

Archaeology Wales

Land at New Court Farm, North of St Teilo's Church, Llantilio Pertholey, Monmouthshire

Geophysical Survey



By

Andrew Shobbrook and Rowena Hart

Report No. 1680

Planning Application No.: 18/16814/FUL

Archaeology Wales Limited
The Reading Room, Town Hall, Llanidloes, SY18 6BN
Tel: +44 (0) 1686 440371
Email: admin@arch-wales.co.uk
Web: arch-wales.co.uk



Archaeology Wales

Land at New Court Farm, North of St Teilo's Church, Llantilio Pertholey, Monmouthshire

Geophysical Survey

Prepared For: Mr Bryan Nicholls

Edited by: Rowena Hart

Signed: 

Position: Regional Director

Date: 18 January 2019

Authorised by: Rowena Hart

Signed: 

Position: Regional Director

Date: 18 January 2019

By

Andrew Shobrook and Rowena Hart

Report No. 1680

July 2018

CONTENTS

| | | |
|-----|--|---|
| 1 | Introduction | 1 |
| 1.1 | Location and scope of work..... | 1 |
| 1.2 | Site Description and Geology..... | 2 |
| 1.3 | Archaeological and Historical Background | 3 |
| 2 | Aims and Objectives..... | 4 |
| 2.1 | Geophysical Survey | 4 |
| 3 | Methodology..... | 4 |
| 3.1 | Geophysical Survey | 4 |
| 3.2 | Data Processing and Presentation..... | 5 |
| 4 | Geophysical Survey Results..... | 6 |
| 4.1 | Limitations..... | 6 |
| 4.2 | Results of the Survey (Figs 5 & 6) | 7 |
| 5 | Interpretation and Discussion..... | 8 |
| 6 | Bibliography and References | 8 |

List of Figures

| | |
|----------|------------------------------------|
| Figure 1 | Site location |
| Figure 2 | Field divisions |
| Figure 3 | Geophysical survey results +/- 3nT |
| Figure 4 | Geophysical survey results +/- 2nT |
| Figure 5 | Interpretation layer over +/- 2nT |
| Figure 6 | Interpretation |

List of Plates

| | |
|--------------|--|
| Plates 1 – 3 | Views to the north across the three fields |
|--------------|--|

List of Appendices

| | |
|------------|---------------------------------|
| Appendix I | Written Scheme of Investigation |
|------------|---------------------------------|

Copyright Notice:

Archaeology Wales Ltd. retain copyright of this report under the Copyright, Designs and Patents Act, 1988, and have granted a licence to Greenspace Architects Ltd to use and reproduce the material contained within.

The Ordnance Survey has granted Archaeology Wales Ltd a Copyright Licence (No. 100055111) to reproduce map information; Copyright remains otherwise with the Ordnance Survey.

Non-Technical Summary

This report results from work carried out by Archaeology Wales Ltd (AW) for Mr Bryan Nicholls through his agents Greenspace Architects Ltd. It presents the results of a geophysical survey undertaken on the site of a proposed mixed development on land at New Court Farm, north of St Teilo's Church, Llantilio Pertholey, Monmouthshire, centred on NGR SO 31146 16468. The site lies within two unitary authority areas, with the northern half of the site being within the Brecon Beacons National Park and the southern half within Monmouthshire.

A large circular anomaly near the southern extent in Field C, two linear features in Field A and numerous dipolar anomalies across all three fields could represent buried archaeological features. The scattered dipolar anomalies, along with the areas of high and low readings in close proximity to the field boundaries could mask buried archaeological features. The lack of obvious archaeological features does not discount the possibility of archaeological features in the area.

The work was carried out to the Standard and Guidance set out by the Chartered Institute for Archaeologists for archaeological geophysical survey (CIfA 2014) and completed in accordance with Geophysical Survey in Archaeological Field Evaluation (English Heritage 2008). The archiving of the geophysical data will follow guidance laid down in Geophysical Data in Archaeology: A Guide to Good Practice 2nd edition (Schmidt 2002).

1 Introduction

1.1 Location and scope of work

In November 2017, Archaeology Wales Ltd (AW) carried out a geophysical survey on the site of a proposed residential development comprising plans for 32 residential units across 26 plots on land at New Court Farm, north of St Teilo's Church, Llantilio Pertholey, Monmouthshire (henceforth – the site), centred on NGR SO 31146 16468 (Figure 1 and 2). The work was carried out at the request of Greenspace Architects Ltd (henceforth the client), to inform planning decisions relating to the proposed development

The proposed development comprises of three separate fields of rough pasture located on the northern edge of Llantilio Portholey, Abergavenny. The site covers an area of approximately two hectares and lies within two unitary authority areas, with the northern half of the site being within the Brecon Beacons National Park and the southern half within Monmouthshire (Figure 2).

The purpose of the proposed Geophysical Survey is to provide the Monmouth County Council and Brecon Beacons National Park Authority with the information they are likely

to request in respect of the proposed development, the requirements for which are set out in Planning Policy Wales (Ed.9 November 2016), Section 6.5, and Technical Advice Note 24. The work is to highlight and assess the impact upon standing and buried remains of potential archaeological interest to ensure that they are adequately preserved or fully investigated and recorded if they are disturbed or revealed as a result of subsequent activities associated with the development.

Subsequently, a Written Scheme of Investigations (WSI) was prepared by Siân Thomas of AW at the request of the client. It provided information on the methodology to be employed by AW during a geophysical survey of the site. The WSI was submitted to Glamorgan Gwent Archaeological Trust-PD on behalf of the planning authority prior to the survey being undertaken.

The work was managed by Rowena Hart, Regional Director, and the site work was undertaken by Andrew Shobbrook, Jennifer Muller and Daniel Moore. The AW Project Number is 2527 and the Site Code LPM/17/SUR. The work was undertaken in November 2017.

