

# Recording Traditional Farm Buildings and Historic Farmsteads

Pilot project North Arduwy 2017-18





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Pilot project: North Ardudwy 2017-18

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## G2469 RECORDING TRADITIONAL FARM BUILDINGS AND HISTORIC FARMSTEADS

**Location:** North Ardudwy

### Summary

*This project was a regional pilot, forming part of a pan-Wales initiative designed to create a set of GIS polygons of surviving traditional farm buildings in order to produce data for current and future agri-environmental schemes. A second element of the project produced a record of the character of the farmsteads containing the traditional buildings following the approach laid out in a guidance document produced by English Heritage. An overall methodology had been devised by Clwyd-Powys Archaeological Trust in a previous pilot study and this was applied to an area in northern Ardudwy in the current project. The majority of the farmsteads in the area conformed to loose courtyard or dispersed multi-yard plans. There was a distinctively high number of outfarms, many in the form of single field-barns.*

### Crynodeb

*Roedd y prosiect peilot rhanbarthol hwn yn ffurfio rhan o fenter Gymru Gyfan wedi'i dylunio i greu set o bolygonau GIS ar gyfer adeiladau fferm traddodiadol sydd wedi goroesi er mwyn cynhyrchu data ar gyfer cynlluniau amaeth amgylcheddol y presennol a'r dyfodol. Cynhyrchodd ail elfen y prosiect gofnod o gymeriad y ffermdai yn cynnwys yr adeiladau traddodiadol yn dilyn y dull a amlinellwyd mewn dogfen ganllaw a grëwyd gan English Heritage. Defnyddiwyd methodoleg a grëwyd gan Ymddiriedolaeth Archaeolegol Clwyd-Powys mewn astudiaeth beilot flaenorol i ymdrin ag ardal yng Ngogledd Ardudwy yn y prosiect presennol. Roedd rhan fwyaf o'r ffermdai yn yr ardal yn cydymffurfio â chynlluniau buarth gwasgaredig. Roedd nifer uchel iawn o adeiladau allanol, llawer ohonynt ar ffurf ysguboriau un llawr.*

## 1. INTRODUCTION

The project was designed with the principal aim of producing polygons of traditional farm buildings that would inform management within the Glastir agri-environmental scheme. A program of polygonisation of features in farmland and woodland had previously been carried out by the Welsh Archaeological Trusts.

The repair of farm buildings as part of the Glastir scheme has been widespread. A large proportion of farms retain *traditional farm buildings*; a category defined by Glastir as buildings predating the end of the First World War. The current project aims to record buildings falling into this category thus providing a register of *traditional farm buildings* that may be eligible for Glastir grant-aid.

A pilot project was carried out by Clwyd-Powys Archaeological Trust in 2015/16 which examined an area in Radnorshire (CPAT Report No 1359). This allowed an efficient methodology to be formulated. The project was continued in Wrexham in 2016/17 (CPAT Report No 1501).

Glastir is a sustainable land management scheme in Wales launched by the Welsh Assembly Government in 2012. Its goals include "combating climate change, improving water management and maintaining and enhancing biodiversity". A targeted element has been focussing on six areas of concern: soil carbon management, water quality, water quantity management, biodiversity, the historic environment and improved access. The scheme is funded by the Welsh Government and the European Union. The introduction of Brexit has implications for future of the scheme. The government has stated that it will support agri-environmental schemes at their current level of funding until 2020. It is likely the schemes will continue in some form after Brexit, so it was decided the data being produced by the Traditional Farm Buildings Project would continue to be relevant and that the project should continue in its current form.

A second element was added to the project in the form of a study of the character of farmsteads following a methodology developed by English Heritage (now Historic England). This aims to “provide a consistent understanding of farmstead character at a landscape level, through recording the distribution, plan-type and degree of change seen between historic mapping and the present” (Lake 2014 and Lake and Edwards 2017).

