

**Results of Archaeological Works
(Desk Based Assessment & Geophysical Survey) at**

Land Adj. to Bryn Hyfryd, Llanrwst

NGR SH 80270 61618



Report Number CR199-2020



CR ARCHAEOLOGY

Compiled by C. Rees and M. Jones
On Behalf of Mr. M. Davies

Summary

CR Archaeology were commissioned by the owner to undertake a desk based assessment and geophysical survey on land adjacent to Bryn Hyfryd, Llanrwst. The work was undertaken in September 2020.

The geophysical survey identified a concentration of potential archaeological activity in the western half of the site with a potential building aligned approximately NE – SW. This is at a different alignment than the current field system and possibly relates to the similar alignment of two further anomalies. Two further possible infilled hollows/pools or burnt mound features were also identified. The majority of the features were identified within the area set aside as flood mitigation rather than within the proposed development area.

The proposed development site is considered to be of high archaeological potential.

Crynondeb

Dirprwyodd Archeoleg CR gan y perchennog i ymgymryd asesiad wrth ddesg a gwaith arohwg geoffiseg ar dir cyfagos i Bryn Hyfryd, Llanrwst. Roedd y gwaith ei ymgymryd yn Medi 2020.

Dynodwyd yr arohwg geoffiseg crynodiad o weithgarwch archeolegol

botensial yn yr banner gorllewinol y safle gydag adeilad posib ei amlinellu'n fras GD-DG. Mae hwn ar amlinell wahanol na'r gyfundrefn cae presennol ac yn bosib mewn cyswllt efo amlinelliad tebyg o ddau anomaledd ychwanegol. Yn ogystal, roedd ddau bant/pwll mewnlenwi neu nodweddion tomen llosg posib ei dynodi. Mae'r rhan fwyaf o'r nodweddion ei dynodi tu fewn i'r ardal wedi ei wahanu fel lliniariad llawn yn hytrach na thu mewn i'r ardal datblygiad awgrymedig.

Mae'r ardal ddatblygiad awgrymedig yn ystyried i fod o botensial uwch archeolegol.

Results of Archaeological Works at Land Adj. to Bryn Hyfryd, Llanrwst

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1.0 Introduction

CR Archaeology have been instructed by Mr. M. Davies to conduct an Archaeological Desk Based Assessment and Geophysical Survey at the proposed site of a new residential development containing 16 houses and associated developments (Appendix B).

The site is located on land adjacent to Bryn Hyfryd Farm, Llanrwst (Figure 1). The farm and outbuildings are Grade II Listed buildings (Ref 3594 and 3595). They are recorded as having been built c. 1840. The proposed development area is currently in agricultural use, with the area immediately adjoining the road prone to flooding.

The proposed development is located to the south of the former Ysgol Dyffryn school (Grade II Listed Ref 3592) and Schoolmaster's House (Grade II Listed Ref 3593). The school is believed to have been founded c. 1612 and elements of the 17th century building have been incorporated into the 19th century and later school.

The town of Llanrwst has Medieval origins and it is noted that there is a general potential for unknown, contemporary archaeological remains throughout the area surrounding the core of the town. It is suggested that within the proposed development site this could comprise ancillary dwellings or industrial activity, or possibly the site of a significant battle as several are known to have taken place in the locale (GAPS Letter Ref: 0807tf/D3490).

This document has been prepared to supply the client and statutory bodies including Cadw and the Local Planning Authority Archaeologist with information as to the archaeological potential, impact and constraints on the aforementioned scheme.

It is intended that the results of this work will inform decisions as to the nature of any additional heritage considerations/consultations which the scheme must be afforded and archaeological mitigation strategies or evaluation methodologies which may be required.

This Desk Based Assessment examines the historic context and archaeological potential of the proposed development area and determines the possible impact of the development on the setting of the local area.

The geophysical survey identified a concentration of potential archaeological activity in the western half of the site with a potential building aligned approximately NE – SW. This is at a different alignment than the current field system and possibly relates to the similar alignment of two further anomalies. Two further possible infilled hollows/pools or burnt mound features were also identified. The majority of the features were identified within the area set aside as flood mitigation rather than within the proposed development area.

The proposed development site is considered to be of high archaeological potential.

2.0 Project Aims & Objectives

This phase of works for the development site aimed to undertake a desk-based assessment, walkover survey and geophysical (gradiometer) survey. It aimed to examine the potential archaeological resource surviving at the site and to provide information which will be utilised to determine an appropriate methodology for any further archaeological mitigation or evaluation methodologies which may be required.

The first aim of this scheme of works was to undertake desk based historical research exploring the history/archaeology of the site. This information includes a map progression and archival

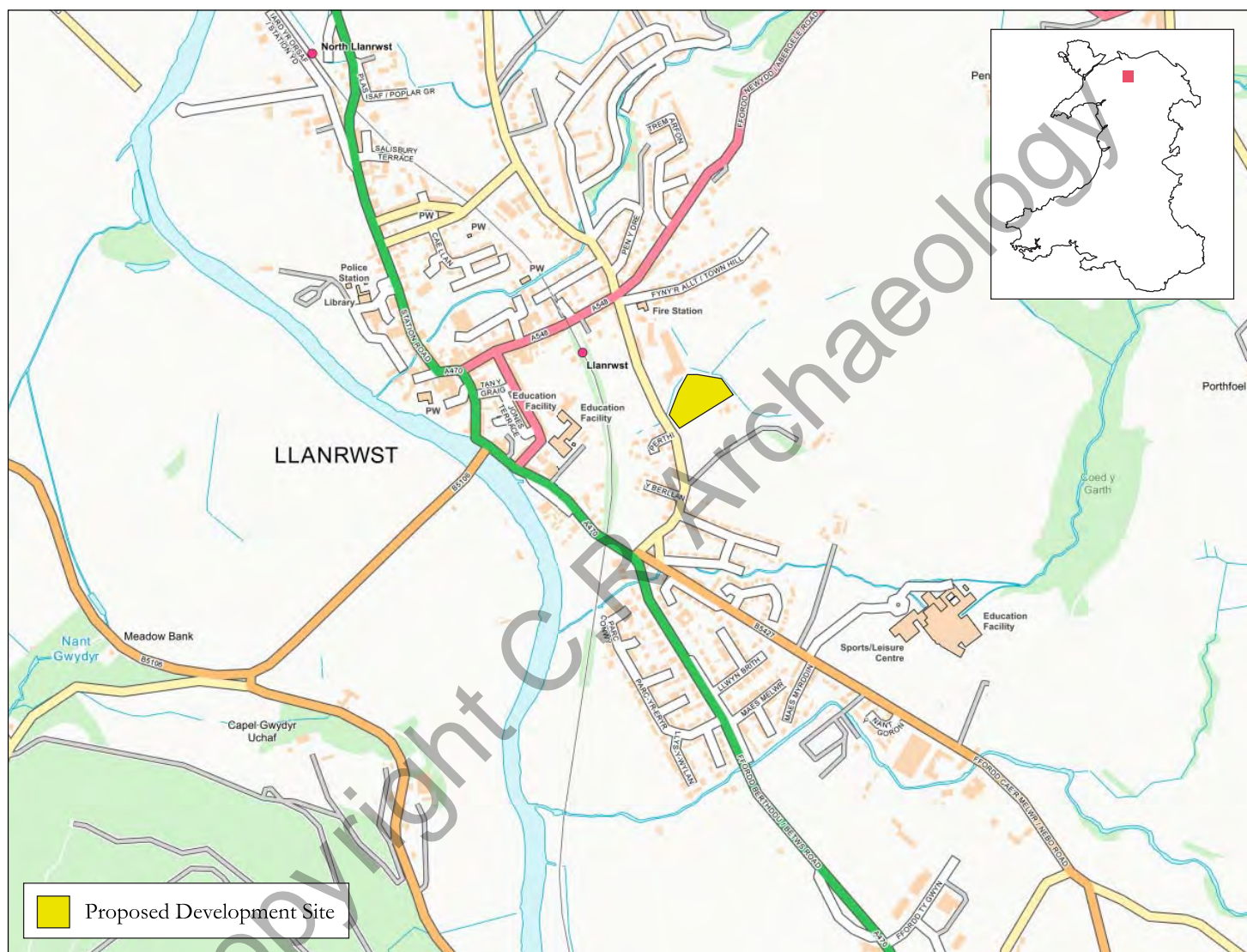


Figure 1. Site Location Map - Source: OS Open Data
(Contains Ordnance Survey data © Crown copyright and database right 2019)

research in order to compile a coherent narrative history of the site and its environs.

The Gwynedd Historic Environment Record (HER), Conwy Archives and relevant publications were consulted to compile a record of known archaeological sites in the vicinity. The data gathered during this phase of works was also utilised in the interpretation of the gradiometer results.

The second aim of this archaeological investigation was to undertake a walkover and geophysical survey of the site in order to identify and locate buried features.

It is intended that this document be utilised to inform further archaeological planning decisions and conditions at the site.

The objectives of this programme of works were:

- To locate and describe, by means of desktop analysis, a walkover survey, geophysical prospecting and subsequent evaluation trenching, all archaeological features which may be present within the development area
- To make full and effective use of existing information to establish the archaeological significance of the site
- To help inform future decision making, design solutions, further evaluation & mitigation strategies

3.0 Scheme of Works - Methodology

The archaeological works were conducted in two sections and each is detailed separately below.

3.1 Desk Based Research

A complete and coherent history of the site was compiled utilising material sourced from the Gwynedd Historic Environment Record (HER), the Royal Commission on the Ancient and Historical Monuments Wales (RCAHMW) database, Conwy Archives and relevant publications. This has allowed as comprehensive a history as possible to be compiled. A map progression of the area was undertaken.

In order to identify the character of archaeological remains in the vicinity of the site a search of the Gwynedd HER was conducted examining an area within a 500m radius of the proposed works (the grid reference for the search is taken as the centre point of the development area). This was expanded to 1000m to examine general trends, but this data is not discussed in detail. The RCAHMW database and aerial imagery of the site was also examined. The information collected is discussed within the main report text.

The works were carried out accordance with the CIfA Standards and Guidance for historic environment desk-based assessment (CIfA 1994 (Revised 2009 & 2014).

This material forms the historical background for the full archaeological report and has been utilised to aid the interpretation of the results of the geophysical survey.

3.2 Geophysical Survey

Prior to the commencement of works a brief written record of the site was compiled. This includes a note on any features/elements which may have an impact on the survey results - for example weather, geological features, fencing & overhead cables.

The survey was carried out in accordance with English Heritage's guidance "*Geophysical Survey in Archaeological Field Evaluation*" (2008) and the CIfA "*Standard and Guidance for Archaeological*

Geophysical Survey” (2011 Revised 2014).

A survey grid was established over the site, orientated to provide a best possible fit to the area to be surveyed and to minimise the effects of the slight slope of the ground level on the site. The survey areas were gridded with a 20 x 20 m grid. These squares were marked by plastic pegs and the grid will be tied to local features. Readings will be taken at 0.25 m intervals along transects 1.0 m apart with a zig-zag pattern being walked. The data will be downloaded on to a laptop computer in the field.

A limited number of small soil samples were taken for magnetic susceptibility analysis as an aid to interpret the results of the Fluxgate gradiometer survey.

3.2.1 Equipment

The survey was undertaken using a Geoscan FM 256 Fluxgate Gradiometer

Sensitivity: 0.1nT

Sample Interval: 0.25m

Traverse Width: 1m

Traverse Method: Zig-Zag

Grid Square Size: 30m x 30m or 20x20m where possible, downsized to 20x10m where necessary.

Geoplot v. 3.00v was used to download and manipulate the geophysical data. Minimal processing was applied to all images to ensure no false results are created by excessive image manipulation. Data was downloaded to a portable computer during each rest period for the course of the day, to ensure data integrity and check ongoing results.

Grey scale plots were produced using Geoplot v. 3.00v. X - Y plots were produced using Golden software “Surfer” v. 10

A photographic record was compiled prior to the commencement of the survey which details all above ground features and shows the general topography of the site. Further photographs were taken to illustrate the setting of the site. It was undertaken using a 20 mega-pixel Sony Alpha digital camera with a variety of standard and other lenses. Images were captured in RAW format for later processing into high resolution JPG and TIF files.

3.3 Timetable for Proposed Works

The walkover survey was conducted on September 8th and the geophysical survey was undertaken on the 12th September 2020 with further time allotted for archive research, report compilation and site archiving.

3.4 Staffing

The project was managed by Catherine Rees (MCIfA, BA (Archaeology), MA (Archaeology) Postgraduate Diploma (Historic Environment Conservation) & Matthew Jones (BA (Archaeology), MA (Archaeology)). The geophysical survey was conducted by Dr Ian Brooks.

All staff have a skill set equivalent to the CIfA ACIfA/MIFA level. C.Vs for all staff employed on the project can be provided on request. All projects are carried out in accordance with IfA *Standard and Guidance* documents.

3.5 Monitoring

The project was subject to monitoring by Gwynedd Archaeological Planning Services.

3.6 Health and Safety

A risk assessment was conducted prior to the commencement of works and site staff were familiarised with its contents. A first aid kit was located in the site vehicle.

All staff were issued with appropriate Personal Protective Equipment (PPE) for the site work. This consisted of:

- Hi-visibility vests (EN471)
- Mobile Telephone (to be kept in site vehicle)
- Suitable Walking Boots & Waterproofs

All staff have passed a CITB health and safety test at least operative level.