1.2 Site Description and Geology

The site is bounded to the east by the line of the railway and to the west by Hereford Road. To the north-west and the south-east the site boundary follows existing property boundaries, while to the south it is bounded by a small lane. Along its northern side the site is bounded by open fields. The Gavenny River runs southwards through the middle of the site. The development area itself comprises open pasture land, with the Gavenny River running southwards through the middle. There is a Public Footpath, which also runs north to south through the site. The ground slopes gently downwards from both the west and east towards the Gavenny River in the centre of the site, which is approximately 96mAOD. The site lies in a largely pastoral area which includes some residential and religious buildings.

The site is located within Llantilio Pertholey, which is located immediately to the north of Abergavenny. The site lies at the bottom of a valley, through which the Gavenny River runs. The valley sides slope steeply from the tops of the ridges to the west and east before becoming gentler towards the valley floor. Llantilio Pertholey is largely rural in nature and is characterised by dispersed settlement along the valley sides. To the south is the large urban centre of Abergavenny, which stretches south and west along the Gavenny River.

The solid geology beneath the proposed development area is the St Maughan's Formation, which is comprised of argillaceous rocks and sandstone. This is overlain by

till formed in the Devensian era, as well as a band of alluvial clay along the river banks (BGS 2017).

1.3 Archaeological and Historical Background

The following information is summarised from the Archaeological Desk-based Assessment (Nikolic, 2017).

1.4 Previous Archaeological Work

A number of archaeological projects have been undertaken within a 1km radius of the site.

An evaluation 80m to the south of the site was undertaken by Archaeological Perspectives Analysis Consultancy in 2012 prior to the construction of an annex in the grounds of Glebe Cottage. Only modern features were discovered (HER E004507).

A desk based assessment was undertaken by Wessex Archaeology in 1992 700m south of the site (HER E003770) prior to the rebuilding of a day care centre. Another desk based assessment was undertaken by Network Archaeology in 1999 along the route of the Llanvetherine and Gilwern section of pipeline which passed through the northwest of the assessment area, to within 350m of the site (HER E002635). The site is within the study area of The Rural Settlement of Roman Britain project undertaken by Reading University and Cotswold Archaeology on behalf of Historic England and the Leverhulme Trust in 2015 (HER E005431).

1.5 The Historic Landscape

There are ten Scheduled Ancient Monuments (SAM) within 5km of the site. The nearest at 2.3 km to the northeast are the remains of St Michaels Chapel and Skirrid Fawr defended enclosure (SAM MM182). The medieval chapel is situated within the large prehistoric hillfort on the top of the mountainous ridge. 2.4 km southwest of the site are the remains of the cloisters belonging to St Mary's Priory (SAM MM183) in Abergavenny. In the same area but at 2.5km distance is Abergavenny Roman fort (SAM MM193) and medieval Castle (SAM MM056), Abergavenny Bridge lies a little further to the west (SAM MM010).

Also to the southwest is Llanwenarth Churchyard cross base (SAM MM118) 3.7km away and St Faiths churchyard cross (SAM MM306) both of medieval date. Beyond these at 4.3km distance are the remains of Hill's Tramroad inclines from the 19th century (SAM MM276).

To the north lies Pen y Clawdd Castle medieval mound (SAM MM145) 3.5km away and 4.8km to the west is a deserted post medieval village called The Graig Settlement (SAM MM273).

At 4.1km to the southwest is the Registered Historic Landscape of Blaenavon (Cadw HLW (Gt) 1).

There are no registered Conservation Areas, World Heritage Sites, Historic Parks and Gardens or Registered Battlefields within the site or within 5km radius of the site.

1.6 Listed Buildings

There are 347 listed buildings (LB) within 5km of the site, the majority lie within the town of Abergavenny to the south. A small number are in close proximity to the site. The Church of St Teilo is on the opposite side of the lane which bounds the southern edge of the proposed development area, listed grade I (LB 2002), parts of the church are dated to the 13th century and within the churchyard are a number of railed chest tombs, a pair of these are also listed (LB 19313) as is the Memorial Cross with its medieval base (LB 19312), both of these are grade II.

Also within proximity to the site is St Telio's House 120m to the west, a grade II 19th century vicarage (LB 19320) and 460m to the east is the 18th century barn and cart shed at Newcourt Farm (LB19315), also grade II. The remainder of listed buildings are at a distance of 1.3km or more from the site.

2 Aims and Objectives

2.1 Geophysical Survey

The geophysical survey was undertaken in order to:

- Locate and describe archaeological features that may be present within the development area. The archaeological work was designed to attempt to elucidate the presence or absence of archaeological material that might be affected by the scheme, in particular its character, distribution, extent and relative significance.
- Provide sub-surface data to inform any future on-site works.

3 Methodology

3.1 Geophysical Survey

A Bartington Grad601 gradiometer was used to undertake the survey. Previous research has shown that fired, or cut and backfilled archaeological features such as kilns and hearths, ditches and pits often have an anomalously higher magnetic susceptibility than the surrounding subsoil due to burning and biological processes. Differences in

magnetic susceptibility within the subsoil and archaeological features can be detected as changing magnetic flux by an instrument such as a gradiometer. Data from this may be mapped at closely spaced regular intervals, to produce an image that may be interpreted to locate buried archaeological features (Clark, 1997) (Aspinall *et al*, 2011).

Relatively level fields of low pasture, such as this site, provide ideal locations for this type of survey. The surface of the field is relatively uniform allowing rapid traverses and readings to be taken at consistent heights above the ground surface, and the upper plough-soil is generally both neither deep enough to mask features cutting into the underlying subsoil, and unlikely to contain a significance amount of material that could interfere with the magnetic readings. The underlying geology of sandstone, overlain with sand and gravels, is also unlikely to provide a strong magnetic response that could distort the readings.