## **2. METHODOLOGY**

### **2.1 Introduction**

Pilot projects were carried out by Clwyd-Powys Archaeological Trust in 2015/16 and 2016/17. The rest of the Welsh Archaeological Trusts (WATs), including GAT started work on the project in 2017/18 in the form of limited pilot projects designed to develop and implement a consistent methodology for the identification and recording of historic farmsteads across Wales. A meeting was held in the CPAT offices before the project commenced. Abi McCulloch and Chris Martin described the methodology that they had developed for the polygonisation of buildings and Jeremy Lake, who had previously worked on the English Heritage farmstead characterisation project, presented a manual for recording historic farmstead character (Lake and Edwards 2017). It was recognised that the characterisation element was potentially the most time consuming element of project so this was streamlined and 14 different fields were identified as the core features that should be recorded. Jeremy Lake subsequently visited all of the WAT offices in order to provide guidance for the characterisation project.

Gwynedd Archaeological Trust agreed to carry out a pilot project covering Northern Ardudwy. The methodology established by CPAT and Jeremy Lake was used and CPAT provided a template MapInfo Table for the characterisation process. It was, however, necessary to add an additional 18 fields of metadata to conform to Gwynedd Historic Environment’s spatial data standards. All digitisation was carried out using MapInfo desktop geographic information system (GIS) and two tables were produced, G2496\_traditional\_farm\_buildings containing individual building polygons and G2496\_farmsteads containing the farmstead characterisation data.

### **2.2 Digitisation**

The data was derived from Epoch GIS registered versions of the Ordnance Survey 2<sup>nd</sup> edition (1900-1901) 25” to the mile maps for Merioneth. The 2<sup>nd</sup> edition maps were used because they were the closest to the end of the First World War cut-off point for the designation of traditional farm buildings by Glastir. These were overlaid with building polygons that were extracted from the *TopographicArea* layer of Mastermap 2012. These were used in a MapInfo workspace along with recent Next Perspectives Aerial photographic cover.

Any Mastermap 2012 polygons that corresponded to buildings on the 25 inch map were copied and pasted into the traditional\_farm\_buildings table. These were then manually cross referenced with existing HER data and any existing Primary Record Numbers (PRNs) were added to the table. Those buildings that were not already recorded in the HER were then allocated new PRNs. The rest of the standard HER data fields were then filled in for each entry. NGRs and X-Y coordinates were derived automatically from MapInfo. Other politico-geographic data was derived from existing MapInfo tables along with spatial correspondences to Cadw’s listed buildings database.

The farmstead characterisation data was added to a second MapInfo table. The extent of each farmstead was defined by a single polygon drawn around the buildings and yards. Each farmstead was assigned a new PRN and data fields relating to layout and condition as defined in table 1 below were manually filled in. Additional metadata fields were added to the table to conform to Gwynedd Historic Environment Records spatial data standards.

The majority of the fields describe variations in the layout of the farm. The fields were filled using the range of farmstead plans identified in the National Farmsteads Character Statement (Lake 2014, 10). A summary of the various plan types is shown on Fig. 1