3.7 The Report

The report clearly and accurately incorporates information gained from the programme of archaeological works. It presents the documentary evidence gathered in such a way as to create a clear and coherent record. This includes illustrations of any cartographic/pictorial sources. The report contains a site plan showing the locations of any photographs taken.

The desk-based assessment considered the following:

- the nature, extent and degree of survival of archaeological sites, structures, deposits and landscapes within the study area
- the significance of any remains in their context both regionally and nationally
- the history of the site
- the potential impact of any proposed development on the setting of known sites of archaeological/historic importance
- the potential for further work with appropriate recommendations

In accordance with English Heritage guidelines the geophysical survey results element includes:

- a survey location plan demonstrating relationships to other mapped features (minimum scale 1:2500);
- an image of minimally processed survey data (minimum scale 1:1000);
- where appropriate a trace (or X–Y) plot of raw magnetic data
- a greyscale plot, or dot density plot (minimum scale 1:1000);
- one or more interpretative plans/diagrams (minimum scale 1:1000).

It is intended that this report will inform decisions as to the necessity and/or nature of any further archaeological mitigation strategies which may be required.

A copy of the report in Adobe PDF format will be sent to the appropriate monitoring archaeologist for approval before formal submission. A bound paper copy and PDF digital copy of the report will be submitted to GAPS as part of the formal submission. A digital Adobe PDF version and a bound paper copy of the final report and will be lodged with the Gwynedd Historic Environment Record within six months of completion of fieldwork.

3.7.1 Copyright

CR Archaeology and sub-contractors shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it hereby provides a licence to the client and the local authority for the use of the report by the client and the local authority in all matters directly relating

to the project as described in the Project.

4.0 Topographical and Geological Background

4.1 Topography

The application site is located off Ffordd Tan y'r Ysgol which forms the south-western site boundary. It is accessed via a lane off Ffordd Tan y'r Ysgol leading to Bryn Hyfryd Farm. This lane runs along the south-eastern site boundary. The field is bounded to the north-east by enclosed agricultural land. It is a generally flat area of land within an enclosed field system and is currently in use as grazing.

4.2 Geology

The bedrock geology at the site is recorded as “*Denbigh Grits Formation - Mudstone, Siltstone and Sandstone. Sedimentary Bedrock formed approximately 427 to 433 million years ago in the Silurian Period. Local environment previously dominated by deep seas. These sedimentary rocks are marine in origin. They are detrital and comprise coarse- to fine-grained slurries of debris from the continental shelf flowing into a deep-sea environment, forming distinctively graded beds*” (www.bgs.ac.uk).

The site is located at the boundary of two superficial geology types. They are recorded as “*River Terrace Deposits (undifferentiated) - Sand and Gravel. Superficial Deposits formed up to 3 million years ago in the Quaternary Period. Local environment previously dominated by rivers. Sedimentary deposits are fluvial in origin. They are detrital, ranging from coarse- to fine-grained and form beds and lenses of deposits reflecting the channels, floodplains and levees of a river or estuary (if in a coastal setting)*” and “*Till, Devensian - Diamicton. Superficial Deposits formed up to 2 million years ago in the Quaternary Period. Local environment previously dominated by ice age conditions. These sedimentary deposits are glacial in origin. They are detrital, created by the action of ice and meltwater, they can form a wide range of deposits and geomorphologies associated with glacial and inter-glacial periods during the Quaternary*” (www.bgs.ac.uk).

5.0 Historical Background

The following section has been subdivided into a more general introduction to the history of Llanrwst, followed by a more detailed examination of the history and archaeology in the vicinity of the proposed development area.

5.1 A Brief History of Llanrwst

The Afon Conwy is the traditional boundary between the historic counties of Denbigh and Caernarfon. The town of Llanrwst is located on the bank of the Afon Conwy at the first location where the river could be crossed by means of a ford. During spring tides, the river is tidal as far as Tan Lan near Llanrwst.

The ability to cross the Afon Conwy at this point is the likely genesis for the siting of the town of Llanrwst in this specific location. No evidence for a pre-Medieval origin for the town has been uncovered but it is not unlikely and the RCAHMW entry for Llanrwst (Urban) records “*Late Celtic Bronze Armlet. A fine bronze armlet decorated with repousse designs in the finest Late Celtic style, was found in 1897 when digging the foundations of Primrose Cottage, near Llanrwst, and sold in 1904 to the Ashmolean Museum, Oxford*”. It also records that “*along with the armlet are said to have been found but no information of their character or present whereabouts could be obtained*” (RCAHMW 1914: 148). The Historic Environment Record records additional Prehistoric artefacts have been found in the area. This information is discussed in detail in section 5.4.1.

In his 1833 Topographical Dictionary of Wales, Samuel Lewis writes “*this town is of very great antiquity and in the year 952 was the scene of an important battle in the contests maintained at this period for the of Wales between the sons of Hywel Dda and those of Edwal Voel when the former, assembling their forces in South Wales, laid waste the of North Wales as far as the river Conwy but opposed by the latter at the town of Llanrwst where*

after an obstinate conflict in which many of considerable rank were slain on both sides, the sons of Edwal Voel were victorious, and pursuing their enemies into South Wales, they retaliated upon their territories the ravages which had been inflicted on their own” (Lewis 1833).

The town and church appear in the Norwich taxation of 1254 and the Lincoln taxation of 1291. It is first mentioned as having a market in 1328, although presumably its origin predates this by some time given its location (Soulsby 1983: 172). The church is recorded by Pennant as “*dedicated to St. Rystyd, or Restitutus (the name involved in Llanrwst was Grwst or Gwrwst, the exact equivalent of the Goidelic Fergus), archbishop of London in 361, present at the council of Arles in 353. The ground on which it is built, is said to have been given by Rhun, the son of Nefydd Hardd, to expiate the foul murder of prince Idwal, a son of Owen Gwynedd (1100-1170), slain by order of his foster-father, Nefydd, to whom he had been intrusted”* (Pennant 1883 ed: Vol II p.302-3).

Llanrwst was to suffer greatly during the uprising of Owain Glyndŵr and the Welsh War of Independence, and the attack on the town in 1401 “*brought such a desolation that greene grasse grewe on the market place...and the deare fed in the churchyard”* (Sir John Wynne, quoted in Ballinger 1927: 52-53).

The parish church appears to have been rebuilt in the late fifteenth century (RCAHMW 1914: 148), as the town recovered after the Glyndwr uprising. The next significant period of investment and building works were undertaken during the early 17th century, many financed by the Wynns of the nearby Gwydir Estate. During this phase of works the alms houses and free school (c.1610-12), Gwydir Chapel was added to the church (1633-4) and Pont Fawr (1636) was constructed. The details surrounding the bridge will be returned to in the following chapter.

Pont Fawr connected the estate elements of the Wynn family on either side of the Afon Conwy and the current road from the seat at Gwydir over the river is likely to date from this period. The bridge later becomes incorporated into the turnpiked road (Evans 2010: 4).

The town was further improved in 1661 when a town hall (demolished 1963) was added to the market square (ibid). Pennant (writing in 1782) describes the town of Llanrwst as “*small and ill built and has nothing remarkable except the church”* (Pennant 1883 ed: Vol II p.302-3). Reverend Bingley writing in 1814 continues along this line of description writing “*nothing to recommend it to notice: the streets are narrow, and the houses very irregular”* (Bingley 1814: 303).

Writing in 1833, Lewis very much disagrees with these descriptions writing “*the town is pleasantly situated on the eastern bank of the river Conway, which here forms the boundary between the two counties, four miles to the north of the road to Holyhead, and in the spacious and beautiful Vale of Llanrwst environed by majestic and wellwooded hills, the land at the foot of which is well watered and exceedingly productive. It is large, well built, and amply supplied with water, but consists principally of small houses and shops the streets are spacious and well paved”*.

He continues: “*excellent roads have lately been made with the London, Liverpool and Holyhead roads also with Denbigh and St Asaph, the improved of which has caused a considerable increase of visitors during the summer months, to the picturesque and admired scenery of this neighbourhood. Llanrwst formerly noted for the making of harps: at present spinning of woollen yarn, and the knitting of stockings constitute the principal branches of trade, the town being situated at the north western extremity of hosiery district of North Wales and next to Bala the principal market for that article. The river is navigable from its mouth to Trefrin, three miles from this town, for vessels of sixty tons burden bring coal, lime, timber and grocery for the of the inhabitants of Llanrwst and the neighbourhood and and carry back the produce of the slate quarries mines of the adjoining parishes. The market, which is on Tuesday, is well supplied, particularly with corn, which is not sold by sample, but in small quantities to the circumstances of the purchaser. It is the mart for the inhabitants of the surrounding district to a distance of twenty*

miles in every direction. Fairs chiefly for the sale of cattle, corn and wool are on the first Tuesday in February, March 8th, April 25th, June 21st, August 10th, September 17th, October 25th, December 11th and the second Tuesday after that day at the June fair. A great quantity of wool is sold to clothiers in Yorkshire, and at the September and October fairs great numbers of cattle are sold to English drovers.

The market place is a spacious square area in the centre of which stands the town hall, a plain substantial structure erected at the expense Maurice Wynne Esq of Caer Mehw, as appears a stone over the principal entrance bearing the of the Wynnes, and the initials of the founder with the date 1661. Above this is a clock, with a cupola containing the market bell and surmounted by a large gilt eagle. The general quarter sessions for the county were formerly held in this hall, which practice has discontinued since the removal of the assizes from Denbigh to Ruthin The petty sessions for the Uchdulas of the hundred of Isdulas are held here; and Llanrwst has, by the late Boundary Act, been made a polling-place in the election of knights for the shire” (Lewis 1833).

The arrival of the railway at the town in 1863 encouraged further development in the town (Evans 2010: 4), and the 1868 National Gazetteer describes the town at that time. “LLANRWST, a parish and market town in the hundred of Isdulas, county Denbigh, and hundred of Nant-Conway, county Carnarvon, 10 miles S. of Conway, 16 S.W. of Denbigh, and 218 from London. The Conway and Llanrwst branch of the Chester and Holyhead railway has its terminus here. It is situated on the river Conway, which is here crossed by a steep bridge of three arches, built under the direction of Inigo Jones about 1636. The parish includes 7 townships, Garth-Garmon and Tre-ydre being among the principal.

The town, which is nearly surrounded by mountains, has of late years undergone great improvements, both in the buildings and general appearance of the place. There is a good townhall, in which the county court sits monthly, a market-place, and a branch bank. It is a polling-place for the county elections. The trade of the place is of no great extent, consisting chiefly of woollens, stockings, tanning, and malting. There are several corn mills. In the neighbourhood are stone-quarries, also coal and iron mines. Formerly Llanrwst was famous for the manufacture of the Welsh harp” (www.genuki.org.uk/big/wal/DEN/Llanrwst/Gaz1868).

Llanrwst continues to be a popular market town and tourist destination. Recent flooding events in the town have caused damage to the town and placed a number of important historic buildings at risk. Flood defences are being considered which may have an impact on the bridge and its setting.

5.2 Results of Historic Environment Record Search of Surrounding Area

Due to the proposed development site being located in an urban area, a search of the Historic Environment Record returned a large number of results – 47 within a 500m search radius, and 100 within a 1000m search radius. Within a 500m search radius there were 1 entry of Prehistoric date, 2 entries of Roman date, 1 entry of Medieval date, 41 of Post Medieval date, 1 of multiperiod date and a single entry recorded as of unknown date.

When the search is expanded to 1000m the majority of the results continue to be predominantly of Post Medieval date. At 1000m there were 2 Prehistoric entries, 3 entries of Roman date, 5 entries of Medieval date, 75 of Post Medieval date, 2 of Modern date, 1 of multiperiod date, and 11 entries recorded as of unknown date.

There are 31 Listed Buildings within a 500m radius of the proposed development, and 53 within a 1000m search radius. One of the Listed Buildings – Pont Fawr Bridge is also a Scheduled Ancient Monument.

5.2.1 Prehistoric

There is a single entry of Prehistoric date within the 500m search radius – PRN 2461 details a stone axe findspot recorded as “A polished stone axe and possible hammer stone were found to the SW of

Pen-y-Fron farmhouse which is about 1/2 a mile east of Llanrwst (axe possibly Graig Lnyd). Mr Jones said his father found the stone axe and possible hammer, but he was unable to indicate the find site”.

When the search radius was extended to 1000m a second entry of Prehistoric date was identified – also recorded by the aforementioned Mr Jones as having been found by his father. PRN 2460 is a perforated stone hammer found in 1921. The findspot location is detailed as *“the field Cae Melyn, about 200 yards south of Pen-y-Fron Farm. Mr Jones said his father found the hammer, but he was unable to indicate the find site”.*

As mentioned in section 5.1 a bronze armlet is recorded by the RCAHMW as having been found in the town. This item is recorded as PRN2469 although it is unclear as to why it has been re-evaluated and assigned a Post Medieval date.

5.2.2 Roman/Romano-British

There are two entries of Roman/Romano-British date within the 500m search radius – both of which are findspots. PRN 2458 is a spindle whorl described as *“a spindle whorl was found in 1919, on a heap of stones picked up from the surface of a field called Yr Hafod, belonging to Penllan”.* A second artefact, PRN 2459 is recorded as *“a perforated stone disc, 3 1/2 inches by 3 1/2 inches across, was found in the garden in front of Cae Groes Farm Cottage in 1926 by Mr R. Thomas, the occupier. Two holes had been driven through the centre of the stone”.*

When the search is extended to 1000m an additional record was identified. 17701 is recorded as part of the Roman Road, Canovium - Tomen y Mur. It is noted that *“the exact location of the Roman road along the Conwy Valley is not known with certainty. However, the most likely route for a road from Canovium to Tomen y Mur is along the west side of the valley, though no lengths of Roman road have been identified with certainty along here”.*

5.2.3 Early Medieval/Medieval

Within a 500m radius of the proposed development site is a single entry of Medieval date. PRN 3194 records the existence of the Medieval Township of Llanrwst.