Detailed survey was carried out in grids of 20m x 20m along parallel traverses spaced at 1m intervals, recording data points spaced at 0.25m intervals to a maximum instrument sensitivity of 0.1nT in accordance with English Heritage Guidelines. The survey mode was set to bi-directional (traverses walked alternately south-north/north-south). At regular intervals the data was downloaded in the field onto a laptop computer for storage and assessment. The location of the survey area was then surveyed using a Topcon GTS 725 total station.

3.2 Data Processing and Presentation

Following the completion of the detailed survey, processing and analysis took place using the TerraSurveyor software package. After downloading, the results were plotted in 2D. The most typical method of visualising the data is as a greyscale image. In a greyscale, each data point is represented as a shade of grey, from black to white at either extreme of the data range. A number of standard operations (including destriping and despiking) were carried out to process the data. The mean level of each traverse of data was reduced to zero and all grids matched so that there were no differences between background levels. The data was then analysed using a variety of parameters and styles and the most useful of these were saved as *JPEG images and displayed using Adobe Illustrator software. Due to the presence of strong magnetic anomalies, the data displayed was clipped to a range of +/-3 nT to allow finer details to be discerned. The results of the survey were then overlaid onto a digital map of the study area. This was then used to produce an interpretation figure.

The right hand sensor of the magnetometer suffered some zeroing issues whilst undertaking the survey in Field A. Despite re-zeroing numerous times the sensor was routinely collecting data that was not consistent with the left-hand sensor. As there were no clear archaeological anomalies in the field the data was not recollected.

All works were undertaken in accordance with the ClfA's Standards and Guidance for a geophysical survey (2014) and current Health and Safety legislation.

4 Geophysical Survey Results

4.1 Limitations

The survey was undertaken during a period of generally dry and cloudy weather.

The development site comprises three separate fields of rough pasture, labelled A, B and C (Figure 2). The site is bounded by hedgerows, fronted by post-and-wire fencing and is located within the base of a low lying valley with both western and eastern sides of the site sloping gently towards the Gavenny river which runs through the central area of the site.

The fields are accessed via two separate metal gateways. Field A and C are accessed through a gateway located on the southern side of field C which in turn is accessed from within the present church car park. A second gateway used to access field B was located on the southern side of the field and in turn fronts onto a minor road which connects the main Hereford Road and B4521 Ross Road located to the south east. When entering field B it was noted that a steel drain pipe was visible protruding from under the western facing bank of the Gavenny river, therefore it was anticipated that this area may contain a large magnetic response due to this modern service. Overground services are also carried on telegraph poles aligned on a north-south orientation continuing through and running along the eastern side of field B. Survey work was undertaken beneath them, but there is the potential that these services may have affected the magnetic readings in this area.

The remains of a raised track way described within the previous DBA was noted bounding the western side of field B and following parallel to the existing Hereford main road. Much of the track way and adjacent areas were overgrown and heavily obscured by vegetation, therefore limited survey work was possible within this area of the site.

Towards the eastern river side boundary of field B and mid to northern end of field C intense areas of vegetation were encountered in form of brambles and nettles. Due to the density of the vegetation these areas were not surveyed not only due to health and safety concerns but due to the fact that the vegetation was at a higher level than the base of the magnetometer sensors and would not allow for reliable data collection. The presence of post-and-wire fencing around the site also obscures any subtler magnetic responses within up to approximately 5m of the fence. This was particularly noticeable along the eastern boundary of the site where the site is bounded by the main Hereford to Abergavenny railway line.

4.2 Results of the Survey (Figs 3-6)

.2.1 *Field A*

Field A was the eastern most field within the proposed development area. A total of three complete grids and five part grids were surveyed. The northern most .c18m could not be surveyed due to high vegetation.

Two linear anomalies were noted in the survey data (blue lines on Figures 4 and 5), one measuring c25m and aligned north-west to south east. The other was an irregular L shape measuring c.25m on its west-south-west to east-north-east aligned section and c.42m on its north-north-west to south-south-east. These linear features do not correspond to any know historic field boundaries. High and low readings were recorded on the eastern edge of the field and are likely to be associated with the made ground under the adjacent railway line and the fencing separating the field from the line (red area on Figures 4 and 5).

.2.2 *Field B*

This field was obscured by vegetation at its north-eastern corner and so the survey was slightly narrowed. One complete grid and eight part grids were surveyed. The western c.18m and the eastern 10m was not surveyed as the vegetation was higher than 30cm in height.

There were significant magnetic signatures at the very north and very south of the fields along the field boundaries. This was coincident with wire fences (red areas on the Figures 4 and 5). The large east-west aligned feature (purple on Figures 4 and 5) is an unknown anomaly with a c.5m radius sub circle and a c. 12m linear aligned approx. east-west. An anomaly on the eastern edge was an electricity pole and cable stay (yellow on Figures 4 and 5). Several dipolar anomalies were also found across the field likely to be associated with metallic objects in the topsoil.

.2. *Field C*

Due to the growth of vegetation within the mid and northern area of field C, survey efforts were largely confined to the southern portion of the field which comprised mainly of rough grass land pasture. The northern half of the field was dominated by high vegetation above 30cm which did not allow for data to be gathered.

There is a c.7m diameter circular anomaly in the southern end of this field (Blue on figures 4 and 5). There was nothing on site at ground level indicating the origin of the anomaly. An area on the easternmost point of the field survey had an area of high readings (red on Figures 4 and 5). This is likely to be associated with the wire fence.

Several dipolar anomalies were also found across the field likely to be associated with metallic objects in the topsoil.

5 Interpretation and Discussion

The geophysical survey did not reveal any obvious archaeological features. The trackway on the western edge of Field B was not revealed during the survey.

A large circular anomaly near the southern extent in Field C, two linear features in Field A and numerous dipolar anomalies across all three fields could represent buried archaeological features. The scattered dipolar anomalies, along with the areas of high and low readings near the field boundaries could mask buried archaeological features. The lack of obvious archaeological features revealed during the survey does not discount the possibility of archaeological features in the area.

