2016

Photographer: Richard Scott Jones

Photo Plates No.

1 and 2



Plate 3. Route of proposed pipeline along existing access track by intake and weir. Looking south.



Plate 4. Route of proposed pipeline through grassland. Looking south.



Plate 5. Spliced view of post medieval sheepfold enclosure (Site No.7 / PRN: 29835). Looking east.

Project Title: Nant y Maen Hydro-electric Scheme

Date taken: July 2016

Photographer: Richard Scott Jones

Photo Plates No.

3 - 5



Plate 6. East facing side of dry-stone sheepfold (PRN: 29835 / Site No.7). Looking west.



Plate 7. Southern end of dry-stone and turf bank sheepfold ((PRN: 29835 / Site No.7). Looking east



Plate 8. Natural boulder acting as part of southern entrance to dry-stone sheepfold. (PRN: 29835 / Site No.7). Looking north.



Plate 9. View south across grassland along route of proposed pipeline. Looking south.

Project Title: Nant y Maen Hydro-electric Scheme

Date taken: July 2016

Photographer: Richard Scott Jones

Photo Plates No.

6 - 9



Plate 10. Remains of small dry-stone built structure (Site No. 6). Looking southwest.



Plate 11. Remains of small dry-stone built structure (Site No. 6). Looking south.



Plate 12. Existing track east of proposed pipeline route. Looking south.



Plate 13. Existing track east of proposed pipeline route. Looking south.

Project Title: Nant y Maen Hydro-electric Scheme

Date taken: July 2016

Photographer: Richard Scott Jones

Photo Plates No.

10 - 13



Plate 14. Possible former dry-stone structure or else clearance cairn (Site No. 3). Looking south.



Plate 15. Possible former dry-stone structure or else clearance cairn (Site No. 4). Looking south.



Plate 16. Route of proposed pipeline by bridge. Looking northwards.



Plate 17. Route of proposed pipeline by bridge. Looking south.

Project Title: Nant y Maen Hydro-electric Scheme

Date taken: July 2016

Photographer: Richard Scott Jones

Photo Plates No.

14 - 17



Plate 18. View of proposed Powerhouse area. Looking south from bridge.



Plate 19. View looking south toward proposed Powerhouse area.



Plate 20. View looking north along proposed pipeline route alongside Powerhouse area.

Project Title: Nant y Maen Hydro-electric Scheme

Date taken: July 2016

Photographer: Richard Scott Jones

Photo Plates No.

18 - 20



Plate 21. View of Powerhouse and discharge area. Looking south.



Plate 22. View of route of proposed cable trench. Looking northwest.

Project Title: Nant y Maen Hydro-electric Scheme

Date taken: July 2016

Photographer: Richard Scott Jones

Photo Plates No.

21 - 22



Plate 23. Nant y Maen Standing Stone (SAM Ref: CD243). Looking south.



Plate 24. Nant y Maen Standing Stone (SAM Ref: CD243). Looking north.



Plate 25. View of route of proposed cable trench. Looking north. Note Nant y Maen Standing stone (SAM Ref: CD243) at far left of photo. Looking northwards.

Project Title: Nant y Maen Hydro-electric Scheme

Date taken: July 2016

Photographer: Richard Scott Jones

Photo Plates No.

23 - 25



Plate 26. View of proposed cable run leading to Powerhouse close to Nant y Maen Standing Stone (SAM Ref: CD243). Looking east.



Plate 27. View of proposed cable run leading to Nant y Maen farmstead. Looking west.

Project Title: Nant y Maen Hydro-electric Scheme

Date taken: July 2016

Photographer: Richard Scott Jones

Photo Plates No.

26 - 27

APPENDIX III:

Site Gazetteer

APPENDIX III

Gazetteer

of all

Historic Environment Record (HER) Sites within 1km buffer zone

from the proposed

Nant y Maen Hydro-electric Scheme, Tregaron, Ceredigion

- PRN:** 5552 **Type:** Round Barrow **Period:** Bronze Age **NGR:** SN76715833
Name: CEFN CERRIG
Summary: A cairn partly constructed on top of a natural rock outcrop, with a hollow/shelter at its centre. The cairn measures c.8m in diameter and stands c.1.3m high, with some slippage of material downslope to the south. NC 2006.
- Community:** Tregaron **Status:**
- PRN:** 5553 **Type:** Standing Stone **Period:** Bronze Age **NGR:** SN76175830
Name: NANT-Y-MAEN
Summary: Inclined standing stone a little animal disturbance around the base. Site value B/1995. PC 1995. Stone reported broken into two pieces to RCAHMW in 2014
- Community:** Tregaron **Status:** scheduled ancient monument
- PRN:** 8524 **Type:** Round Barrow **Period:** Bronze Age **NGR:** SN76475802
Name: BLAEN NANT-Y-RHIW;CEFN CERRIG
Summary: A small round cairn on the highest point of a broad ridge at 461m above OD. The site consists of a rough platform of large stones, 6m in diameter and 0.2m high. The feature is grass-covered and would appear to be undisturbed.
- Community:** Tregaron **Status:** scheduled ancient monument
- PRN:** 9019 **Type:** Round Barrow **Period:** Bronze Age **NGR:** SN775589
Name: CEFN CNUC
Summary: Originally recorded by DK Leighton with a 6 figure grid reference in 1981 as a 'much denuded cairn with central depression. Oval, measuring 6.5m (N-S) x 5.5m.' Not located by DAT during fieldwork in 1995.
- Community:** Tregaron **Status:**
- PRN:** 9108 **Type:** Farmstead **Period:** Post-Medieval **NGR:** SN76155755
Name: FFRWD-AR-GAMDDWR
Summary: Only main building sketched as part of Llyn Brianne Upland Survey. There are surrounding enclosures one at least with outbuilding that have not been recorded. This area would need detailed survey in dry conditions.
- Community:** Llanddewi Brefi **Status:**
- PRN:** 9283 **Type:** Cottage **Period:** Post-Medieval **NGR:** SN76435937
Name: BRYN-BRAN
Summary: Building of drystone construction. Complete in plan. Small bit of probable floor in NE corner. Probable fireplace in east wall. Entrance in south wall. Walls max 1.0m high. Front wall (south) 1.0m wide rest 0.9m and back wall 0.5m wide.

Community: Tregaron

Status:

PRN: 9285 **Type:** Long Hut **Period:** Post-Medieval,Medieval **NGR:** SN76415945
Name: NANT WEN
Summary: Single rectilinear building on a platform or natural terrace at stream edge. North wall beginning to be eroded by stream. Long hut has a single compartment and measures 9m x 4.75m overall, walls 0.8m wide and up to 1m high.

Community: Tregaron

Status:

PRN: 12429 **Type:** Deleted **Period:** Medieval **NGR:** SN769598
Name: PEN Y MAEN
Summary: REES MAP EXAMINED AND NO EVIDENCE FOR BRIDGE IN THIS AERA. FE SURVEY COULD NOT FIND ANY TRACE OF STONE(Mick Levy followed the watercourse for several hundred metres both up and downstream from mapped location. Is the grid reference incorrect?).

Community: Tregaron

Status:

PRN: 14123 **Type:** Common Land **Period:** Post-Medieval,Medieval **NGR:** SN765590
Name: CEFN-Y-CNWC
Summary: Caron tithe map 1839 appears to indicate that this land is owned. This land is now no longer registered as common land. PC 1995

Community: Tregaron

Status:

PRN: 29806 **Type:** Shelter **Period:** Post-Medieval,Medieval **NGR:** SN75285862
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Long hut in very poor condition. Aligned NW-SE, 6.5m long, 3.5m wide, max. height 0.5m. Entrance in south corner. Constructed with long axis into bottom of slope and out onto flat land. Some stone remaining in SW end.

Community: Tregaron

Status:

PRN: 29809 **Type:** Field Boundary **Period:** Post-Medieval **NGR:** SN75305828
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. GPS grid refs SN75237 58086 good SN75906 58099 good disappears at this eastern point however the tithe map shows this boundary continuing to stream but has probably now been hidden by peat growth Bank approx max 0.75m high and 3.6m wide.

Community: Tregaron

Status:

PRN: 29810 **Type:** Long Hut **Period:** Post-Medieval,Medieval **NGR:** SN75385853
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. GPS grid ref SN75383 58527 good. Long hut with annex at SE end. Constructed on rock outcrop above stream. aligned NW-SW total length 15.5m width 10m height 1m. Entrance in south corner of main room. Site value B/1995.