When the search radius is extended to 1000m the number of entries rises to 6, including one entry of Early Medieval date. PRN 81651 is recorded as the findspot of an Early Medieval mount. No further details are given.

Llanrwst is believed to be a town of Medieval origin although some form of earlier settlement and/activity is very likely given its location as a crossing point on the Afon Conwy. In addition to PRN 3194, which records the existence of the Medieval Township of Llanrwst. The Gwydir Medieval Township (PRN 6830) is also recorded as having been located in the area.

PRN 4633 refers to the Medieval origins of Gwydir Castle. It is recorded as *“Principal seat of the Wynn Family for over 200 years. Originally built by Maredudd ap Ieuan having purchased the site from Hywel Coetmor around 1500. Much of the building as it stands today is the work of Sir John Wynn, great grandson of Maredudd ap Ieuan and the author of The History of the Gwydir Family. Much of the building work utilises stone from Maenan Abbey after its dissolution.”* This site develops over centuries of use and the gardens and associated features are recorded as entries of Post Medieval date. Within the castle itself PRN 31986 records *“the cut-down head of a small slab has been built into the wall at the foot of the spiral staircase at the back of the principal block, which was built in the early and mid-16th century. It is of dark red-brown sandstone and has a bold moulding at the top, but this has been trimmed from the sides. It measures 1ft by 10.5in. The carving is well preserved and the cross is designed in a quatrefoil with a six-petalled flower at the centre, and decorative motifs between the arms inturning in the form of*

curled and lobed leaves. It has been suggested that this slab may have been brought from Maenan Abbey, and this may be so, as the design resembles one at the other Cistercian Abbey of Valle Crucis in general design and detail. C.1300”.

The remaining entry (PRN's 7034) of Medieval date refers to the Parish Church – St Grwst's. It is described as *“An interesting church of c.1500, with a chapel added in 1633. A number of restorations and modern additions have been carried out, including the tower and north aisle. The site is older than the present church; it is mentioned in the Valuation of Norwich of 1254, and it is possible that the church had to be rebuilt following destruction by William Herbert, Earl of Pembroke, during the Lancastrian wars. It was visited by Pennant during his Tour of Wales in 1781 who described the tombs and brasses inside the church. Although largely rebuilt this medieval church retains some features of note, in particular the rood screen and loft, and the Wynn chapel with its fittings.*

The churchyard is approached from the centre of Llanrwst along Tan y Eghwys between almshouses, founded by Sir John Wynn c.1610. The curvilinear churchyard is bounded by Afon Conny to the south. It has been encroached by the adjacent property to the north west where there is now a linear boundary. The churchyard is entered through a 19th century arch, to the south east of the church, of squared rubble with freestone coping and arch voussoirs. The broad arch has a hood-mould with head stops and ornamental wrought iron gates beneath.

The church was built in the late 15th century. It consists of a continuous nave and chancel with an early 19th century west tower, a later 19th century north aisle, a south porch and the Gwydir Chapel at the south east corner.

The south wall of the nave has square headed windows surmounted by hood-moulds. The most westerly and the most easterly are 19th century windows with a central 15th century window of three cinquefoil lights. To the north east of the tower the nave has a window of three lights under a three-centred arch. The east window of the nave c.1500 has four lights with brattished transom and panel tracery. The nave has a 15th century arch-braced roof with small cusped wind braces.

Gwydir Chapel, in late Perpendicular style, was added to the south of the chancel in 1633-4 by Sir Richard Wynn. It has a castellated parapet with pinnacles to the south and stepped buttresses. The east and west windows are of four cinquefoil cusped lights under panel tracery. The two south bays have similar windows but of three lights. The round beaded entrance doorway has a heraldic shield over it recording the founding of the chapel. The chapel has an elaborate low-pitched camber-beam oak ceiling, wall panelling, stalls and screens.

The church still retains its 15th century rood screen and loft at the entrance to the chancel. A detailed description and illustrations of these features can be found in Crossley's article in Archaeologia Cambrensis Vol XCIX.

The west tower and south porch were rebuilt in the early 19th century and the north aisle c 1880. The main church was largely rebuilt in 1882-1884 by Paley and Austin.

The square castellated tower has three storeys. The ground floor stage has single light windows with Gothic arches under square lintels. The second stage has single light windows with arched heads in the north and south walls and a window of two light under a four-centred arch in the west wall. The bell stage has two arched windows on each face. The tower is stepped up to the west to support the carved stone cross and has diagonal buttresses.

The north wall of the north aisle has three windows, two of three lights and one of two lights, with panel tracery above. There are stepped buttresses between the windows. The west gable of the aisle has an arched doorway with a two-light window to the north. The arcade of three bays has elongated octagonal piers.

The 19th century south porch is half timbered with a Perpendicular doorway.

Gwydir Chapel contains contemporary woodwork and several memorials. These include a large stone coffin, said to

be that of Llewelyn the Great who died in 1240, a stone effigy of Hywel Coetmor c1440, described in 'Medieval Stone Carving in North Wales', and another to members of the Wynn family including Sir John Wynn, who died in 1559, and his wife Sydney, who died in 1639. A series of 17th century engraved brasses have been moved from the floor to the walls of the chapel.

The church is built of uncoursed grey rubble with pale limestone dressings. The tower is of roughly coursed rubble with limestone dressings and Gwydir Chapel is of coursed grey stone with pale limestone dressings.

The floor of Gwydir Chapel is stone flagged.*

5.2.4 Post Medieval

The majority of entries for the town of Llanrwst belong to this period, with 41 entries of Post Medieval date within a 500m search radius, rising to 75 within 1000m. Of the 53 Listed Buildings within a 1000m radius 37 are of Post Medieval date.

As would be expected within a market town like Llanrwst the majority of the entries fall into the categorisation of “commercial”, “domestic” and “transport”. Also represented are “agriculture and subsistence” referring to the field systems on the southern side of the Afon Conwy, “education” including the old infants school, grammar school and schoolmaster’s house, “parks, gardens and urban spaces” recording the Gwydir estate gardens and walkways, “religious” related to the Parish church.

In the immediate vicinity of the proposed development site is Bryn Hyfryd Farm. The farm and outbuildings are Grade II Listed buildings (Ref 3594 and 3595). They are recorded as having been built c. 1840. The proposed development is also located directly to the south of the former Ysgol Dyffryn school (Grade II Listed Ref 3592) and Schoolmaster’s House (Grade II Listed Ref 3593). The school is believed to have been founded c. 1612 and elements of the 17th century building have been incorporated into the 19th century and later school. These structures will be discussed in detail in Section 5.3.

5.2.4.1 Cartographic Sources

A search of the Conwy Archives was made, and the Tithe and historic Ordnance Survey maps was made. Unfortunately, there has been damage to the area of the 1862 Tithe map which covers the proposed development area and although it appears that the site boundaries are unchanged from those currently in place the plot interior, schedule number and the neighbouring farm are missing. It was therefore not possible to identify the field name or owner. When studied in conjunction with the results of the geophysical survey (see section 6.2) it is clear that there is no building shown in the location of the possible rectangular structure identified, and it must therefore predate this period.

The field was identified on the Ordnance Survey maps from 1875 – 1953 and no changes were shown. The field boundaries are as shown on the current site location map. See figure 2 - 4.

5.3 Statutory & Non-Statutory Designations - Scheduled Ancient Monuments and Listed Buildings

The site is not located within the Llanrwst Town Conservation Area (www.conwy.gov.uk/en/Resident/Planning-Building-Control-andConservation/Conservation-and-Regeneration/Conservation-Areas/Assets/Documents/Llanrwst.pdf). The limits of the Conservation Area are however within 500m of the centre of the proposed development site.

There are 31 Listed Buildings within a 500m radius of the proposed development, and 53 within

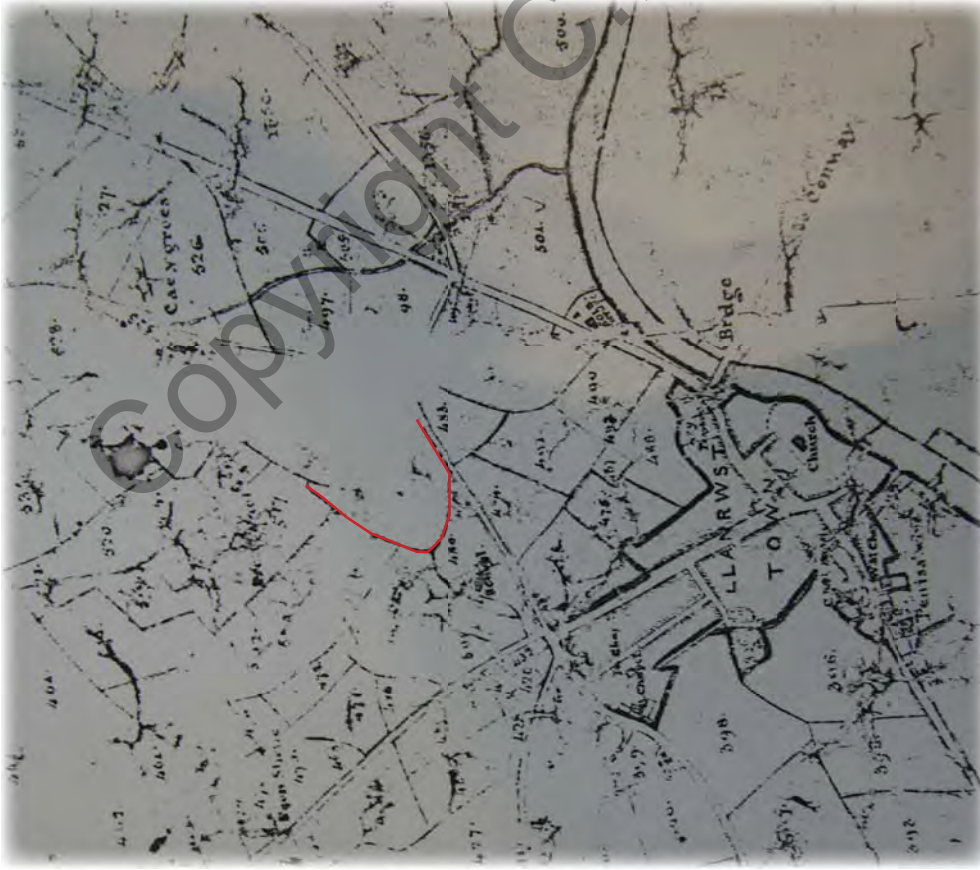


Figure 2. 1862 Tithe Map of Proposed Development Area
(Source: Conwy Archives)

Figure 3. 1875 First Edition Ordnance Survey Map of
Proposed Development Area (Source: Conwy Archives)

Figure 4. 1920 Edition Ordnance Survey Map of
Proposed Development Area (Source: Conwy Archives)

a 1000m search radius. One of the Listed Buildings – Pont Fawr Bridge is also a Scheduled Ancient Monument. The majority of these structures are not intervisible to/from the proposed development area and will not be specifically impacted by the proposed residential development.

There are four Listed Buildings in two groups located in the immediate vicinity of the proposed development area – the former Ysgol Dyffryn School and Schoolmaster's House to the north-west, and Bryn Hyfryd Farm and Outbuildings directly adjacent to the site.

The former Ysgol Dyffryn school (Grade II Listed Ref 3592) and Schoolmaster's House (Grade II Listed Ref 3593) are listed separately. The two building elements have a single description which is recorded as:

“Old Grammar School, dating from C17 (school founded circa 1612), incorporated into C19 and later school. Attached Master's house probably rebuilding of earlier C19 with upper storey rebuilt in late C19.

Former schoolmaster's house faces roughly SE. Three storey, four window block with three storey crosswing to R. Slate roof, squared rubble to entrance front random rubble elsewhere. Pair of cylindrical stone chimneys to L, group of six cylindrical stone chimneys across ridge; roof with wide overhang to L gable. Four steeply pitched dormer roofs, each with 3 brackets; pair of horned sash windows to each dormer window. First floor two-light windows (mullioned and transomed) under deep grey stone lintels. Three ground floor windows (three light mullioned and transomed) under deep grey stone lintels; fourth bay has porch with parapet (statue of griffin over); square-headed entrance doorway with boarded and nailed door. Gabled crosswing has, to R, group of 7 cylindrical stone chimneys. On second and first floors, two-light window (mullioned and transomed) under deep grey stone lintel; former ground floor window now doorway. To rear of former schoolmaster's house, attached at a right angle, former Old Grammar Schoolroom. C17 origins, restored early C19, incorporated into later school as library. Exterior obscured by later buildings. Roof of six bays with five pegged arch-braced trusses with cusping above collars; all except S truss have rose bosses. Three tiers of stop chamfered purlins with small cusped windbraces. Ventilator louvre to fourth bay from N. Inserted flat roofed dormer type windows and skylights. Mullioned windows with deep splays, generally of two lights, but window to N wall three lights; diapered iron casement glazing. Two doors to W elevation. one to E; blocked doorway to S wall used as recess for books. Walls in scribed render” (www.cadwpublic-api.azurewebsites.net/reports/listedbuilding/FullReport?lang=&id=3592).