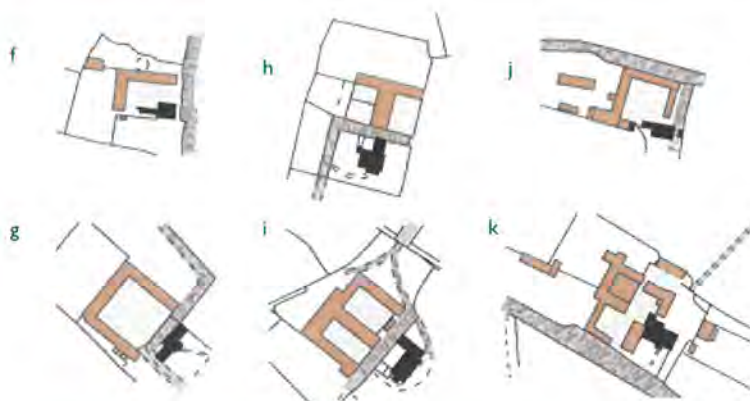
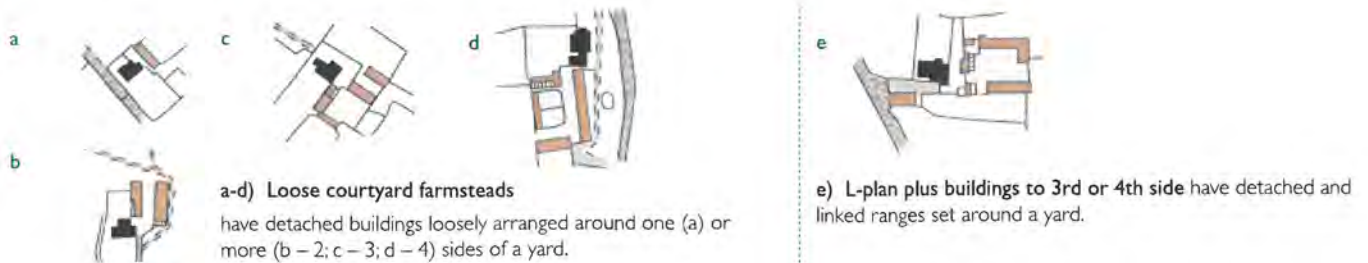


Table 1 - Farmstead mapping attributes

<b>PRN</b>	Unique No.	Unique reference number to fit with any existing data sets
<b>Site Name</b>	Modern Name (historic name)	Modern farm name with historic name (if different) recorded in brackets
<b>Classification</b>	FARMSTEAD	Defined as a site with farmhouse and associated working buildings and areas for the working of a farm
<b>Primary Attribute</b>	OUTFARM	Defined as a site (outfarm) or individual building range (field barn) remote from the farmstead
<b>PLAN TYPE</b>	This results from combination of Primary and Secondary Plan Attributes e.g. LC3 = Loose Courtyard with buildings to 3 sides of yard; RCmy = Regular Courtyard multi-yard plan	
<b>Plan Type</b>	DISP LC LIN LP PAR RC ROW SING UNC	Dispersed Loose Courtyard Linear L-plan (attached house) Parallel Regular Courtyard Row Plan Single building (use for field barns etc. where there is no yard) Uncertain
<b>Plan Type</b>	I, 2, 3, 4  L3 or L4 . L u e ful cl dw my cov d y	No. of sides to loose courtyard formed by <i>working</i> agricultural buildings  Yard with an L-plan range plus detached buildings to the third and/or fourth side of the yard (may be used with LC or RC dependent on overall character)  Regular Courtyard L-plan Regular Courtyard U-plan Regular Courtyard E-plan Full Regular Courtyard plan Cluster (Used with DISP) Driftway (Used with DISP) Multi-yard (Used with DISP or RC) Covered yard forms an element of farmstead Additional detached elements to main plan Presence of small second yard with one main yard evident
<b>Tertiary Attribute</b>	Codes as per Secondary Attribute table e.g. LCId = Loose Courtyard with building to one side of yard with additional detached buildings; DISPMYL = Dispersed multi-yard group including a prominent Regular L-plan within it	

<b>Survival</b>	EXT	Extant – no apparent alteration
	ALT	Partial Loss – less than 50% change
	ALTS	Significant Loss – more than 50% alteration
	DEM	Site remains but no OS 2nd edition buildings legible
	HOUS	Farmhouse only survives
	LOST	No evident trace of farmstead/outfarm site
<b>Ruin</b>	PART	Aerial photographs show ruination to extant buildings on part of the farmstead/outfarm
	WHOLE	Aerial photographs show ruination to extant buildings for the whole farmstead/outfarm
<b>Sheds</b>	SITE	Large modern sheds on site of historic farmstead – may have destroyed historic buildings or may obscure them
	SIDE	Large modern sheds to side of historic farmstead – suggests farmstead probably still in agricultural use
<b>Farmhouse Position</b>	ATT	Attached to agricultural range
	DET	Detached
	UNC	Uncertain (cannot identify which is farmhouse)
<b>Confidence</b>	H	High
	M	Medium
	L	Low
<b>Area</b>	Rapid capture of the area of the farmstead, capable of analysis after an area mapping project has completed	
<b>Notes</b>	Free text field to add notes relating to the character or identification of a record or confidence score	
<b>Date_HM</b> (Date of House based on presence of dated House or Map evidence)	MED	Pre 1600
	C17	17 <sup>th</sup> century
	C18	18 <sup>th</sup> century
	C19L	19 <sup>th</sup> century (based on presence of a listed building dated to 19 <sup>th</sup> century)
	C19	19 <sup>th</sup> century (based on presence on historic map)
<b>Converted buildings?</b>	Yes/No	Note presence of converted buildings based on address point data or StreetView etc.