Community: Tregaron

Status:

PRN: 29811 **Type:** Shelter **Period:** Post-Medieval,Medieval **NGR:** SN75355870
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. GPS grid ref SN75351 38698 good fix. Probably complete in plan. Long hut? Dug into side of hill at bottom of slope. Sub-rectangular or oval in shape. Building aligned E-W 6m long 4.8m wide 0.6m high.

Community: Tregaron

Status:

PRN: 29814 **Type:** Quarry,Long Hut,Building **Period:** Post-Medieval **NGR:** SN75385862

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. GPS grid ref 75380 38620 good fix. "L" shaped in plan with hollow interior and exterior banks except where cut into side of hill. Probably associated with PRN29810 as out building or quarry and possibly with track way PRN29815.

Community: Tregaron

Status:

PRN: 29815 **Type:** Trackway

Period: Post-Medieval,Medieval

NGR: SN75405860

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. GPS grid refs SN7540058540 fair SN7547058650 fair. Probable trackway aligned approx NE-SW probably also aligned with and associated with PRN2980 and may be associated with possible quarry or outbuilding PRN29814.

Community: Tregaron

Status:

PRN: 29818 **Type:** Long Hut

Period: Post-Medieval,Medieval

NGR: SN75785794

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. GPS grid ref good fix SN75780 57936 accurate plot on AP 77 92 265. Long hut, drystone construction with tumbled walls. Construction partly into base of slope of hill. Aligned E-W, length 9m width 6m, bank/wall height 0.6m.

Community: Tregaron

Status:

PRN: 29819 **Type:** Standing Stone

Period: Bronze Age

NGR: SN75695773

Name: ESGAIR FFRWD

Summary: Nant-y-Maen Farm. Plotted from GPS grid ref fair fix SN75688 57725 approx position marked on AP 77 92 265. Possible fallen standing stone or burial chamber with cap stone and fallen uprights (see plan 118) Large stone flat on ground. Aligned NW-SE 3m long.

Community: Tregaron

Status:

PRN: 29820 **Type:** Drainage System

Period: Post-Medieval

NGR: SN760579

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. Drainage system banks as seen would be too small for a field boundary. There are three ditches enclosing a sub-triangular area but with the upper part of two of the ditches extending higher up.

Community: Tregaron

Status:

PRN: 29821 **Type:** Enclosure

Period: Post-Medieval,Medieval

NGR: SN76155770

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. Probable sheep fold and also likely to be post med and associated with farm PRN 9108 to south Enclosure utilizing natural east west rock face on north side. This rock face has been enhanced with stones layered in parts to form a wall.

Community: Tregaron

Status:

PRN: 29822 **Type:** Field Boundary

Period: Post-Medieval

NGR: SN75905883

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. Wide bank slight sign of ditch on north and west sides. Approx height 0.5m and 1.5m wide bank. Accurate on AP. Site value D/1995. P.C. 1995.

Community: Tregaron

Status:

PRN: 29823 **Type:** Drainage Ditch

Period: Post-Medieval

NGR: SN75845840

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. Accurate plot on AP 77 92 265. Ditch aligned NW-SE 0.75m wide. Dug into slope of hillside upcast on lower side but not really a bank. Probably associated with 29824 which butts 29823. Both for drainage and not field boundaries.

Community: Tregaron

Status:

PRN: 29824 **Type:** Drainage Ditch **Period:** Post-Medieval **NGR:** SN75425838

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. Drainage ditch and not field boundary. Accurate plot on AP 77 92 265. Ditch aligned NE-SW approx 0.5m wide dug into slope of hillside. Butts 29823. Site value D/1995 P.C. 1995.

Community: Tregaron

Status:

PRN: 29825 **Type:** Peat Workings **Period:** Post-Medieval **NGR:** SN75955909

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. Full extent not recorded but could be quite extensive. Plotted from GPS grid refs only all fixes good. NW corner SN7590059103 NE corner SN7595059090 SE corner SN7592659053. Depth 30-40cm with straight edges in places.

Community: Tregaron

Status:

PRN: 29826 **Type:** Trackway, Peat Workings **Period:** Post-Medieval **NGR:** SN76275921

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. Position from GPS grid refs good fix SN7627459210 and from AP. Probable trackway approx 3m wide by 0.8m deep. Aligned NNW-SSE and length 70m. Note 2m ranging rod can almost be completely pushed into the peat bog.