6 Archiving

A project archive will be prepared in accordance with the National Monuments Record (Wales) agreed structure and be deposited with the National Monuments Records, held and maintained by the RCAHMW, Aberystwyth, on completion of site analysis and report production. It will also conform to the guidelines set out in 'The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales 2017' (National Panel for Archaeological Archives in Wales 2017). The digital archive will be deposited with the NMR.

The report will be submitted with the regional HER at Glamorgan Gwent Archaeological Trust in line with the Guidance for the Submission of Data to the Welsh Historic Environment Records document.

7 Bibliography and References

Aspinall, A, Gaffney, C & Schmidt, A. 2011, *Magnetometry for Archaeologists*. Altamira, London

Clark, A 1997, *Seeing Beneath the Soil: Prospecting Methods in Archaeology*. Routledge, Stroud

Chartered Institute for Archaeologists. 2014, *Standards and Guidance for a Geophysical Survey*

Thomas, S 2017. *Archaeological Desk Based Assessment, Land at New Court Farm, North of St Teilo's Church, Llantilio Pertholey, Monmouthshire. Archaeology Wales, report no. 2527*

Websites

British Geological Society online map resource
(<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>)

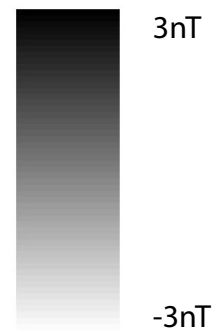
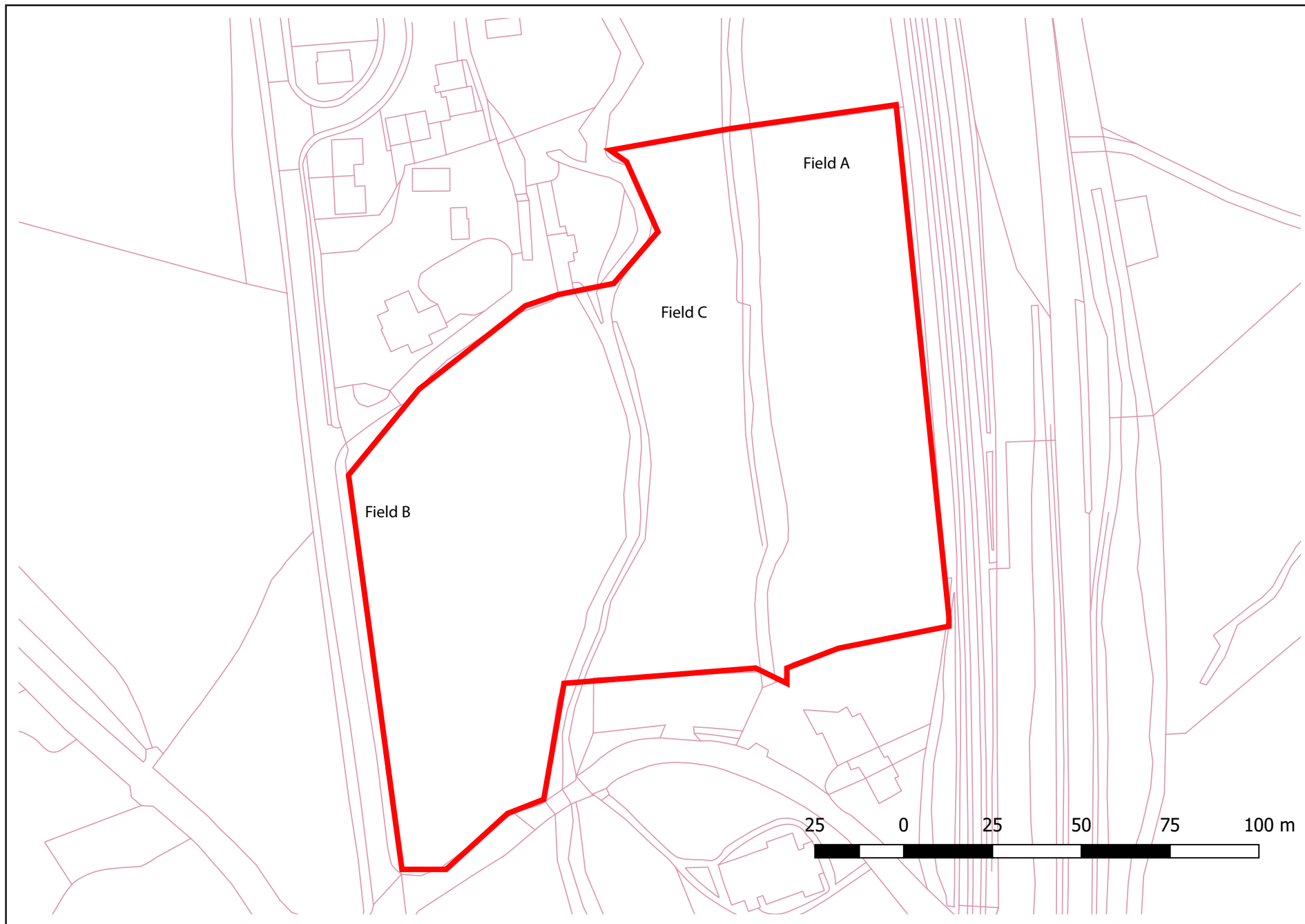


Figure 1. Showing survey area and field divisions

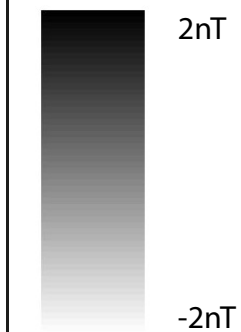


Figure 2. Showing magnetometer data clipped at -3nT to 3nT Green shows inaccessible areas due to vegetation Site centred on NGR SO 31146 16468

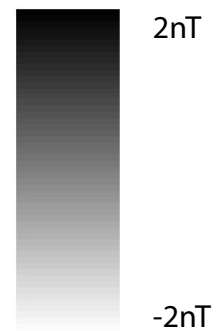


Figure 3. Showing magnetometer data clipped at -2nT to 2nT. Green shows inaccessible areas due to vegetation. Site centred on NGR SO 31146 16468.