**Courtyard plans** are the most common forms of farmstead layout, where the working buildings are arranged around one or more yards. The largest courtyard farms are found on high-status sites, estate farms and in the arable vales, wolds and downlands of England, and the smallest in stock-rearing and dairying areas. Cattle yards either developed as areas for treading straw from the threshing barn into manure, or – especially in upland areas – an area for moving cattle and storing the manure. They may have scatters of other farm buildings relating to routes and tracks, usually cart sheds and other ancillary buildings.



**Dispersed plans** have no focal yard area and the working buildings are dispersed along a routeway or within the boundary of the farmstead. They are concentrated in upland and wood pasture landscapes including areas close to common land for holding stock. They vary greatly in scale and are often bisected by routeways and public footpaths.



**Linear and other farmstead types** are most closely associated with upland and common-edge farmsteads.

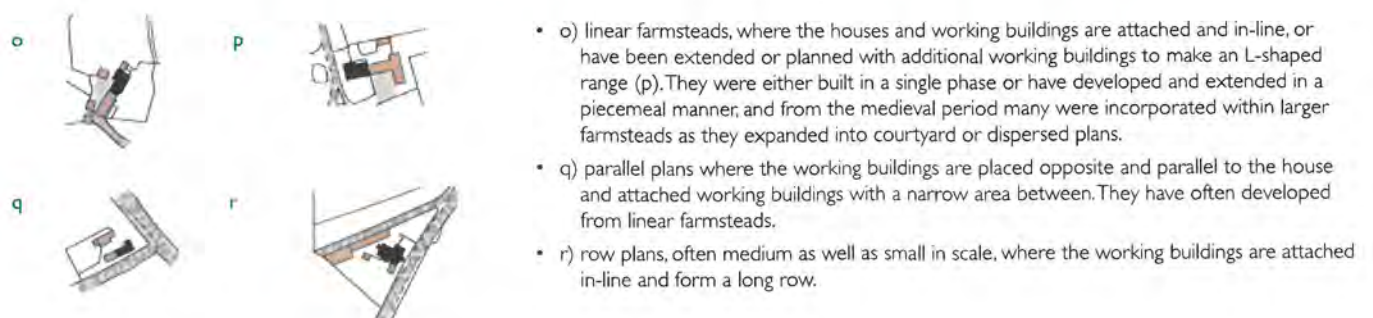


Fig. 1 Principal farmstead types (from Lake 2014, 10)



The completed tables were submitted to the HER.