Community: Tregaron

Status:

PRN: 29827 **Type:** Peat Workings **Period:** Post-Medieval **NGR:** SN76275899

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. Peat cutting area "L" shaped depth approx 0.5m. There may be more evidence of peat cutting in this low lying area but it has been the wettest summer since 1948 in Britain and the wettest recorded in Cardiff. Site value D/1995.

Community: Tregaron

Status:

PRN: 29829 **Type:** Cairn **Period:** Bronze Age **NGR:** SN77325887

Name: CEFN Y CWNC

Summary: A ridge-top cairn, 10m in diameter and 0.55m high at its maximum, much denuded and with some spreading of its material, and evidence of a hollow at its centre. Likely duplicate for PRN 9019. NC 2006.

Community: Tregaron

Status:

PRN: 29830 **Type:** Cairn **Period:** Bronze Age **NGR:** SN76545804

Name: CEFN CERRIG

Summary: A very slight cairn, c.5m in diameter and 0.5m high at its maximum, located c.70m away to the NE/ENE of another barrow, PRN 8524. NC 2006.

Community: Tregaron

Status:

PRN: 29831 **Type:** Drainage Ditch **Period:** Post-Medieval **NGR:** SN76335765

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. Bank and ditch lower part curved and quite well defined. Upper NE end meanders and has probably disappeared in the peat. Purpose probably to drain peat bog area at north east end. Dimensions ditch approx 1m wide 0.4 deep.

Community: Tregaron

Status:

PRN: 29833 **Type:** Quarry **Period:** Post-Medieval, Modern **NGR:** SN76635756

Name: NANT-Y-MAEN

Summary: Nant-y-Maen Farm. 'T' shaped quarry with upright of 'T' a track way from present road. Track way aligned NW-SE and approx 2m wide by 30m long to lower face. Spoil tips on either side 3 main steps in quarry face

with total height approx 6m.

Community: Tregaron

Status:

PRN: 29834 **Type:** Long Hut **Period:** Post-Medieval,Medieval **NGR:** SN76445908
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. GPS grid ref good fixes SN7646259087 SN7642259080. Accurate plot on AP. Long hut which appears to have associated features, location 15m north of stream bend and construction on old stream bed.

Community: Tregaron

Status:

PRN: 29835 **Type:** Enclosure **Period:** Post-Medieval,Medieval **NGR:** SN76525872
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Drystone walled enclosure. Construction of walls in relatively small to middle sized stones. South east side against stream now missing. Site value D/1995 P.C. 1995.

Community: Tregaron

Status:

PRN: 29836 **Type:** Field Boundary,Drainage Ditch **Period:** Post-Medieval **NGR:** SN76255808
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Bank and ditch ditch still partly active. Ditch approx 1m wide 0.6m deep. Bank approx 1.5m wide 0.5m high. Bank on north side. Ditch runs down from the north side where it probably has been disturbed by the farm track.

Community: Tregaron

Status:

PRN: 29837 **Type:** Field Boundary,Drainage Ditch **Period:** Post-Medieval **NGR:** SN76205805
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Bank and ditch ditch still just active. Ditch approx 1m wide 0.4m deep. Bank approx 1.5m wide 0.4m high. Bank not well defined in places but appears to be on the north side. Ditch runs down from east to west down towards stream.

Community: Tregaron

Status:

PRN: 29838 **Type:** Drainage Ditch **Period:** Post-Medieval **NGR:** SN76435843
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Bank and ditch ditch still partly active but north east end has now been covered by peat. SW end drains towards stream. Bank on north west side. This feature does not appear to be a field boundary. Site value D/1995.

Community: Tregaron

Status:

PRN: 29839 **Type:** Standing Stone,Milestone **Period:** Post-Medieval,Bronze ge **NGR:** SN75905768
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Small standing stone probably road marking. Now some 18m south of present road. There appears to be a former trackway immediately on its north side. Not given a separate PRN. Probable peat extraction trackway 13m to south.

Community: Tregaron

Status:

PRN: 29840 **Type:** Root Vegetable Store **Period:** Post-Medieval **NGR:** SN76055756
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. GPS grid ref fair fix SN7603057540. Three parallel gullies each approx 1m wide and 5.5m long. Total width of features 4m and 0.5m deep. No real sign of upcast. Gullies aligned SE-NW.

