

# Bro Tathan Utilities Upgrade

784-B048494



## Archaeological Scoping and Method Statement

### Second Issue

Welsh Government

July 2023

Document prepared on behalf of Tetra Tech Limited. Registered in England number:  
01959704



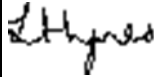


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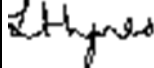

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# DOCUMENT CONTROL

<b>Document:</b>	Archaeological Method Statement
<b>Project:</b>	Bro Tathan Utilities Upgrade
<b>Client:</b>	Welsh Government
<b>Project Number:</b>	784-B048494
<b>File Origin:</b>	<a href="#">Utilities Method Statement 29Jun23xtc.docx</a>

<b>Revision:</b>	0	<b>Prepared by:</b>	Lauren Hynes (PCIfA), Archaeological Consultant 
<b>Date:</b>	July 2023	<b>Checked by:</b>	Tia Moore (PCIfA), Archaeological Consultant 
<b>Status:</b>	Issue	<b>Approved By:</b>	Martin Brown (MCIfA), Associate 
<b>Description of Revision:</b>	Issue		

<b>Revision:</b>	1	<b>Prepared by:</b>	Lauren Hynes (PCIfA), Archaeological Consultant 
<b>Date:</b>	July 2023	<b>Checked by:</b>	Martin Brown (MCIfA), Associate 

<b>Status:</b>	Issue	<b>Approved By:</b>	Martin Brown (MCIFA), Associate 
<b>Description of Revision:</b>	Amendments following comments from GGAT and the client		

<b>Revision:</b>		<b>Prepared by:</b>	
<b>Date:</b>		<b>Checked by:</b>	
<b>Status:</b>		<b>Approved By:</b>	
<b>Description of Revision:</b>			

<b>Revision:</b>		<b>Prepared by:</b>	
<b>Date:</b>		<b>Checked by:</b>	
<b>Status:</b>		<b>Approved By:</b>	
<b>Description of Revision:</b>			



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## APPENDICES

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Appendix A – Site Location and Installation Route Plan

Appendix B –Archaeological Assets

Appendix C – Constraints Map

Appendix D – Report Conditions

## ACRONYMS/ABBREVIATIONS

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Acronyms/Abbreviations	Definition
DBA	Desk-Based Assessment
HER	Historic Environment Record
LiDAR	Laser Imaging, Detection and Ranging
OSGB NGR	Ordnance Survey National Grid reference system
aOD	Ordnance Datum
WSI	Written Scheme of Investigation
MoD	Ministry of Defence

## 1.0 NON-TECHNICAL SUMMARY

This Archaeological Method Statement has been prepared to support the consideration of this site for future development, including the installation of new utilities and services. This study considers the known archaeological potential of the proposed routes for the provision of above and below ground utilities, associated infrastructure and reprofiling of land, as well as previous archaeological evaluation to inform an appropriate mitigation strategy. Several parts of the route are noted to have been heavily disturbed and truncated by previous development and various areas previously investigated. However, there are small sections of the route that venture into untouched land, as well as areas with high archaeological potential. A programme of archaeological mitigation has been advised, with any further archaeological work being undertaken in accordance with the standards and guidance from the Chartered Institute for Archaeologists, and a Written Scheme of Investigation agreed in advance with Glamorgan-Gwent Archaeological Trust Archaeologist and with Cadw, in relation to works proposed across the West Orchard Manor House Scheduled Monument (GM083).

## 2.0 INTRODUCTION

This Method Statement has been prepared by Lauren Hynes (PCIfA) Archaeological Consultant, Tetra Tech, on behalf of Welsh Government to support a planning application for the provision of above and below ground utilities, associated infrastructure and reprofiling of land around the Bro Tathan site. The document outlines a scheme of archaeological monitoring required to identify, characterise, and record potential remains of archaeological significance in advance of development.

This Method Statement will be an overarching document for the scheme of mitigation. However, this statement contains details of the potential impact of the proposed development on archaeology and provides an appropriate method for archaeological mitigation. This Method Statement should be read in conjunction to the Archaeological Monitoring Written Scheme of Investigation for Watching Brief and the Archaeological Trial Trenching Written Scheme of Investigation required under any Scheduled Monument Consent for the works at West Orchard; both documents are in preparation.

### 2.1 AIM AND OBJECTIVES

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The overall aim of the archaeological watching brief and trial trenching is to identify and record any features of archaeological interest within specific areas which have been targeted based upon the results of previous evaluation work. This programme of works will result in the preparation of a report and an ordered archive.