Figure 4. Showing magnetometer data clipped at -2nT to 2nT . Green shows inaccessible areas due to vegetation Site centred on NGR SO 31146 16468. Interpretation overlay described in Section 4



Figure 5. Interpretation overlay described in Section 4
 Green shows inaccessible areas due to vegetation
 Site centred on NGR SO 31146 16468.



Field A - View to north

Field B - View to north



Field C - View to north

Plates 1-3. Views to the north across all fields

Archaeology Wales Ltd
The Reading Room, Town Hall, Llanidloes SY18 6BN
T: 01686 440371
E: info@arch-wales.co.uk
www.arch-wales.co.uk

Specification

For Archaeological Desk Based Assessment and Geophysical Survey:

Land at New Court Farm, North of St Teilo's Church, Llantilio Pertholey, Monmouthshire

**Prepared for:
Greenspace Architects Ltd**

Project No: 2527

June 2017

Archaeology Wales Limited
The Reading Room, Town Hall,
Great Oak St., Llanidloes, Powys, SY18 6BN
Tel: +44 (0) 1686 440319
Email: admin@arch-wales.co.uk



NON TECHNICAL SUMMARY

This Specification details the proposal for an archaeological Desk Based Assessment and Geophysical Survey associated with the proposed residential development on land at New Court Farm, north of St Teilo's Church, Llantilio Pertholey, Monmouthshire. It has been prepared by Archaeology Wales Ltd for Greenspace Architects Ltd as part of the pre-planning application investigation of the site.

1. Introduction

The proposed development comprises plans for approximately 23 dwellings, altered access and amenity provision on land at New Court Farm, north of St Teilo's Church, Llantilio Pertholey, Monmouthshire (henceforth – the site), centred on NGR SO 31146 16468 (Figure 1 and 2). The local planning authority is Monmouthshire County Council (henceforth – MCC). The proposed development is currently in the pre-planning stages of development.

This Specification has been prepared by Siân Thomas, Archaeology Wales Ltd (Henceforth - AW) at the request of Greenspace Architects Ltd. It provides information on the methodology that will be employed by AW during a Desk Based Assessment and Geophysical Survey.

The purpose of the proposed Desk Based Assessment and Geophysical Survey is to provide the MCC with the information they are likely to request in respect of the proposed development, the requirements for which are set out in Planning Policy Wales (Ed.9 November 2016), Section 6.5, and Technical Advice Note 24. The work is to highlight and assess the impact upon standing and buried remains of potential archaeological interest to ensure that they are adequately preserved or fully investigated and recorded if they are disturbed or revealed as a result of subsequent activities associated with the development.

The site lies within two unitary authority areas, with the northern half of the site being within the Brecon Beacons National Park and the southern half within Monmouthshire (Figure 2). This specification is to be approved by both the Brecon Beacons National Park Authority (henceforth – BBNPA) and the Glamorgan-Gwent Archaeological Trust (henceforth - GGAT) who both act as archaeological advisers to MCC.

All work will conform to the Standard and Guidance for Archaeological Desk Based Assessment (CIfA December 2014) and be undertaken by suitably qualified staff to the highest professional standards.

2 Development Details & Site Description

Draft development details have been provided by the developer, and proposals currently comprise the development of approximately 23 dwellings, altered access and amenity provision. The development area occupies an irregular plot of land to the north of St Teilo's Church, Llantilio Pertholey and centred on NGR SO 31146 16468. The development site as a whole comprises approximately 2 hectares.

The site is bounded to the east by the line of the railway and to the west by Hereford

Road. To the north-west and the south-east the site boundary follows existing property boundaries, while to the south it is bounded by a small lane. Along its northern side the site is bounded by open fields. The Gavenny River runs southwards through the middle of the site. The development area itself comprises open pasture land, with the Gavenny River running southwards through the middle. There is a Public Footpath, which also runs north to south through the site. The ground slopes gently downwards from both the west and east towards the Gavenny River in the centre of the site, which is approximately 96mAOD. The site lies in a largely pastoral area which includes some residential and religious buildings.

The site is located within Llantilio Pertholey, which is located immediately to the north of Abergavenny. The site lies at the bottom of a valley, through which the Gavenny River runs. The valley sides slope steeply from the tops of ridges to the west and east before becoming gentler towards the valley floor. Llantilio Pertholey is largely rural in nature and is characterised by dispersed settlement along the valley sides. To the south is the large urban centre of Abergavenny, which stretches south and west along the Gavenny River.

The solid geology beneath the proposed development area is the St Maughan's Formation, which is comprised of argillaceous rocks and sandstone. This is overlain by till formed in the Devensian era, as well as a band of alluvial clay along the river banks (BGS 2017).

3 Site specific objectives

The primary objective of the desk based assessment will be to assess the potential impact of the development proposals on the historic environment by means of a detailed desk based study and site visit. This will help inform future decision making, design solutions and potential mitigation strategies. The aim will be to make full and effective use of existing information in establishing the archaeological significance of the site, to elucidate the presence or absence of archaeological material, its character, distribution, extent, condition and relative significance.

The work will include a comprehensive assessment of regional context within which the archaeological evidence rests and will aim to highlight any relevant research issues within national and regional research frameworks.

This will be followed with a geophysical survey, the primary objective of which will be to locate and describe, by means of geophysical survey and resulting interpretation, archaeological features that may be present within the development area. The proposed archaeological work will attempt to elucidate the presence or absence of archaeological material that might be affected by the scheme, in particular its character, distribution, extent and relative significance.