This structure has been converted for use as a doctor's surgery (Meddygfa Gwydir), and a large sheltered housing/medical centre has been constructed to the rear and south-east of the school building effectively removing any intervisibility between this site and the proposed development area. It will therefore have little impact on the setting of this Listed group.

The site is located on land adjacent to Bryn Hyfryd Farm, Llanrwst. The farm and outbuildings are Grade II Listed buildings (Ref 3594 and 3595). The building descriptions record for the farm building states:

“Two storey, two window farmhouse of circa 1840. Steeply hipped slate roof with wide boarded eaves; tall stone chimneys to ends. Walls in slate rubble with heavy quoins. First floor has two camber-headed 12 pane hornless sash windows. Two similar windows to ground floor, and centrally placed doorway with broad panelled door with overlight; shallow gabled porch with slate slab side panels. Small walled forecourt garden. To rear, single small gabled dormer in roof. Two camber-headed windows to each floor (horizontal sashes except to R of door which is horned vertical small pane sash). Camber-headed doorway offset to L, simple boarded door. Attractive interior, largely unaltered. Open joists to ground floor ceilings (but ceiled and coved parlour). Original doors and staircases; built-in cupboards to sides of fireplaces” (www.cadwpublic-api.azurewebsites.net/reports/listedbuilding/FullReport?lang=&id=3594).

The outbuildings to the rear of the farmhouse as recorded as:

“Circa 1840 and later L-plan range of agricultural buildings.

Parallel to house, barn range, local rubble with heavy quoins, slate roof, simple boarded doors. Centrally placed broad double doors to barn. To L, boarded door to former animal pen. To R, stone stairs up to loft; to R of stairs door to stable. Stable interior retains wooden stall dividers and cobbled floors. At right angles to barn range, single storey dairy and outhouse range in stone and brick with slate roof; simple boarded doors” (www.cadwpublic-api.azurewebsites.net/reports/listedbuilding/FullReport?lang=&id=3595).

Bryn Hyfryd is currently sitting alone at the end of a long private drive, set within farmland. The impact of the proposed development on the setting of this Listed group will be direct as the development will essentially link the farmhouse and outbuildings to the rest of School Bank Road. The effect on the setting of the farm group is considered in a Heritage Impact Assessment (St Paul 2018). This document should be read in conjunction with this report.

This assessment summarises that *“In terms of the guidance offered by Cadw, Bryn Hyfryd offers a strong contribution to the Heritage Asset through all of the four categories of Evidential Value, Historical Value, Communal Value and Aesthetic Value. Of these the Evidential and Historical elements are particularly strong”* (St Paul 2018: 8).

The conclusions of the report are broadly in keeping with those of this report author in that that the proposed development will have an impact upon the heritage asset, that the views of and from the asset will change, and that this would be the inevitable result of developing the land (Ibid: 10).

It is not possible to fully alleviate the impact of the proposed development, but mitigation is proposed to minimise the impact upon the asset. This is summarised by St. Paul as *“The layout and location of the proposed residential area has been carefully considered so as to have the least impact upon the setting of the listed buildings. In particular the reduced scale of the proposed units to the south west of Bryn Hyfryd preserve the views of the building. The undeveloped area on the lower level and the retention of the straight drive access also respect the setting of the listed buildings. The design and materials proposed are of high quality and are compatible with and complementary to Bryn Hyfryd”* (St. Paul 2018: 12-13).

The single Scheduled Ancient Monument within a 500m search radius is Pont Fawr. The bridge is a Scheduled Ancient Monument (DE025) and a Grade I Listed Building (Cadw Id 16951 and 3612). The Scheduled Ancient Monument description records *“a bridge consisting of three segmental arches, with cut-waters continuing upwards to form triangular refuges. It is built of roughly coursed local slate and gritstone rubble. The central and east arches are formed of sandstone voussoirs, but the W arch was rebuilt in 1675 and again in 1703. Stone panels surmounted by a double ogee capping are set in the apex of each parapet over the central arch. That on the S, which is well preserved, contains the Stuart arms in an enriched frame bearing the date 1636; on top of the cap is a later sundial. The inner or road face is plain. The inner face of the N panel carries the date 1636; its outer face, now weathered, contains the Prince of Wales' feathers in a less elaborate frame than the S panel. The monument is of national importance for its potential to enhance our knowledge of transport and construction. It retains significant archaeological potential, with a strong probability of the presence of associated archaeological features and deposits. The scheduled area comprises the remains described and areas around them within which related evidence may be expected to survive”* (www.cadwpublic-api.azurewebsites.net/reports/sam/FullReport?lang=&id=207).

Pont Fawr is also a Grade I Listed Building (Cadw ID 16951 and 3612) and the listing description adds *“Steeply ramped stone road bridge of three segmental arches. Central arch circa 18 metres span, outer arches circa 13.5 metres span. Cutwaters to each side continue upwards to form refuges in parapet. Coursed local gritstone*

and slate rubble. Arch voussoirs set slightly back. West arch masonry in smaller blocks. Parapet with heavy chamfered coping stones with iron cramps. Flared approach walls. Above apex of central arch, S parapet has stone relief of Stuart Arms (plus initials 'CR') set in frame with superimposed fluted columns supporting floral entablature and ogee cresting; below arms is date '1636'. Sundial above installed for tercentenary of bridge. North parapet has, in same position Prince of Wales feathers springing from crown; flanked by initials 'CP'; framed by columns, ogee cresting above with weathered relief pinnacles. Behind this, on inner parapet, date '1636'. Inner parapet has carriage stones to protect masonry. Stone on inner S parapet above rebuilt W arch has initials 'TR'. Tarmacadam carriageway surface” (www.cadwpublic-api.azurewebsites.net/reports/listedbuilding/FullReport?lang=&id=3612).

In addition to Pont Fawr itself being Grade I Listed, there are two further Listed structures connected with the bridge. The walls to the north and south of the bridge on the town side are both Grade II Listed with the northern wall stretch (ID 3613) recorded as being of late eighteenth/early nineteenth century date. The description states that the wall is a “*rubble wall with flat slate copings acting as revetment to bank of Afon Conwy. Wall connects (to S) with parapet of approach to Llanrwst Bridge. Length of wall c37m; height 0.8m-1m above pavement*” (www.cadwpublic-api.azurewebsites.net/reports/listedbuilding/FullReport?lang=&id=3613). The southern wall is Listed as 3614 and is contemporary with the northern structure. It is described as “*wall connects (to N) with parapet of approach to Llanrwst Bridge. Length of wall c94m; height 0.8m-1m above pavement. Rubble wall with flat slate copings, approximately 7m length to S has replacement copings*” (www.cadwpublic-api.azurewebsites.net/reports/listedbuilding/FullReport?lang=&id=3614).

Due to the location of the site there is no intervisibility between the two sites, nor will the proposed development itself have a direct physical impact on the structure. Concerns have however been raised by GAPS (letter reference 0907tf/D3490) that an increase in housing would have the inevitable result of causing an increased use of this historic bridge. This is a factor which, although beyond the scope of this report, will need to be addressed and an assessment produced by the relevant expert.

6.0 Results of Archaeological Works

6.1 Walk-Over Survey

A walkover survey was conducted on the 8th September 2020. The site was accessed along a straight track leading up a raise to the main Bryn Hyfryd farm and yard. The main proposed development area is situated to the west of this track and bounded by a hedge. A smaller area was also surveyed to the east of the track.

The housing field is accessed via an open area behind a small barn. Its northern boundary comprises of an earth and stone bank with large trees growing within it. It is further secured with a post-and -wire fence. A stream runs along this boundary edge until it reached the western boundary where it is culverted with a concrete cover and continues towards the road. There is a waterlogged area in the field above this boundary and there is a well marked in this area on the historic Ordnance Survey maps.

The road and field boundary is a stone-built wall topped with an iron open fence. There were no visible earth work or built features visible within the development area. The southern end of the field was clearly subject to flooding, as indicated by the presence of reeds. Despite heavy rain during the preceding weeks, the ground was wet but not waterlogged during the site visit.

6.2 Results of Geophysical Survey

Report compiled by Dr Ian Brooks – included in full.



Plate 1. General View of the Proposed Development Site from the South-West



Plate 2. General View of the Proposed Development Site and Access Lane



Plate 3. General View of the Proposed Development Site from the North-West



Plate 4. Bryn Hyfryd Farm Outbuilding Adjacent to Proposed Development



Plate 5. General View of the Proposed Development Site from the South-East



Plate 6. General View of the Proposed Development Site from North-West



Plate 7. General View of the Proposed Development Site from the North-East



Plate 8. Reeds/Marsby Area to the South-West of the Site

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Engineering Archaeological Services Ltd.

Land Adjacent to Bryn Hyfryd, Llanrwst, LL26 0HU:

Geophysical Survey

Commissioned by

CR Archaeology



Analysis by

I.P. Brooks

Engineering Archaeological Services Ltd

EAS Client Report 2020/08

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NGR

Centred on: SH 80266 61605

Location and Topography (Figures 1 and 2)

The survey area lies either side of the track leading to Bryn Hyfryd, School Bank Road, Llanrwst, LL26 0HU. The largest of the survey areas (Area 1) lies to the north of the track, whilst the smaller survey area (Area 2) is to the south. Both fields were under pasture at the time of the survey, with the grass in the southern field being slightly longer. Both fields slope down to the south west with a plateau at the top of the northern field and a low lying, slightly reedy area in the south west sector of the field.

The survey took place on 12th September 2020.

Archaeological Background

It is intended to construct sixteen new houses and associated facilities on the field immediately to the north of Bryn Hyfryd, School Bank Road, Llanrwst, LL26 0HU (Planning Application 0/47526). As part of the planning process the Gwynedd Archaeological Planning Service recommended an initial evaluation comprising a geophysical survey and desk-top study.

Aims of Survey

1. To investigate, define and record any potentially archaeological features within the survey areas.

SUMMARY OF RESULTS

A Fluxgate Gradiometer Survey was undertaken in the fields either side of the track leading to Bryn Hyfryd, School Bank Road, Llanrwst, LL26 0HU on 12th September 2020. Two areas were surveyed, with the larger area being to the north of the track. There is a concentration of magnetic anomalies in the western part of Area 1 with a potential building, three areas of mixed magnetic response and possible field boundaries having been located.

Gwnaethpwyd Arolwg Graddiomedr Fluxgate yn y caeau bob ochr i'r trac sy'n arwain at Bryn Hyfryd, School Bank Road, Llanrwst, LL26 0HU ar 12fed Medi 2020. Arolygwyd dwy ardal. Yr ardal fwy oedd yr un i'r gogledd o'r trac. Mae crynodiad o anomaledau magnetig yn rhan orllewinol Ardal 1 gydag adeilad posibl. Mae tair ardal o ymateb magnetig cymysg a ffiniau caeau posibl wedi'u lleoli.

Methods

The survey was based on a series of thirty, 20 x 20 m squares laid out as in Figure 2. Readings were taken with a Geoscan FM256 Fluxgate Gradiometer at 0.25 m intervals along transects 1 m apart. The surveys were downloaded onto a laptop, on site, and processed using Geoscan Research “Geoplot” v.4.00. The X - Y plots were produced by exporting the data and processing it using Golden Software “Surfer” v. 10.7.972

A limited number of soils samples were taken to access the Magnetic Susceptibility on the site. These were dried out in a warming oven, sieved and processed using a Bartington MS2 Magnetic Susceptibility Meter.

Survey Results:

Area

Area 1: 0.83 Ha.

Area 2: 0.16 Ha

Display

The results are displayed as grey scale images (Figures 3 and 6) and as X-Y trace plots (Figures 4 and 7). The interpretation plots are shown as Figure 5 and 8. The Magnetic Susceptibility results are summarised on Figure 9 and the survey, as a whole, is summarised on Figure 10.

Results:

Fluxgate Gradiometer Survey

Area 1 (Figures 3 – 5)

The effect of the fences and other modern metal objects, which surround the field, can be shown as a series of ferromagnetic responses, shown in blue on Figure 5. Anomalies A and B can be related to the proximity of metal fencing whilst Anomaly C relates to the depth gauge and its associated fencing and equipment just outside the survey area. Further modern disturbance is shown by Anomaly D, in the eastern corner of the survey which is related to the farm buildings in this part of the site. The disturbance is partly from a demolished brick building and a metal sheep race, but also to the general level of disturbance around the buildings.

There is a distinctive group of magnetic anomalies in the south western end of the field. Anomaly E forms a distinct rectangle, approximately 15 x 10 m in size, which appears to be subdivided into three cells. Given the size and form of this anomaly it is likely to be a building. The relatively high readings in part of this anomaly (+21 nT) may suggest the use of ceramic material such as brick may have been used for the construction. There are two large areas of magnetic disturbance (Anomalies F and G). Anomaly F is approximately 13 m in diameter and Anomaly G is 16 m in diameter. Both have quite mixed responses with readings varying between +26 and – 17 nT in almost a random arrangement. The origins of these anomalies are uncertain, whilst they may be infilled ponds or other hollows, they could also be the magnetic response to such archaeological features as burnt mounds. A third area of magnetic disturbance (Anomaly H) forms a crescent approximately 17 x 5 m in size. It has a magnetic signature similar to Anomalies F and G and may have a similar origin.

Anomaly I is a rough “L” shaped anomaly approximately 47 m long with its long axis aligned NE – SW. In such, it is roughly parallel with the possible building (Anomaly E) to which it may be contemporary. Each leg of this anomaly is approximately 4 m wide with the short leg being

approximately 12.5 m long. Assuming this anomaly represents a field boundary, the width of each leg of the anomaly may suggest a major boundary such as an earthen bank or clawdd type boundary. Anomaly J is a linear anomaly that runs at right angles to the long leg of Anomaly I and may therefore be contemporary.