Community: Llanddewi Brefi

Status:

PRN: 29841 **Type:** Clearance Cairn **Period:** Post-Medieval **NGR:** SN76055745
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Position from GPS grid ref fair fix SN76048 57452. Cairn approx 2.5m diameter X 0.5m high. Small stones on top of large rocks. Site value D/1995. P.C. 1995.

Community: Llanddewi Brefi **Status:**

PRN: 29842 **Type:** Quarry,Pit **Period:** Modern **NGR:** SN76335751
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Pit disused indicated on 1981 OS map but not previously shown. Approx 25m long X 20m back from road and 3.5m deep. Probably for extraction of shaley rock for road construction. Probably dates from 1960's to 70's. Site value D/1995

Community: Tregaron **Status:**

PRN: 29843 **Type:** Peat Workings **Period:** Post-Medieval **NGR:** SN75655758
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Area of peat cutting limits not defined. Probably associated with peat cutting 29844 29845 29847 or these may all be parts of a larger operation. Site value D/1995 P.C. 1995.

Community: Tregaron **Status:**

PRN: 29846 **Type:** Peat Workings,Drainage System **Period:** Unknown **NGR:** SN76155743
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Area of peat cutting not defined with at least one drainage ditch running NW-SE. Possibly associated with the farmstead PRN 9108 to the north east. Site value D/1995 P.C. 1995.

Community: Tregaron **Status:**

PRN: 29847 **Type:** Peat Workings,Drainage System **Period:** Post-Medieval **NGR:** SN75905767
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Peat cutting area probably rectangular with associated trackway probably leading from cutting area to what is now the present road. Area of peat cutting not defined or exact length of trackway would require more detailed survey.

Community: Tregaron **Status:**

PRN: 29848 **Type:** Farmstead **Period:** Post-Medieval,Modern **NGR:** SN76165845
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Farmhouse exterior appears modernized with at least seven out buildings some modern. Detailed report not undertaken as farm extensively in use and probable lambing season. Site value B/1995 P.C. 1995.

Community: Tregaron **Status:**

PRN: 29850 **Type:** Trackway **Period:** Post-Medieval **NGR:** SN76135752
Name: NANT-Y-MAEN
Summary: Nant-y-Maen Farm. Trackway cart track width both ends not established north east end overgrown by peat bog (but possibly ran to PRN9108) south west end disappears into tussock grass. Site value D/1995. P.C. 1995.

Community: Tregaron **Status:**

PRN: 32900 **Type:** Deserted Rural Settlement **Period:** Prehistoric,Post-Medieval,Medieval **NGR:** SN75285862
Name: ESGAIR AMBOR
Summary: Deserted rural settlement consisting of longhouse 29806;long hut (or sheepfold) 9281. Within 200m are

another longhouse 29810 and its ancillaries 29811 & 29814, though the relationship between the two sites is unknown. P Sambrook. 1998

Community: Tregaron

Status: ESA

PRN: 48404 **Type:** Round Barrow,Cairn

Period: Modern,Bronze
Age

NGR: SN7673258333

Name: CEFN CERRIG

Summary: Located 6m to the east of barrow 5552, this site consists of a small platform 'cairn', 0.2m high and 3.5m in diameter, made up of medium-sized, turf-consolidated flat stones. There is some reed growth at the centre of the cairn.

Community:

Status:

APPENDIX IV:
Archive Cover Sheet

ARCHIVE COVER SHEET

Nant y Maen Hydro-electric Scheme,
Tregaron, Ceredigion

ARCHIVE DESTINATION – HRS Wales

Site Name:	Nant y Maen
Site Code:	NYM/2016/AA
PRN:	
NPRN :	N/A
SAM:	N/A
Other Ref No:	HRSW Report No. 183
NGR:	SN 7650 5892 to SN7619 5828
Site Type:	Uplands landscape
Project Type:	Archaeological Appraisal
Project Manager:	Richard Scott Jones
Project Dates:	July 2016
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



Egwyl, Llwyn-y-groes, Tregaron, Ceredigion SY25 6QE

Tel: 01570 493759 Fax: 08712 428171 E-mail: richard@hrswales.co.uk