Both the desk based assessment and geophysical survey will result in a report that will provide information of sufficient detail to allow informed planning decisions to be made which can safeguard the archaeological resource. The information could then be used to determine further archaeological investigation or appropriate mitigation strategies for any archaeological remains within the area to be implemented prior to or during the proposed development. Preservation *in situ* will be advocated where at all possible, but where engineering or other factors result in loss of archaeological deposits, preservation by

record will be recommended.

4 The proposed archaeological work

The proposed archaeological work relates to the whole of the site, i.e. all of the application area.

The aim of the work will be to establish and make available information about the archaeological resource existing on the site. The work will include the following elements:

- A detailed desk based assessment (Stage 1)
- A site visit (Stage 2)
- A geophysical survey (Stage 3)
- The production of an illustrated report and the deposition of the site archive (Stage 4)

5 Method statement for a detailed desk based assessment (Stage 1)

The assessment will consider the following:

- a) The nature, extent and degree of survival of archaeological sites, structures, deposits and landscapes within the study area. It will involve the following areas of research:
1. Collation and assessment of all relevant information held in the regional HER at Glamorgan-Gwent Archaeological Trust in Swansea, within a 1km radius from the centre of the proposed development area.
 2. Collation and basic assessment of the impact on all Designated archaeological sites (Scheduled Ancient Monuments, Listed Buildings, Historic Parks & Gardens, landscapes, Conservation Areas) within 5km from the edge of the aforementioned area.
 3. Assessment of all available excavation report and archives including unpublished and unprocessed material affecting the site and its setting.
 4. Assessment of all extant aerial photographic (AP) evidence. This will include visits to Central Register of Air Photography for Wales, in Cardiff.
 5. Assessment of archive records held at the County Archives, and as appropriate, site files held by RCAHMW
 6. Records held by the developer e.g. bore logs, geological/geomorphological information, aerial photographs, maps, plans.
 7. Map regression analysis using all relevant cartographic sources e.g. All editions of the Ordnance Survey County Series, Tithe and early estate maps (as available).
 8. Place name evidence.
 9. Internet sourced satellite imagery and Lidar imagery as available.
 10. Assessment of the records held at the Portable Antiquities Scheme.
 11. Historic documents (e.g. Charters, registers, estate papers).
- b) The significance of any remains in their context both regionally and nationally and in light of the findings of the desk based study.

- c) The history of the site, based on the areas of research outlined above.
- d) The potential impact of any proposed development on the setting of known sites of archaeological importance (this will constitute a brief assessment, rather than a formal assessment such as that detailed in the Design Manual of Roads and Visits).
- e) The potential for further archaeological remains to be present, which have not been identified in pre-existing archaeological records.
- f) The potential for further work, with recommendations if requested and where appropriate for a suitable investigative and/or mitigation methodology.

6 Method statement for a Site Visit (Stage 2)

The site visit will be a visual walked search of the accessible development area. The ground surface will be visually inspected for all earthworks, structures and finds. The location of any environmental archaeological deposits, or areas which may have a potential for such deposits, will also be taken into account along with the visible archaeology.

All located sites or finds will be accurately fixed by means of GPS. Each individual find or site location will have an accurate NGR reference attached. Where a close cluster of related features is identified a single NGR for the centre of the cluster will be used, and each constituent feature separately described in the text.

The character, function, condition, vulnerability, potential dating and relationship to other features of each identified site or find will be described fully. The importance of the site or find will be assessed in terms of local, regional or national significance.

A sketch survey of each identified site layout will be made with accompanying metric measurements.

Written, drawn and photographic records of an appropriate level of detail will be maintained throughout the course of the project. Digital photographs, including metric scales, will be taken using cameras with resolutions of 10 mega pixels or above.

Illustrations will be drawn to a scale of 1:50, 1:20 and 1:10 as required, and these will be related to Ordnance Survey datum and published boundaries where appropriate.

The site visit will also assess the visual impact of the proposed development on the setting of known sites of archaeological importance. Photographs will be taken from the proposed development to help illustrate and assess this visual impact and Designated sites within the study area (and SAMs to 5km) will also be visited with photographs taken towards the proposed development to help illustrate and assess this visual impact on these sites.

7 Method statement for the geophysical survey (Stage 3)

The area to be surveyed will include all of the accessible development area (see the attached plan, Figure 2). On-site adjustments may be required to avoid areas of magnetic interference or inaccessibility. The site will be located and the survey grids laid out by GPS and plotted onto an O.S. base map.

The survey will be carried out using a Bartington Grad601 Magnetometer. This is chosen as an efficient and effective method of locating archaeological anomalies on this type of site. The machine consists of two high stability fluxgates gradiometers suspended on a single frame, accurately aligned, that can detect localised magnetic anomalies compared with the general magnetic background. When mapped in a systematic manner this allows changes in the magnetic field resulting from differing features in the soil to be plotted. Strong magnetic anomalies will be generated by iron-based objects or areas of heat-activity, such as hearths and kilns. More subtle anomalies may be generated by changes, typically in the iron-oxide content, of underlying soils, compared to the natural subsoil. This helps to detect infilling material of features such as ditches and pits, as well as overlying material such as wall lines.

The survey area will be divided into 20m square grids along a common alignment. Within each grid, zig-zag traverses 1m apart will be walked with instrument readings being logged at 0.25m intervals. Incomplete survey lines resulting from irregular area boundaries or obstacles will be completed using the "dummy log" key.

A composite of each detailed survey area will be created and processed using the software package *Terrasurveyor v.3*. A variety of processing tools will be used to enhance any potential archaeology. The final results will be presented at an appropriate scale tied to the Ordnance Survey National Grid.

8 Method statement for the production of an illustrated report and the deposition of the site archive (Stage 4)

A report will be produced which synthesises the results of stages 1, 2 and 3 and thereby assesses the total archaeological resource within the development area.