### 3. Copyright

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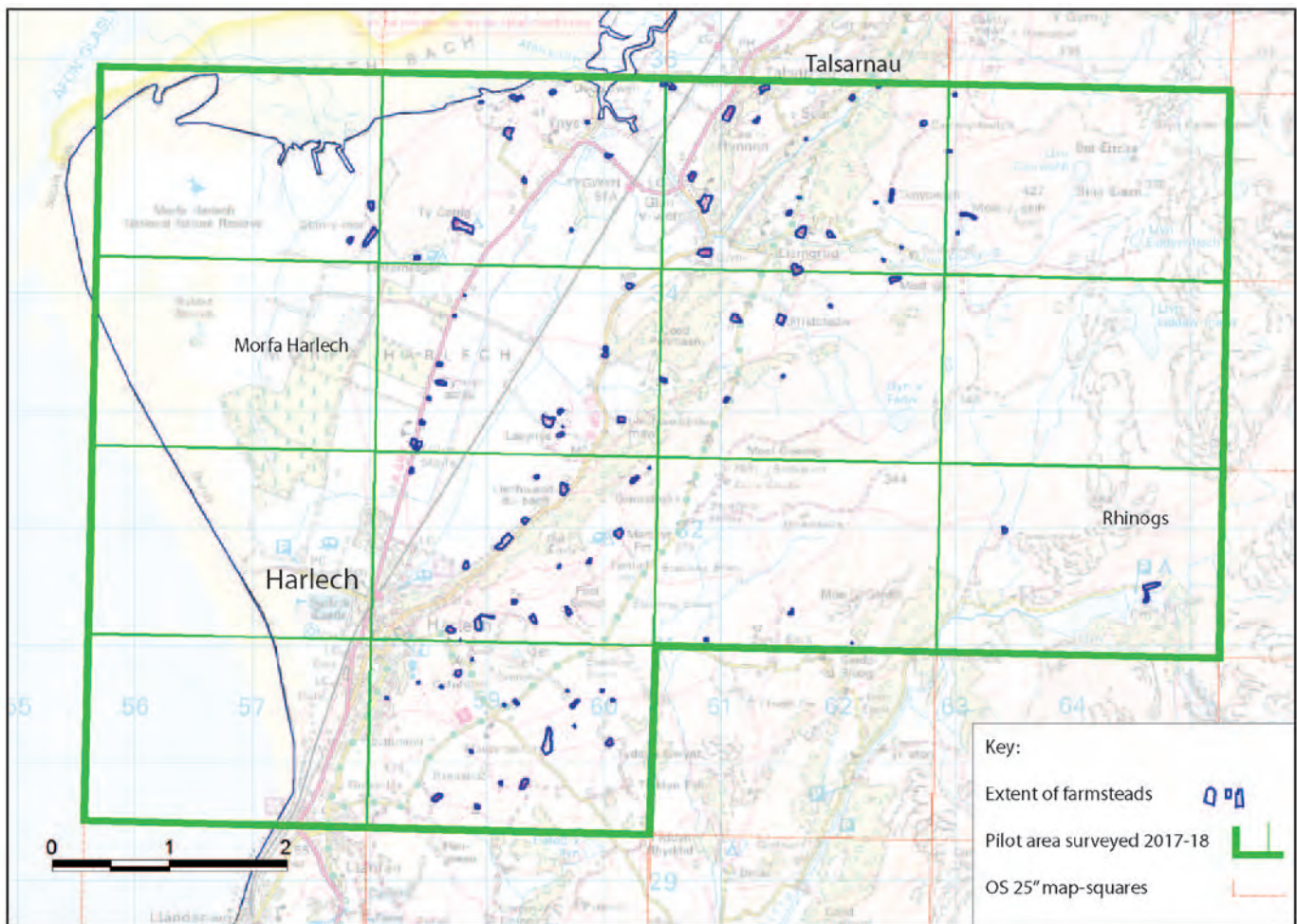


Fig. 2 Area of digitisation in the 2017-18 project

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### 4. RESULTS

The 2017/18 phase was a short pilot project and significant proportion of the allocated time was spent setting the project up, attending meetings and solving compatibility problems related to differing digital resources, HER requirements and mapping datasets held by the WATs.

A reliable and efficient methodology was established during the project. An area of approximately 55 square kilometres of Northern Arddudwy was digitised comprising 361 building polygons in 104 farmsteads. This includes full characterisation of the farmsteads which was found to be considerably

more time consuming than the production of the individual building polygons.

The area included a wide range of topography extending from coastal dunes at the west, through fertile undulating farmland, to the uplands of the Rhinogs to the east.

Most farmsteads tended towards loose layouts with only 2% conforming to a regular courtyard plan. The regular courtyards were large high-status holdings. Dispersed plans were the most common (46%) with 30% being dispersed multi-yards. The majority of the rest conformed to loose courtyard plans (37%) with one or two buildings arranged around a single courtyard.