The three, parallel, feint, linear anomalies (Anomalies K, L and M) are probably the result of drainage features within the field.

Area 2

Only a limited number of magnetic anomalies were located within Area 2. The ferromagnetic response along the north western side of the survey area (Anomaly N) diverges from the field boundary and is therefore likely to be a modern service. The only anomaly of possible archaeological origins (Anomaly O) is in the centre of Area 2. This is a roughly oval anomaly approximately 7 x 5 m in size of unknown origins.

The feint, parallel, linear anomalies (Anomalies P and Q) are likely to be the response to modern drainage within the field.

Magnetic Susceptibility (Figure 9)

Twelve, small, soil samples were taken for Magnetic Susceptibility analysis. It was not possible, however, to obtain a subsoil sample for comparison. Both volume susceptibility (direct reading of the samples) and mass susceptibility (reading compensated for the varying mass of the samples) is given below. The location of the samples is shown on Figure 2 and the results on Figure 9.

Sample	Volume susceptibility χ_v	Mass susceptibility χ_m
Grid 1	23	30.4
Grid 3	84	130.2
Grid 5	51	61.7
Grid 7	71	84.7
Grid 9	30	41.8
Grid 11	58	84.4
Grid 13	35	45.6
Grid 17	82	113.6
Grid 19	70	103.6
Grid 24	107	136.1
Grid 27	111	151.0
Grid 30	76	112.6

The samples, as measured, are generally of moderate to high values suggesting that, the conditions for magnetic survey were suitable.

Assuming a consistent geological regime across the survey area the magnetic susceptibility can be used as a proxy for the level of archaeological activity (Clark, 1996, 99). Those recorded from the survey area, however have a range of values that do not necessarily follow the distribution of anomalies within the survey. It would seem likely that the geology is not consistent within the survey area with soils with a higher magnetic susceptibility on the slopes and upper parts of the field. Within each of the broad zones, however, the values, as recorded generally follow the density of magnetic anomalies recorded.

Conclusions (Figure 10)

It is a fundamental axiom of archaeological geophysics that the absence of features in the survey data does not mean that there is no archaeology present in the survey area only that the techniques used have not detected it.

There would appear to be a concentration of potential archaeological activity in the western half of Area 1 with a potential building aligned approximately NE – SW. This is at a different alignment than the current field system and possibly relates to the similar alignment of Anomalies I and J.

The origins of the mixed magnetic responses in Anomalies F G and H is not known, however given their location in the lower part of the survey area it is possible that they are infilled hollows or pools. Another possible interpretation is that they contain randomly aligned magnetic objects, such as heated stones, and may therefore be the response to a feature such as a burnt mound.

References

Clark, A. 1996. *Seeing beneath the soil prospecting methods in archaeology*. Routledge, London

Acknowledgements

This survey was commissioned by CR Archaeology, based on recommendations made by Tom Fildes of the Gwynedd Archaeological Planning Service.

Techniques of Geophysical Survey:

Magnetometry:

This relies on variations in soil magnetic susceptibility and magnetic remanence which often result from past human activities. Using a Fluxgate Gradiometer these variations can be mapped, or a rapid evaluation of archaeological potential can be made by scanning.

Resistivity:

This relies on variations in the electrical conductivity of the soil and subsoil which in general is related to soil moisture levels. As such, results can be seasonally dependant. Slower than Magnetometry this technique is best suited to locating positive features such as buried walls that give rise to high resistance anomalies.

Resistance Tomography

Builds up a vertical profile or pseudo-section through deposits by taking resistivity readings along a transect using a range of different probe spacings.

Magnetic Susceptibility:

Variations in soil magnetic susceptibility occur naturally but can be greatly enhanced by human activity. Information on the enhancement of magnetic susceptibility can be used to ascertain the suitability of a site for magnetic survey and for targeting areas of potential archaeological activity when extensive sites need to be investigated. Very large areas can be rapidly evaluated and specific areas identified for detailed survey by gradiometer.

Instrumentation:

1. Fluxgate Gradiometer - Geoscan FM256
2. Resistance Meter - Geoscan RM15
3. Magnetic Susceptibility Meter - Bartington MS2
4. Geopulse Imager 25 - Campus

Methodology:

For Gradiometer and Resistivity Survey 20m x 20m or 30m x 30m grids are laid out over the survey area. Gradiometer readings are logged between 0.25m and 1m intervals along traverses 1m apart. Resistance meter readings are logged at 0.5m or 1m intervals. Data is down-loaded to a laptop computer in the field for initial configuration and analysis. Final analysis is carried out back at base.

For scanning transects are laid out at 10m intervals. Any anomalies noticed are where possible traced and recorded on the location plan.

For Magnetic Susceptibility survey, a large grid is laid out and readings logged at 20m intervals along traverses 20m apart, data is again configured and analysed on a laptop computer.

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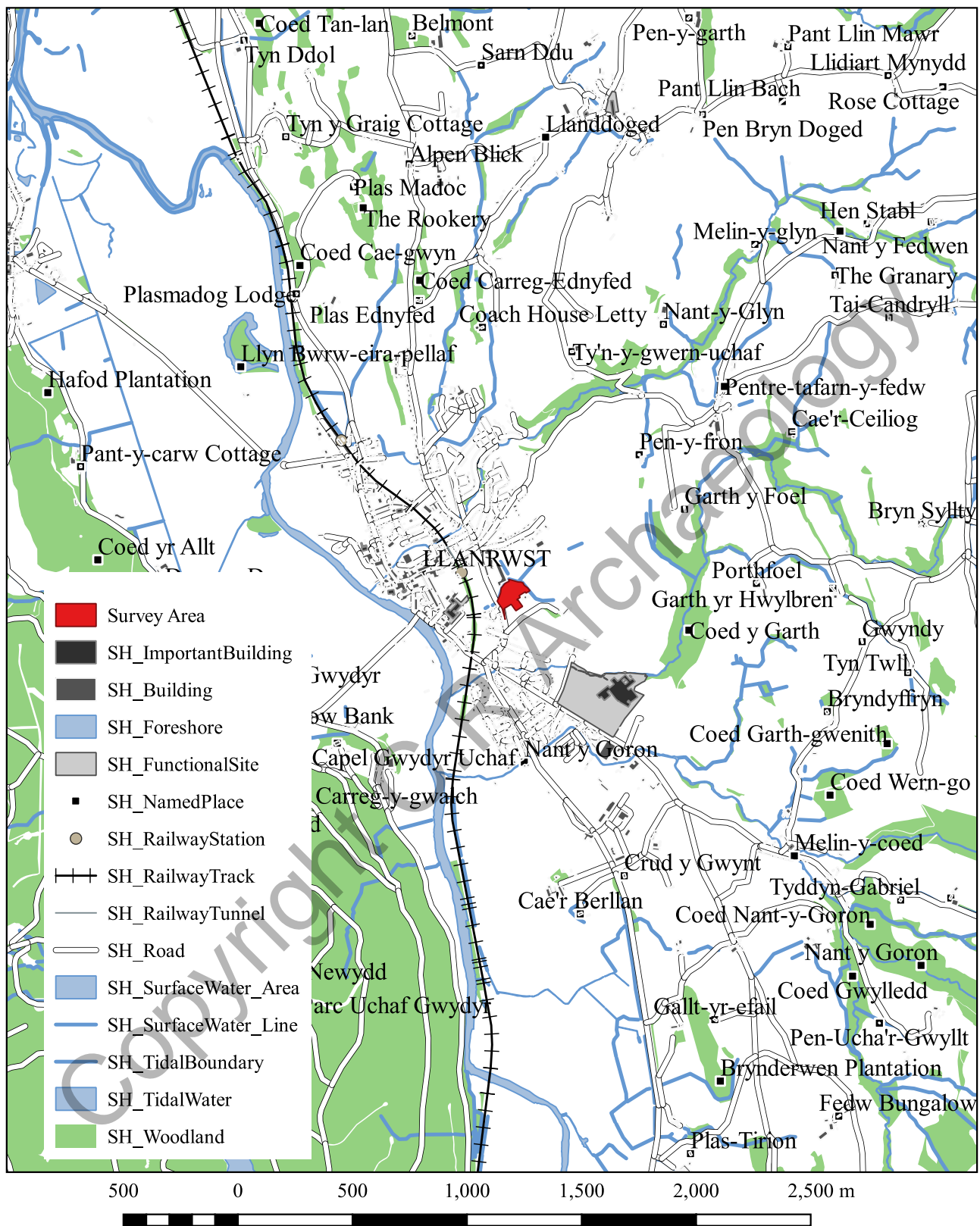