The results will be presented in a report and will be detailed and laid out in such a way that data and supporting text are readily cross-referenced. The HER Officer will be contacted to ensure that any sites or monuments not previously recorded in the HER are given a Primary Record Number (PRN) and that data structure is compatible with the HER. The historical development of the site will be presented in phased maps and plans comprising clearly, the outline of the site.

Within the report an attempt will be made to indicate areas of greater or lesser archaeological significance and the sites will be ranked in level of overall archaeological importance (locally, regionally and nationally).

All relevant aerial photographs, re-plots and historic maps will be included and be fully referenced. Any site photographs included in the report will be appropriately captioned and clearly located on a suitably scaled site plan.

The report will specifically include the following:

1. a copy of the design brief (if applicable)
2. a location plan
3. all identified sites plotted on an appropriately scaled plan of the proposal site
4. a gazetteer of all located sites with full dimensional and descriptive detail including grid reference and period

Copies of the report will be sent to the client, to BBNPA and to GGAT for inclusion in the HER. Digital copies will be provided in pdf format.

The site archive

A project archive will be prepared in accordance with the National Monuments Record (Wales) agreed structure and be deposited with the National Monuments Records, held and maintained by the RCAHMW, Aberystwyth, on completion of site analysis and report production. It will also conform to the guidelines set out in 'The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales 2017' (National Panel for Archaeological Archives in Wales 2017). The digital archive will be deposited with the NMR.

Although there may be a period during which client confidentiality will need to be maintained, the report and the archive will be deposited not later than six months after completion of the work.

Other significant digital data generated by the survey (ie AP plots, EDM surveys, CAD drawings, GIS maps, etc) will be presented as part of the report on a CD/DVD. The format of this presented data will be agreed with the curator in advance of its preparation.

9 Resources and timetable

Standards

The desk based assessment will be undertaken by AW staff using current best practice.

All work will be undertaken to the standards and guidelines of the CIfA.

Staff

The project will be undertaken by suitably qualified AW staff. Overall management of the project will be undertaken by Rowena Hart.

Timetable of archaeological works

The work will be undertaken at the convenience of the client and is likely to commence imminently.

Insurance

AW is fully insured for this type of work, and holds Insurance with Aviva Insurance Ltd and Hiscox Insurance Company Limited through Towergate Insurance. Full details of these and other relevant policies can be supplied on request.

Arbitration

Disputes or differences arising in relation to this work shall be referred for a decision in accordance with the Rules of the Chartered Institute of Arbitrators' *Arbitration Scheme for the Institute for Archaeologists* applying at the date of the agreement.

Health and safety

All members of staff will adhere to the requirements of the *Health & Safety at Work Act, 1974*, and the Health and Safety Policy Statement of AW.