There was a distinctively high proportion of outfarms in the study area. Farmsteads, (i.e. a site containing both a house and working buildings) accounted for 57% of the farms most of which were dispersed multi-yards. The remaining 43% were outfarms (i.e. buildings remote from the main farmstead) mostly in the form of one or two barns and an associated yard (loose courtyard plans). Upland farmsteads tended to be small and dispersed often in the form of driftways defined by buildings set alongside a local routeway. A map showing the farmsteads recorded in the current year's project shows the general distribution with a band of dense activity in a strip between the edge of the coastal dunes and the 350m contour.

Survival of buildings shown on the 25" map was generally high although some outfarm barns had been lost or could be seen on aerial photographs as roofless ruins. Survival and condition could only be determined from the mapping and aerial photographic evidence. This gave a reliable estimate of the general survival of buildings and showed that 75% of farmstead/outfarms were intact with no significant loss of structures. About 27%, particularly in the lowlands around Harlech, had been converted and no longer functioned as farms even though in many cases all the buildings were extant in some form. In some cases former working buildings had clearly been converted into dwellings. The data for the "converted" field was derived entirely from aerial photography and as such includes a degree of uncertainty.

## **5. DISCUSSION**

### **5.1 Methodology**

One of the aims of the pilot project was to develop and refine the existing methodology and ensure that outcomes were compatible with the Gwynedd HER. This has been achieved and a reasonably efficient workflow has been devised.

The digitisation of the individual farm buildings is a relatively swift process. The input table contains 52 fields but only 3 require manual entry and the rest can be batch filled at the end of the project. This process was the main purpose of the project.

The farmstead characterisation was added to the project as a secondary element but is more complex and time consuming than the digitisation of individual farm buildings. The input table contains 34 fields but crucially 12 of these fields require manual input and the process includes reference to aerial photographs, the existing HER, Cadw listed building records and RCAHMW records. The categorisation process requires confirmation of the current status and condition of the buildings, the identification of the farmhouse, and the allocation of the plan to one of 8 basic plan types and 18 sub-plan types.

The main categories of farmstead plans as defined in the Historic Farmsteads manual (Lake and Edwards 2017) proved to be readily identifiable although smaller more irregular farmsteads could sometimes be interpreted in more than one way. It was in many cases possible to reliably identify secondary and tertiary attributes such as multi-yards, drift-ways, clusters and numbers of buildings around courtyards. Some of the other attributes seem to require more subjective judgement and could be regarded as being on a continuum of irregular plans.

## 5.2 Characterisation

The characterisation study identified a distinctive agricultural settlement pattern in the survey area. The area is characterised by relatively small irregular farmsteads with a high proportion of outfarms often in the form, of a single barn and attached courtyard. The Historic Landscape Characterisation for Ardudwy notes that the use of outfield barns is particularly characteristic of the Meirionydd area in general, and contrasts with many similar upland areas in Caernarfonshire. These were used to over-winter cattle, while hay and fodder was stored on an upper level access from the opposite gable end (GAT undated).

Much of the settlement pattern, with farms set along routeways into the uplands, is a relict of the transhumance of the hafod and hendre system. It appears that many of the hafodydd, on the upland margins developed into permanent farmsteads and are still occupied in the present day.

Glyn Cywarch, built for the Wynn family and now owned by Lord Harlech, is the main high-status building in the study area and includes one of only two examples of a regular courtyard plan in its associated farm buildings. Elsewhere farms are less regular and less carefully planned and appear to have developed along pragmatic lines driven by topography, function and transport routes. A small minority, particularly higher status farms were clearly built to a predetermined plan. Many, probably most, of the smaller farms developed in an *ad hoc* fashion and could probably be seen as variations on a dispersed multi-yard plan that developed from a core farmstead over time. In these cases the variations in plan appear to be driven more by topographic constraints than by deliberate planning.

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