Figure 1: Location
Scale 1:25,000



Figure 2: Location of the Survey Area
Scale 1:1000

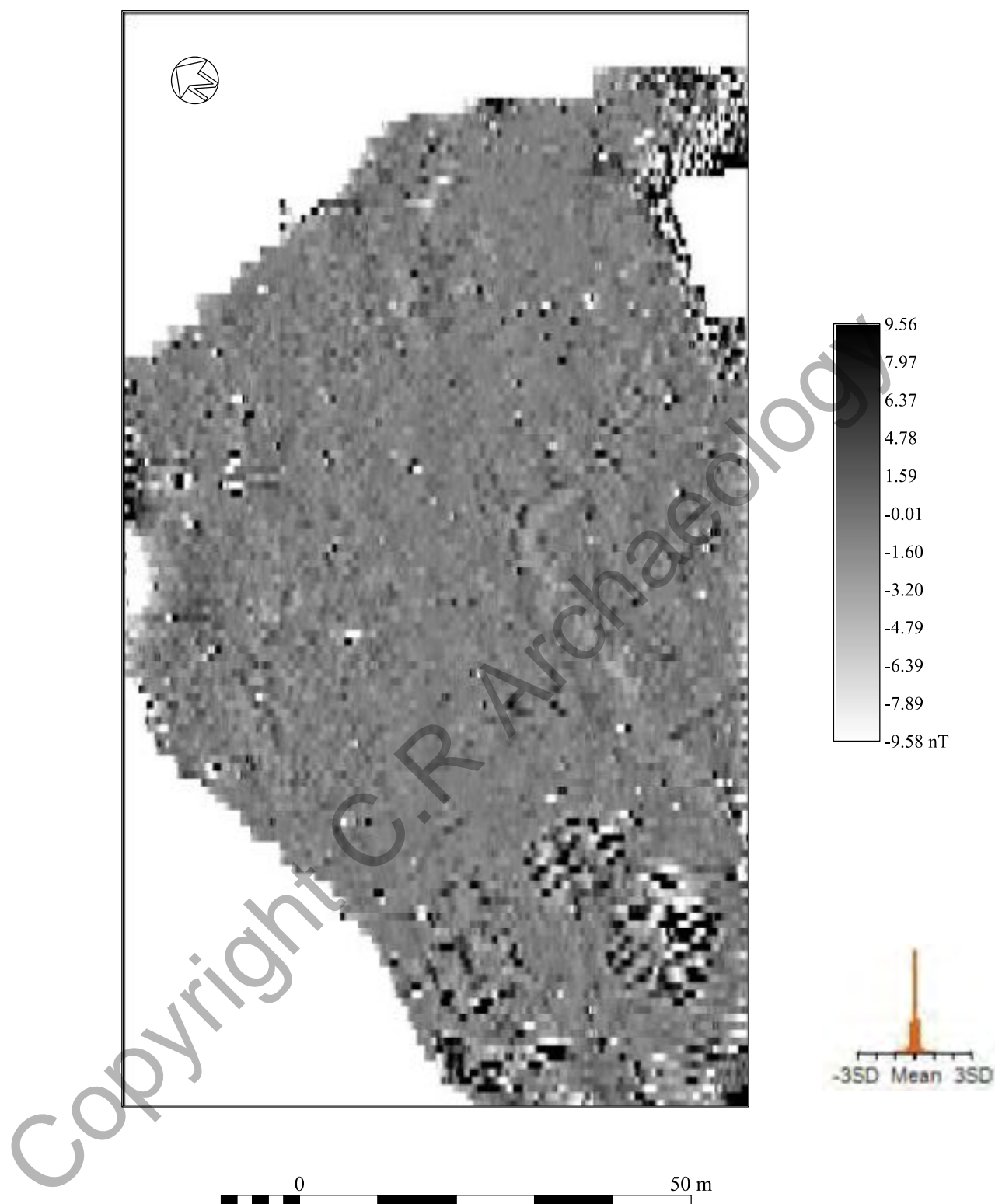


Figure 3: Area 1, Grey Scale Plot
Scale 1:750

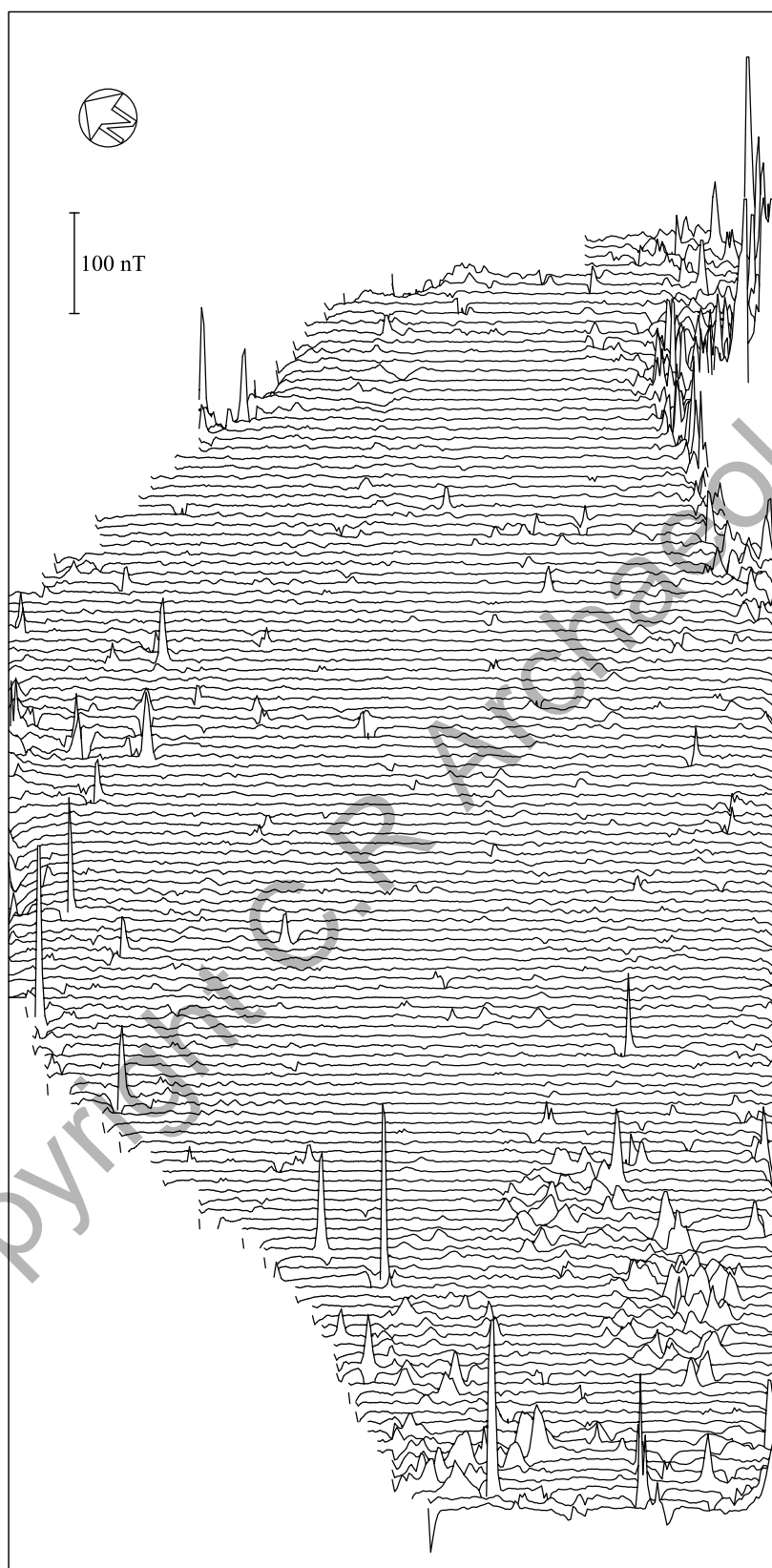


Figure 4: Area 1, X-Y Plot
Scale 1:750

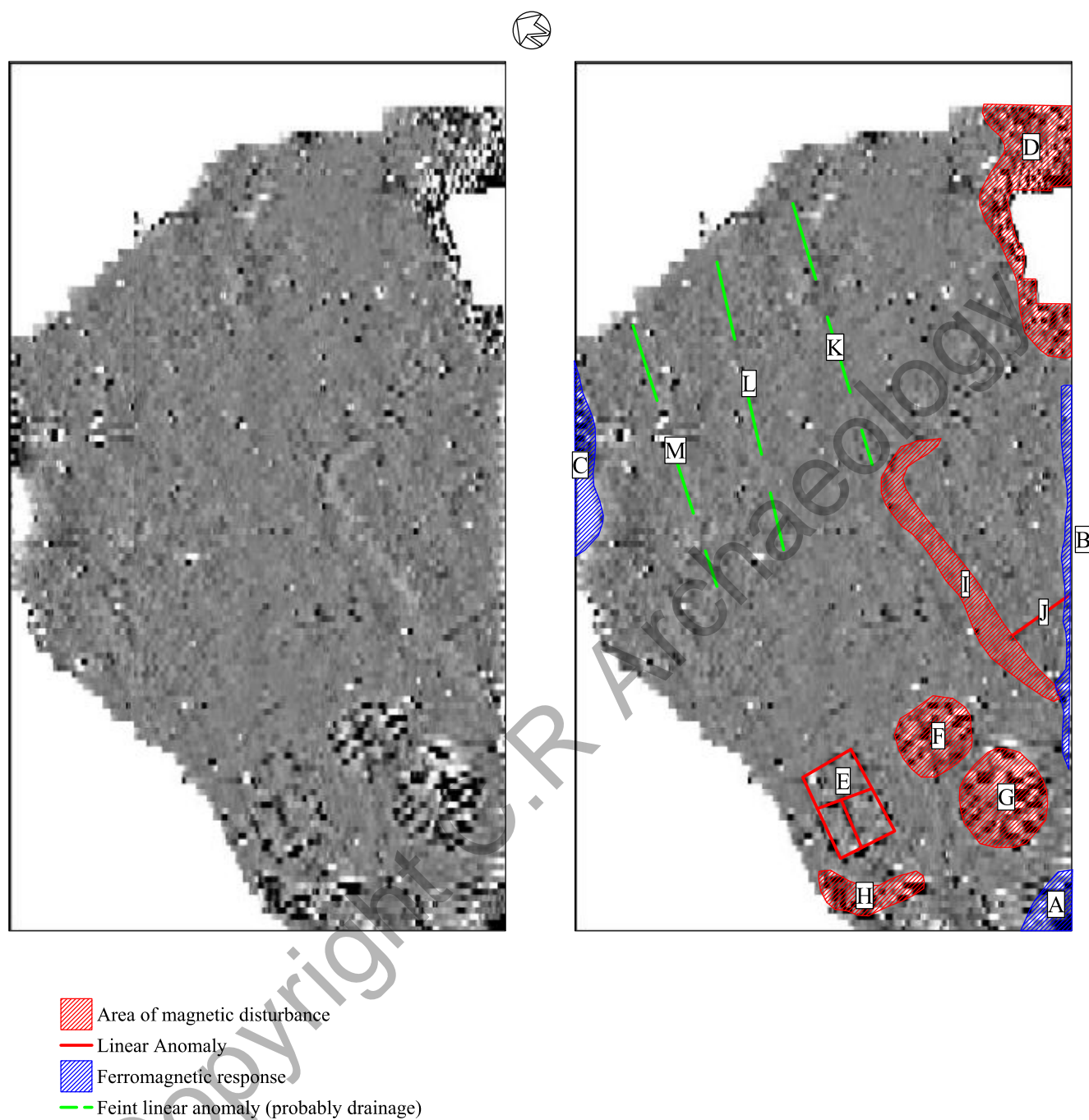


Figure 5: Area 1, Interpretation
Scale 1:1,000

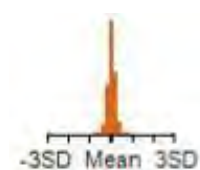
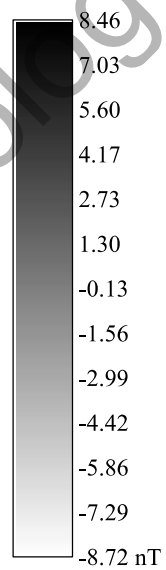
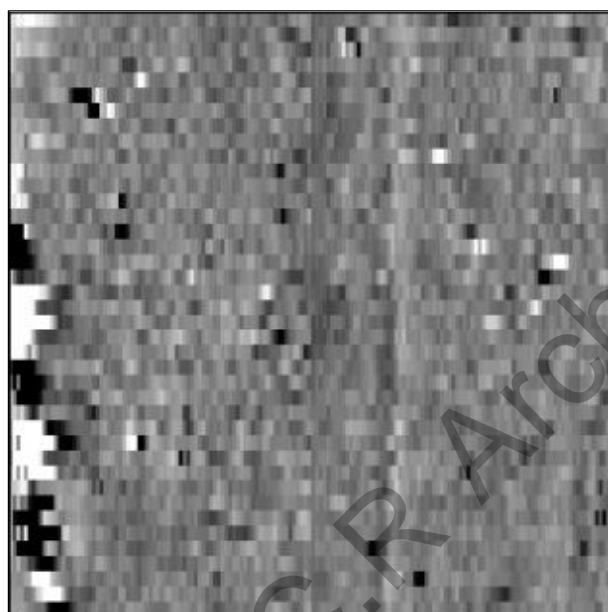


Figure 6: Area 2 Grey Scale Plot
Scale 1:500

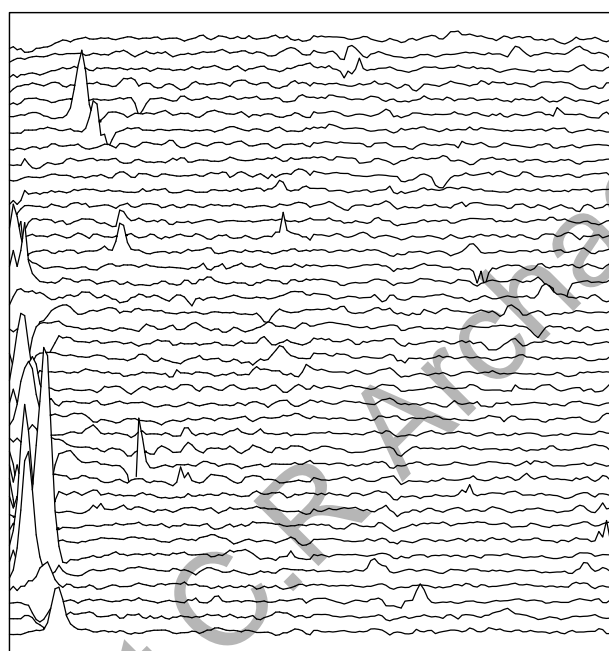
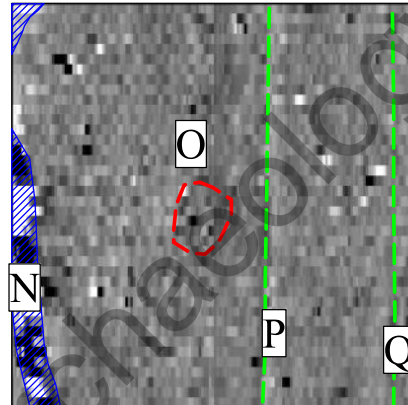
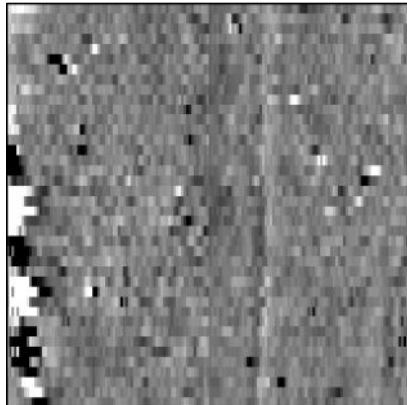


Figure 7: Area 2, X-Y Plot
Scale 1:500






-  Ferromagnetic response
-  Possible Linear Anomaly
-  Feint linear anomaly (probably drainage)

Figure 8: Area 2, Interpretation
Scale 1:750



Figure 9: Magnetic Susceptibility
Scale 1:1,000



Figure 10: Summary
Scale 1:1,000

7.0 Conclusion

The desk-based research has shown that despite its proximity to the Medieval town centre, the area has been undeveloped from at least the mid nineteenth century and likely considerably earlier. The site therefore has the potential for Post Medieval and Medieval remains which could comprise ancillary dwellings or industrial activity.

There are also known Prehistoric, Romano-British and Early Medieval archaeological entries recorded in the vicinity in the HER and the site has potential for similar finds to be made. The undeveloped nature of the area is an indicator of such sites potentially being well preserved. This is supported by the presence of possible burnt mound features identified through geophysical survey. Given that this area is known to hold water the possibility of preserved wooden troughs must be considered should these be proven to be burnt mounds.

The geophysical survey has identified a number of features within the proposed development plot. In addition to features interpreted as of modern origin (Anomalies A-D & N) the following possible features were identified:

- Anomaly E – A distinct rectangle, approximately 15m x 10m in size which appears to be subdivided into three cells. Interpreted as likely to be a building, possibly of brick construction
- Anomalies F & G – Two large areas of magnetic disturbance with diameters of 13m (F) and 16m (G). These features may be infilled ponds/hollows or burnt mounds.
- Anomaly H – Magnetic disturbance in crescent shape measuring c. 17 x 5m. Similar signature to F & G and may have similar origin
- Anomaly I – Rough “L” shaped anomaly approximately 47m in length. Roughly parallel to Anomaly E and the features may be related/contemporary. Each leg of the anomaly is c. 4m in width and should this feature be a field boundary it would be a major construction such as a clawdd type structure
- Anomaly J – Linear anomaly running at right angles to the long leg of Anomaly I. May therefore be contemporary
- Anomalies K, L & M – Three feint, linear anomalies. Probably the result of drainage features within the field
- Anomaly O – Roughly oval anomaly 7m x 5m in size of unknown origin
- Anomalies P & Q – Feint, parallel, linear anomalies. Probably the result of drainage features within the field.

Features E, F, G and H are located within the area to be set aside due to the risk of flooding and are not within the proposed development area (see figure 5).

This report has demonstrated that the proposed development site is of high archaeological potential.