Figure 1. Location of development area

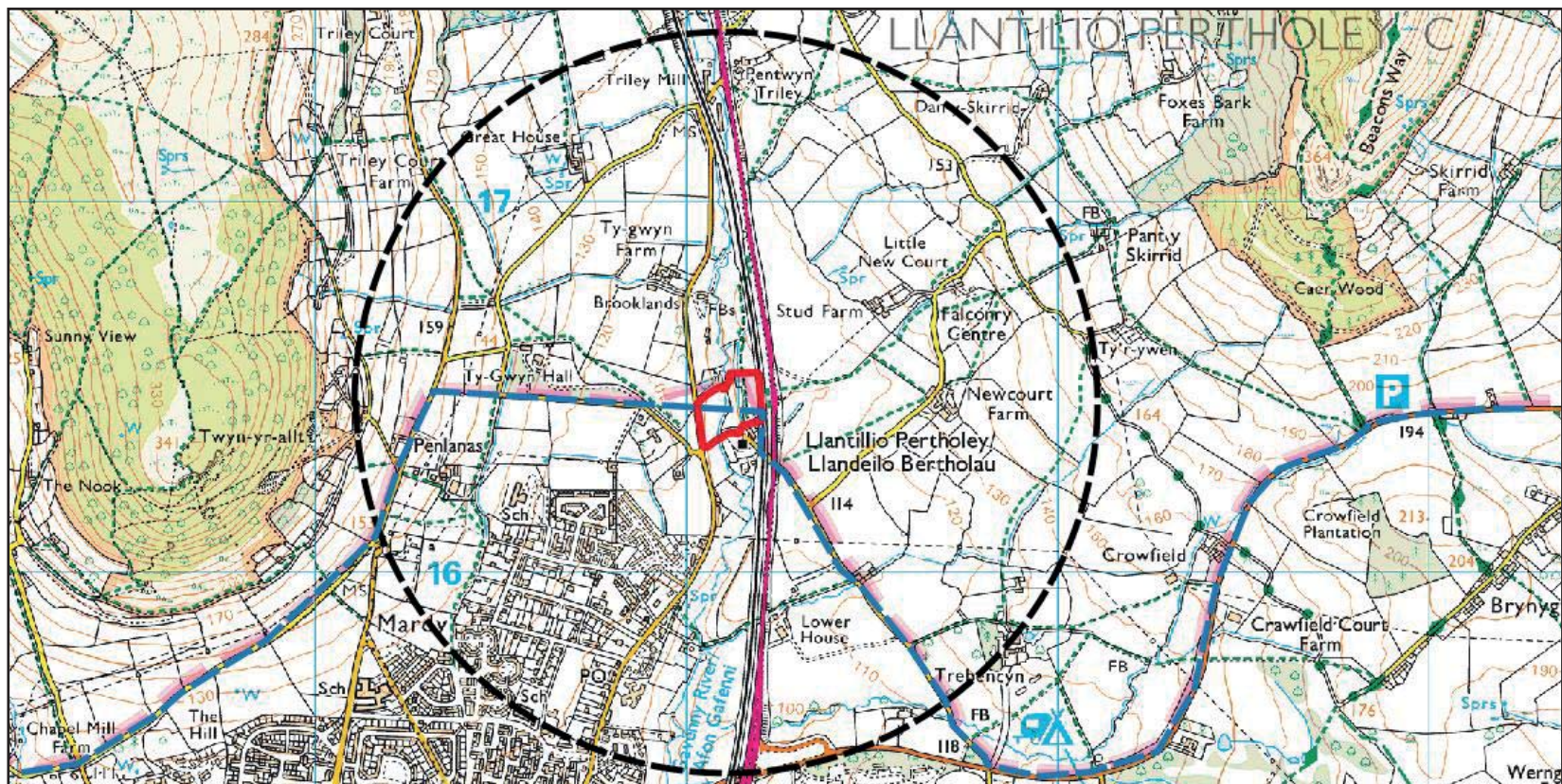
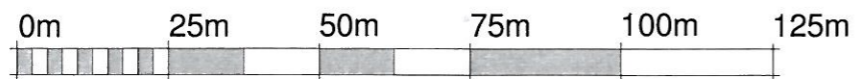
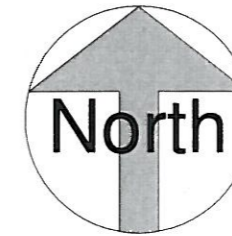
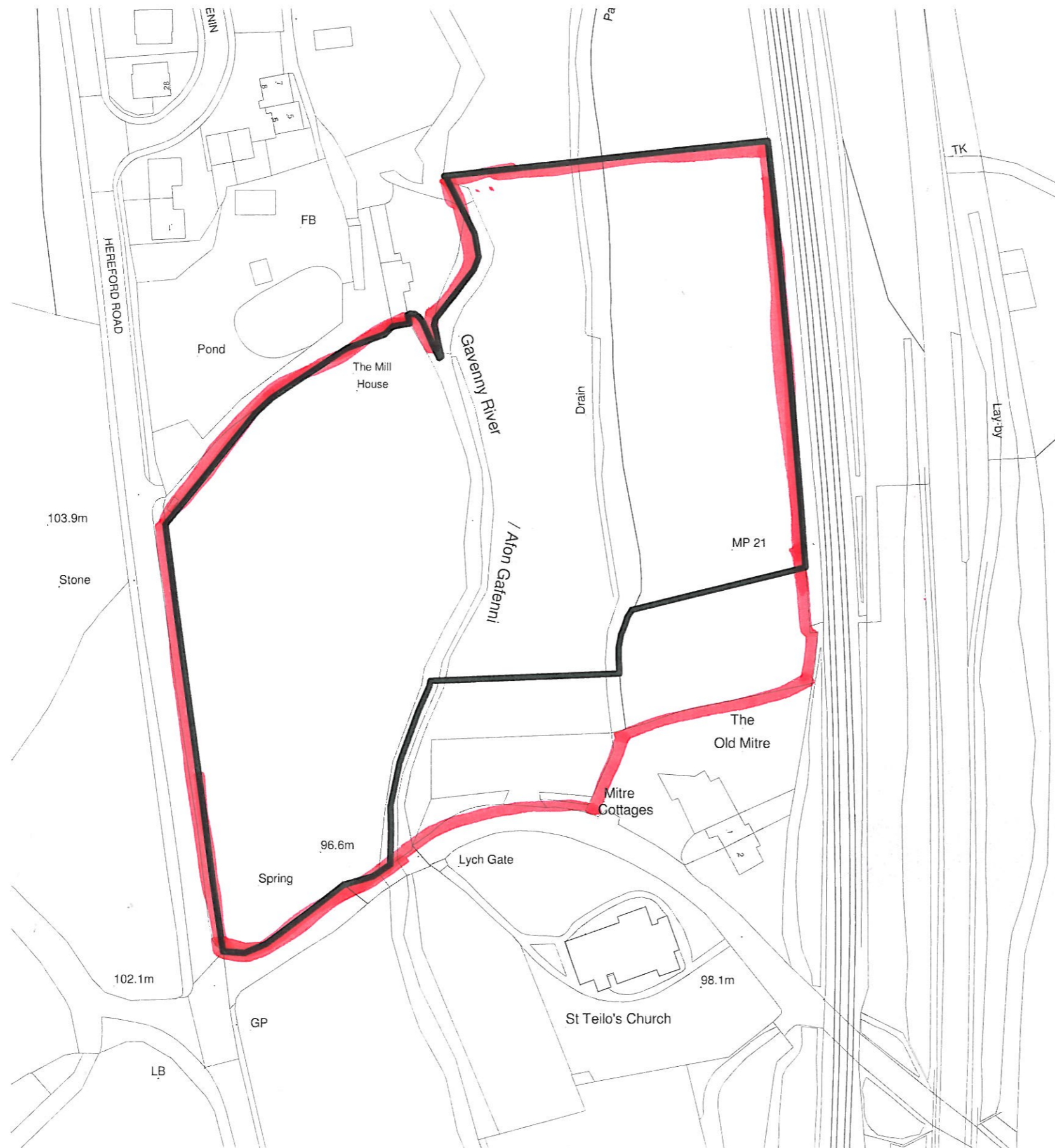


Figure 2. Location of development area (red), applied study area (black), old UA boundary (pink), new UA boundary (blue).



VISUAL SCALE 1:1250 @ A3

| Rev. | Revision description | Drawn | Checked | Date |
|------|----------------------|-------|---------|------|
| | | | | |

Greenspace Architects Ltd.
The Old Town Hall, Ellesmere,
Shropshire, SY12 0EP
Tel 01691 623889

e-mail:
greenspace@greenspacearchitects.com
web: www.greenspacearchitects.com

Project
**Land at New Court Farm, North of
St Teilo's Church, Llantillio
Pertholey**

Title
Location Plan

| Scale @ A3 | Drawn By | Checked By | Date |
|------------|----------|------------|----------|
| 1 : 1250 | jv | ks | 31/05/16 |

| Job No. | Sheet No. | Rev. |
|---------|-----------|------|
| 16-23 | A001 | - |

Drawing
Number

16-23 A001 -