Figure 5. Overlay of Geophysical Survey Results on Proposed Development Plans

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www.data.gov.uk/data/map-preview

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Appendix A. Specification for Archaeological Works

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**Specification for Archaeological Works
(Desk Based Assessment & Geophysical Survey) at**

Land Adj. to Bryn Hyfryd, Llanrwst

NGR SH 80270 61618

Report Number CR199-2020



CR ARCHAEOLOGY

Compiled by C. Rees and M. Jones
On Behalf of Mr. M. Davies

**Specification for Archaeological Works at Land Adj. to Bryn Hyfryd,
Llanrwst**

Planning Application Number:	0/47526
National Grid Reference:	SH 80270 61618
Client:	Mr. M. Davies
Report Author:	Catherine Rees and Matthew Jones
Report Number:	CR199-2020
Date:	03/09/2020

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- 1.0 Introduction**
- 2.0 Project Aims**
- 3.0 Brief Historical Background**
 - 3.1 Topography
 - 3.2 Geology
- 4.0 Scheme of Works – Methodology**
 - 4.1 Desk Based Research
 - 4.2 Geophysical & Walk Over Survey
 - 4.2.1 Equipment
 - 4.3 Timetable for Proposed Works
 - 4.4 Staffing
 - 4.5 Monitoring
 - 4.6 Health and Safety
 - 4.7 The Report
 - 4.7.1 Copyright
- 5.0 Bibliography**

Illustrations

Figure 1. Site Location Map

Appendices

Appendix A. Proposed Site Development Plans

1.0 Introduction

CR Archaeology have been instructed by Mr. M. Davies to conduct an Archaeological Desk Based Assessment and Geophysical Survey at the proposed site of a new residential development (Appendix A).

The site is located on land adjacent to Bryn Hyfryd Farm, Llanrwst (Figure 1). The farm and outbuildings are Grade II Listed buildings (Ref 3594 and 3595). They are recorded as having been built c. 1840. The proposed development area is currently in agricultural use

The proposed development is located directly to the south of the former Ysgol Dyffryn school (Grade II Listed Ref 3592) and Schoolmaster's House (Grade II Listed Ref 3593). The school is believed to have been founded c. 1612 and elements of the 17th century building have been incorporated into the 19th century and later school.

The town of Llanrwst has Medieval origins and it is noted that there is a general potential for unknown, contemporary archaeological remains throughout the area surrounding the core of the town. It is suggested that within the proposed development site this could comprise ancillary dwellings or industrial activity, or possibly the site of a significant battle as several are known to have taken place in the locale (GAPS Letter Ref: 0807tf/D3490).

This document has been prepared to supply the client and statutory bodies including Cadw and the Local Planning Authority Archaeologist with information as to the archaeological potential, impact and constraints on the aforementioned scheme.

It is intended that the results of this work will inform decisions as to the nature of any additional heritage considerations/consultations which the scheme must be afforded and archaeological mitigation strategies or evaluation methodologies which may be required.

This Desk Based Assessment examines the historic context and archaeological potential of the proposed development area and determines the possible impact of the development on the setting of the local area.

2.0 Project Aims & Objectives

This phase of works for the development site aims to undertake a desk-based assessment, walkover survey and geophysical (gradiometer) survey. It aims to examine the potential archaeological resource surviving on the site and to provide information which will be utilised to determine an appropriate methodology for any further archaeological mitigation or evaluation methodologies which may be required.

The first aim of this scheme of works is to undertake desk based historical research exploring the history/archaeology of the site. This information will include a map progression and archival research in order to compile a coherent narrative history of the site and its environs.

The Gwynedd Historic Environment Record (HER), Conwy Archives and relevant publications will be consulted to compile a record of known archaeological sites in the vicinity. The data gathered during this phase of works will also be utilised in the interpretation of the gradiometer results.

The second aim of this archaeological investigation is to undertake a walkover and geophysical survey of the site in order to identify and locate buried features.

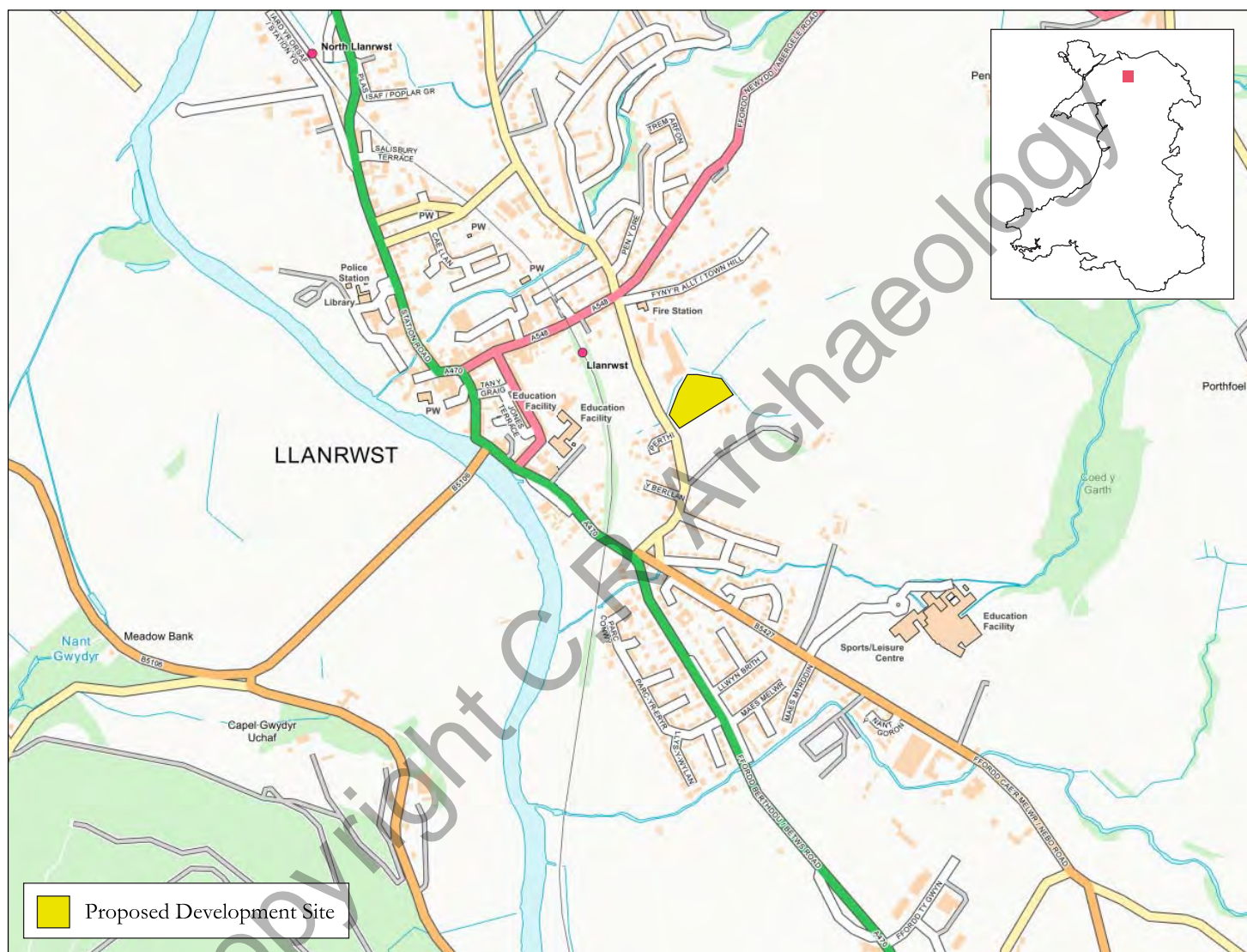


Figure 1. Site Location Map - Source: OS Open Data
 (Contains Ordnance Survey data © Crown copyright and database right 2019)

It is intended that this document be utilised to inform further archaeological planning decisions and conditions at the site.

The objectives of this programme of works are:

- To locate and describe, by means of desktop analysis, a walkover survey, geophysical prospecting and subsequent evaluation trenching, all archaeological features which may be present within the development area
- To make full and effective use of existing information to establish the archaeological significance of the site
- To help inform future decision making, design solutions, further evaluation & mitigation strategies

3.0 Brief Historical Background

The following section is, through necessity, very brief and is intended to merely place the site in context. A more detailed history of the site will form a key element in the proposed works.

The Afon Conwy is the traditional boundary between the historic counties of Denbigh and Caernarfon. The town of Llanrwst is located on the bank of the Afon Conwy at the first location where the river could be crossed by means of a ford. During spring tides, the river is tidal as far as Tan Lan near Llanrwst.

The ability to cross the Afon Conwy at this point is the likely genesis for the siting of the town of Llanrwst in this specific location. No evidence for a pre-Medieval origin for the town has been uncovered but it is not unlikely and the RCAHMW entry for Llanrwst (Urban) records “*Late Celtic Bronze Armlet. A fine bronze armlet decorated with repousse designs in the finest Late Celtic style, was found in 1897 when digging the foundations of Primrose Cottage, near Llanrwst, and sold in 1904 to the Ashmolean Museum, Oxford*”. It also records that “*along with the armlet are said to have been found but no information of their character or present whereabouts could be obtained*” (RCAHMW 1914: 148). The Historic Environment Record records additional Prehistoric artefacts have been found in the area.

The town of Llanrwst has Medieval origins and it is noted that there is a general potential for unknown, contemporary archaeological remains throughout the area surrounding the core of the town. It is suggested that within the proposed development site this could comprise ancillary dwellings or industrial activity, or possibly the site of a significant battle as several are known to have taken place in the locale (GAPS Letter Ref: 0807tf/D3490).

The site is located on land adjacent to Bryn Hyfryd Farm, Llanrwst. The farm and outbuildings are Grade II Listed buildings (Ref 3594 and 3595). They are recorded as having been built c. 1840. The proposed development is also located directly to the south of the former Ysgol Dyffryn school (Grade II Listed Ref 3592) and Schoolmaster’s House (Grade II Listed Ref 3593). The school is believed to have been founded c. 1612 and elements of the 17th century building have been incorporated into the 19th century and later school.

3.1 Topography

The application site is located off Ffordd Tan y’r Ysgol which forms the south-western site boundary. It is accessed via a lane off Ffordd Tan y’r Ysgol leading to Bryn Hyfryd Farm. This lane runs along the south-eastern site boundary. The field is bounded to the north-east by enclosed agricultural land. It is a generally flat area of land within an enclosed field system and is currently in use as grazing.

3.2 Geology

The bedrock geology at the site is recorded as “*Denbigh Grits Formation - Mudstone, Siltstone and Sandstone. Sedimentary Bedrock formed approximately 427 to 433 million years ago in the Silurian Period. Local environment previously dominated by deep seas. These sedimentary rocks are marine in origin. They are detrital and comprise coarse- to fine-grained slurries of debris from the continental shelf flowing into a deep-sea environment, forming distinctively graded beds*” (www.bgs.ac.uk).

The site is located at the boundary of two superficial geology types. They are recorded as “*River Terrace Deposits (undifferentiated) - Sand and Gravel. Superficial Deposits formed up to 3 million years ago in the Quaternary Period. Local environment previously dominated by rivers. Sedimentary deposits are fluvial in origin. They are detrital, ranging from coarse- to fine-grained and form beds and lenses of deposits reflecting the channels, floodplains and levees of a river or estuary (if in a coastal setting)*” and “*Till, Devensian - Diamictic. Superficial Deposits formed up to 2 million years ago in the Quaternary Period. Local environment previously dominated by ice age conditions. These sedimentary deposits are glacial in origin. They are detrital, created by the action of ice and meltwater, they can form a wide range of deposits and geomorphologies associated with glacial and inter-glacial periods during the Quaternary*” (www.bgs.ac.uk).

4.0 Scheme of Works - Methodology

It is proposed that the archaeological works be conducted in two sections and each is detailed separately below.

4.1 Desk Based Research

A complete and coherent history of the site will be compiled utilising material sourced from the Gwynedd Historic Environment Record (HER), the Royal Commission on the Ancient and Historical Monuments Wales (RCAHMW) database, Conwy Archives and relevant publications. This will allow as comprehensive a history as possible to be compiled. A map progression of the area will be undertaken. Where appropriate the archive information will be supplemented with information from local libraries and specialist interest websites & journals.

In order to identify the character of archaeological remains in the vicinity of the site a search of the Gwynedd HER will be conducted examining an area within a 500m radius of the proposed works (the grid reference for the search is taken as the centre point of the development area). This will be expanded to 1000m to examine general trends, but this data will not be discussed in detail. The RCAHMW database and aerial imagery of the site will be examined. The information collected will be discussed within the main report text.

The works will be carried out accordance with the CIfA Standards and Guidance for historic environment desk-based assessment (CIfA 1994 (Revised 2009 & 2014).

This material will form the historical background for a full archaeological report and will be utilised to aid the interpretation of the results of the geophysical survey.

4.2 Geophysical Survey

Prior to the commencement of works a brief written record of the site will be compiled. This will include a note on any features/elements which may have an impact on the survey results - for example weather, geological features, fencing & overhead cables.

The survey will be carried out in accordance with English Heritage’s guidance “*Geophysical Survey in Archaeological Field Evaluation*” (2008) and the CIfA “*Standard and Guidance for Archaeological Geophysical Survey*” (2011 Revised 2014).

A survey grid will be established over the site, orientated to provide a best possible fit to the area to be surveyed and to minimise the effects of the slight slope of the ground level on the site. The survey areas will be gridded with a 20 x 20 m or 30 x 30 m grid. These squares will be marked by plastic pegs and the grid will be tied to local features. Readings will be taken at 0.25 m intervals along transects 1.0 m apart with a zig-zag pattern being walked. The data will be downloaded on to a laptop computer in the field.

If possible, a limited number of small soil samples will be taken for magnetic susceptibility analysis as an aid to interpret the results of the Fluxgate gradiometer survey.

4.2.1 Equipment

The survey will be undertaken using a Geoscan FM 256 Fluxgate Gradiometer

Sensitivity: 0.1nT

Sample Interval: 0.25m

Traverse Width: 1m

Traverse Method: Zig-Zag

Grid Square Size: 30m x 30m or 20x20m where possible, downsized to 20x10m where necessary.

It must however be noted that these settings may have to be adjusted dependant on ground conditions, but all changes will be recorded.

Geoplot v. 3.00v will be used to download and manipulate the geophysical data. Minimal processing will be applied to all images to ensure no false results are created by excessive image manipulation. Data will be downloaded to a portable computer during each rest period for the course of the day, to ensure data integrity and check ongoing results.

Grey scale plots will be produced using Geoplot v. 3.00v. X - Y plots will be produced using Golden software "Surfer" v. 10

A basic photographic record will be compiled prior to the commencement of the survey which will detail any above ground features and show the general topography of the site. Further photographs will be taken to illustrate the setting of the site. It will be undertaken using a 20 megapixel Sony Alpha digital camera with a variety of standard and other lenses. Images will be captured in RAW format for later processing into high resolution JPG and TIF files.

4.3 Timetable for Proposed Works

It is envisaged that the geophysical survey will be undertaken on the 12th September 2020 with an estimated time frame of 1-2 days. Further time has been allotted for archive research, report compilation and site archiving.

4.4 Staffing

The project will be managed by Catherine Rees (MCIfA, BA (Archaeology), MA (Archaeology) Postgraduate Diploma (Historic Environment Conservation) & Matthew Jones (BA (Archaeology), MA (Archaeology)). The geophysical survey will be conducted by Dr Ian Brooks.

All staff will have a skill set equivalent to the IfA AifA/MIFA level. C.Vs for all staff employed on the project can be provided on request. All projects are carried out in accordance with IfA *Standard and Guidance* documents.

4.5 Monitoring

The project will be subject to monitoring by Gwynedd Archaeological Planning Services. A projected time-scale and copy of the risk assessment can be provided on request to the monitoring body prior to the commencement of works.

4.6 Health and Safety

A risk assessment will be conducted prior to the commencement of works and site staff will be familiarised with its contents. A first aid kit will be located in the site vehicle.

All staff will be issued with appropriate Personal Protective Equipment (PPE) for the site work. Initially this is anticipated to consist of:

- Hi-visibility vests (EN471)
- Mobile Telephone (to be kept in site vehicle)
- Suitable Walking Boots & Waterproofs

Any further PPE required will be provided by CR Archaeology. All staff will have passed at least a CITB health and safety test at least operative level and will carry a Construction Related Organisation (CRO) White Card for Archaeological Technician (Code 5363).

CR Archaeology staff will also comply with any Health and Safety Policy or specific on-site instructions provided by the client or their appointed Principal contractor or H&S coordinator.

4.7 The Report

The report will clearly and accurately incorporate information gained from the programme of archaeological works. It will present the documentary evidence gathered in such a way as to create a clear and coherent record. This will include illustrations of any cartographic/pictorial sources. The report will contain a site plan showing the locations of any photographs taken. The desk-based assessment will consider the following:

- the nature, extent and degree of survival of archaeological sites, structures, deposits and landscapes within the study area
- the significance of any remains in their context both regionally and nationally
- the history of the site
- the potential impact of any proposed development on the setting of known sites of archaeological/historic importance
- the potential for further work with appropriate recommendations

In accordance with English Heritage guidelines the geophysical survey results element will include:

- a survey location plan demonstrating relationships to other mapped features (minimum scale 1:2500);
- an image of minimally processed survey data (minimum scale 1:1000);
- where appropriate a trace (or X–Y) plot of raw magnetic data
- a greyscale plot, or dot density plot (minimum scale 1:1000);
- one or more interpretative plans/diagrams (minimum scale 1:1000).

It is intended that this report will inform decisions as to the necessity and/or nature of any further archaeological mitigation strategies which may be required.

A copy of the report in Adobe PDF format will be sent to the appropriate monitoring archaeologist for approval before formal submission. A bound paper copy and PDF digital copy of the report will be submitted to GAPS as part of the formal submission. A digital Adobe PDF version and a bound paper copy of the final report and will be lodged with the Gwynedd Historic Environment Record within six months of completion of fieldwork.

4.7.1 Copyright

CR Archaeology and sub-contractors shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it hereby provides a licence to the client and the local authority for the use of the report by the client and the local authority in all matters directly relating to the project as described in the Project.

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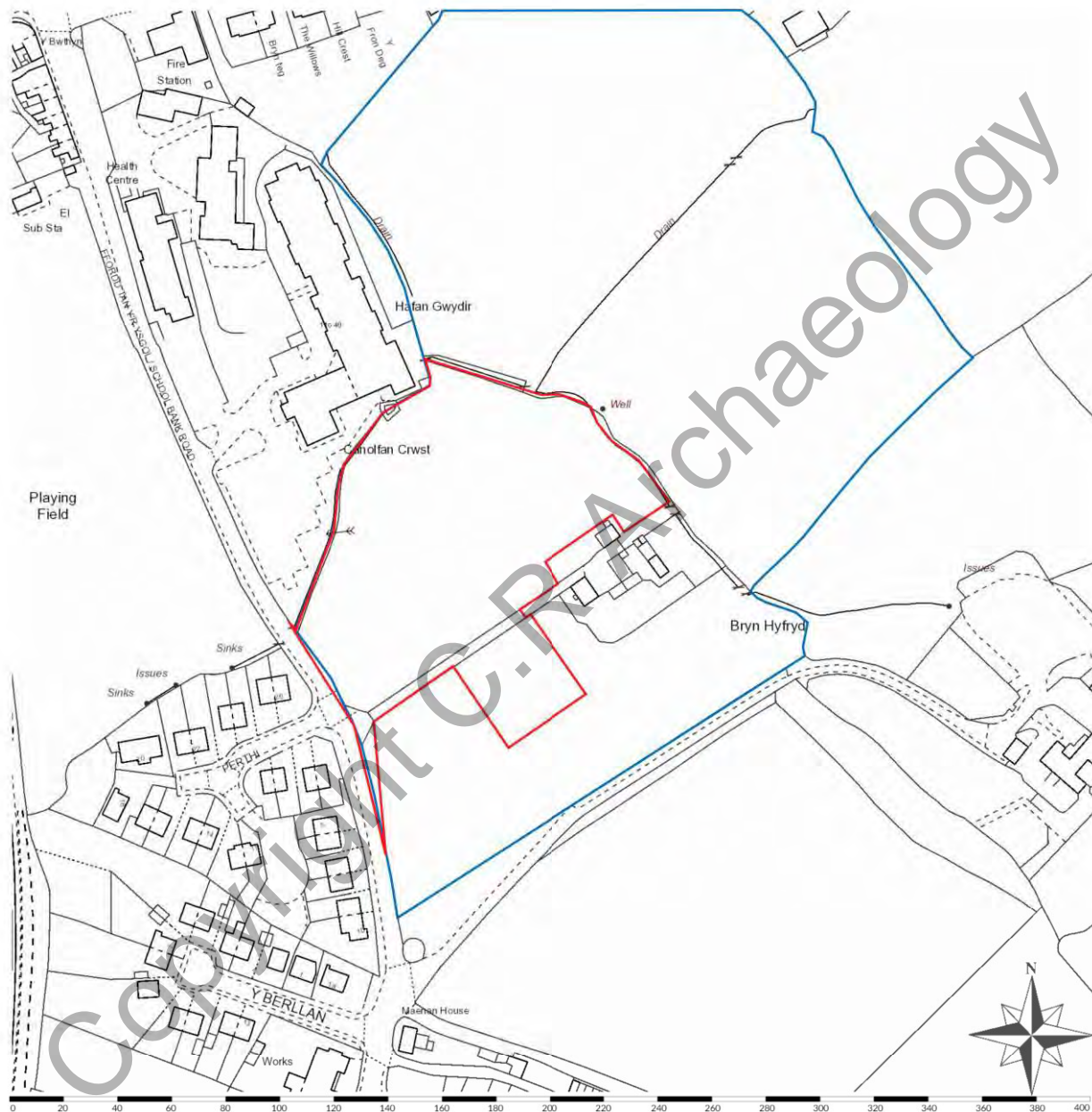
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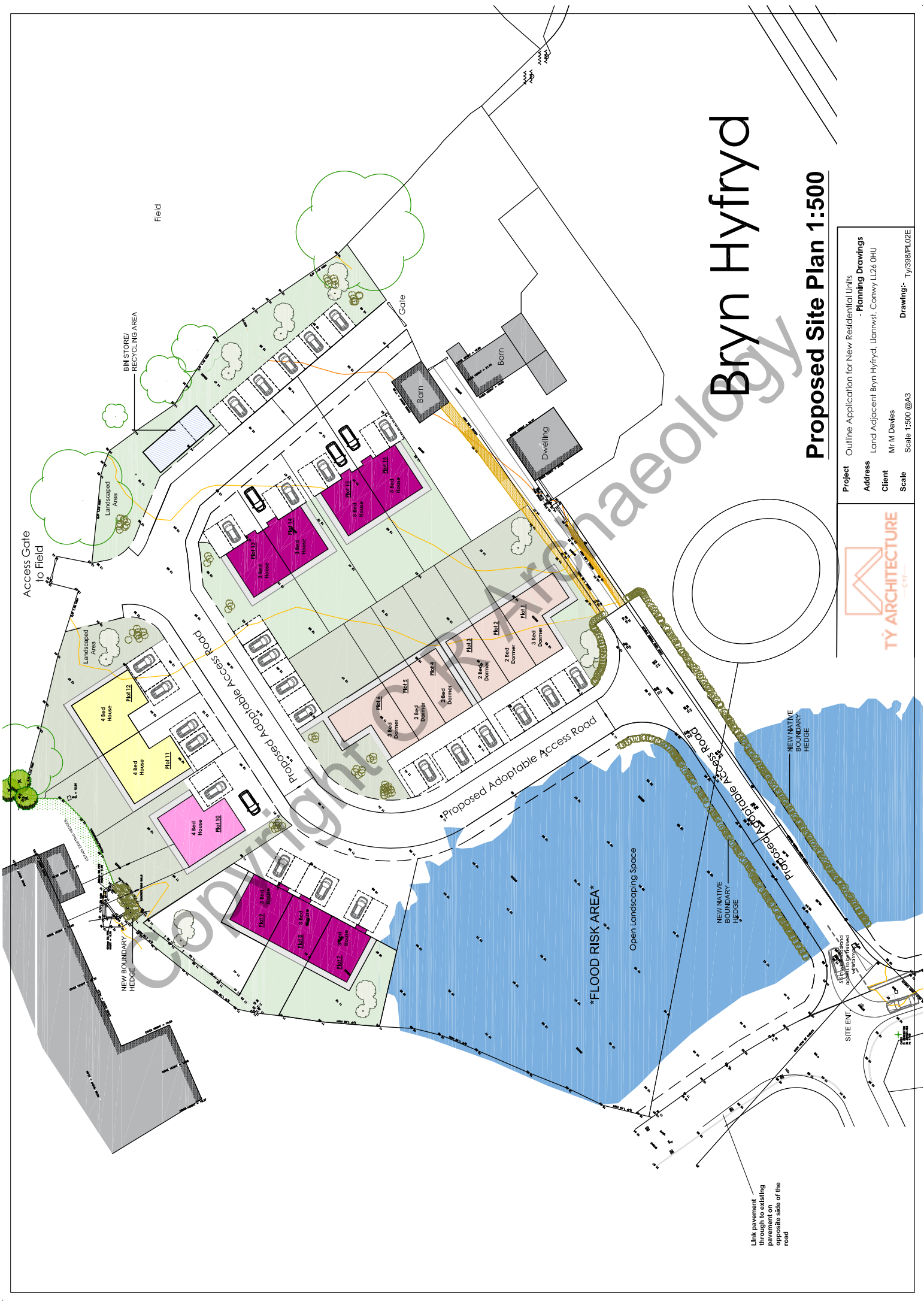
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Appendix B. Proposed Development Plans

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Scale: 1:2500 | Area 16Ha | Grid Reference: 280304,361601 | Paper Size: A4



Bryn Hyfryd

Proposed Site Plan 1:500

Project	Outline Application for New Residential Units
Address	Land Adjacent Bryn Hyfryd, Llannwst, Conwy LL26 0HU
Client	Mr M Davies
Scale	Scale 1:500 @A3
Drawing	Ty/398/PL02E





Proposed Section Through Site



Natural Stone Cladding



Natural Slate Roof



Smooth Render Painted White



Heritage Style Upvc Casement Windows

External Finishes

Walls - Natural Stone Cladding and Smooth White Render

Roof - Natural Slate

Windows & Doors - White Upvc

Rainwater Goods & Fascia Boards - Dark Green



Project	Outline Application for New Residential Units
Address	- Planning Drawings
Client	Land Adjacent Bryn Hyfryd, Llannwst, Conwy LL26 0HU
Scale	Mr M Davies
	Scale 1:250 @A3
	Drawing:- Ty/398/PL04

Appendix C. Location and Direction of Photographic Plates

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Appendix C. Location & Direction of Photographic Plates - Source: OS Open Data
(Contains Ordnance Survey data © Crown copyright and database right 2019)