The specific aims of the watching brief and trial trenching will be to:

- Identify and record any archaeological features and deposits to a level appropriate to their extent and significance;
- Excavate, record and sample any identified archaeological features and deposits to a level appropriate to their extent and significance;
- Undertake sufficient post-excavation analysis at a level commensurate with the findings to confidently interpret any archaeological features and phasing identified;

- Undertake post-excavation analysis at a level commensurate with types and numbers of artefacts and samples collected to interpret their significance;
- Report the results of the watching brief and subsequent post-excavation analysis and place these results within their local and regional context; and
- Compile and deposit a site archive at a suitable repository.

The archaeological monitoring will be carried out in accordance with the ClfA Standard and Guidance for an archaeological watching brief.

Further mitigation, if required, will likely take the form of design measures to enable preservation in situ.

### 3.0 SITE LOCATION AND CONDITIONS

The site is located around Bro Tathan, which contains several areas known as Y Gogledd (North), Y Porth and Y Gorllewin (West), Y Dwyrain (East), Y De (South), which contains the rotary zone, Batslays, West Orchard and Beggar's Pound, and St Athan Golf Club. The overall Bro Tathan site includes approximately 167.28 hectares. Y Gogledd (North) measures approximately 32.40 hectares and is centred on grid reference SS 99937 69572, ranging from approximately 40m above Ordnance Datum (aOD) to 56m aOD, Y Porth and Y Gorllewin (West) includes approximately 32.32 hectares and is centred on grid reference SS 99967 68671, ranging from approximately 40m above Ordnance Datum (aOD) to 53m aOD, Y Dwyrain (East) includes approximately 47.32 hectares and is centred on grid reference ST 01094 68934, ranging from approximately 40m above Ordnance Datum (aOD) to 49m aOD, Y De (South) includes approximately 21.96 hectares, and is centred on grid reference ST 00152 68137, ranging from approximately 37m above Ordnance Datum (aOD) to 49m aOD. A site location plan, and overall site location plan of Bro Tathan can be seen in Appendix A.

The geology of the application sites comprises of Porthkerry Member, Limestone and Mudstone, Interbedded, a sedimentary bedrock formed approximately 191 to 201 million years ago in the Jurassic Period. It is noted that the local environment was previously dominated by shallow lime-mud seas (NERC, 2020). The application sites consist of freely draining slightly acid but base-rich soils (Soilscape 7) (Cranfield University, 2020).

### 4.0 SOURCES CONSULTED

A variety of sources were consulted in the preparation of this document. Notably, previous archaeological evaluations performed across the Bro Tathan site have been considered to assist in the creation of a strategy for the installation of utilities and services around the site. A list of sources have been considered below;

- Glamorgan-Gwent Historic Environment Record;
- National Record of the Historic Environment (NRHE) (formerly the (NMR);
- Cadw for designated sites;
- Previous Archaeological Evaluation by Tetra Tech/WYG including;
  - Beggar's Pound Archaeological Desk-Based Assessment (WYG, 2019)
  - Picketston, Bro Tathan, BV Giga Factory Archaeological and Heritage Desk-Based Assessment (WYG, 2020)

- Site Wide Bro Tathan Archaeological and Heritage Desk-Based Assessment (WYG, 2020)
- Eglwys-Brewis, Bro Tathan, Archaeological and Heritage Desk-Based Assessment (WYG, 2019)
- Bro Tathan Area 9: Archaeological Assessment (Tetra Tech, 2021)
- Bro Tathan East Archaeological and Heritage Desk-Based Assessment (Tetra Tech, 2022)
- Previous Archaeological Evaluation Reports by Third-Party Subcontractors/ External Companies, including;
  - Unit 415, Beggars Pound, RAF St Athan: Archaeological Evaluation (Cotswold Archaeology, 2008)
  - Batslays, RAF St Athan, RAF St Athan: Archaeological Evaluation (Cotswold Archaeology, 2008)
  - Interim Report on the EM38 Magnetic Susceptibility Survey with recommendations for the initial phase 2 magnetometer surveys: DTRP, St Athan (Young, 2008)
  - Defence Technical College and Aerospace Business Park, St Athan, Glamorgan (Wessex Archaeology, 2009)
  - Bro Tathan, Eglwys-Brewis: Geophysical Survey (Headland Archaeology, 2019)
  - Land at Bro Tathan, Eglwys-Brewis: Archaeological Evaluation (Headland Archaeology, 2019)
  - Bro Tathan East: Geophysical Survey Report (SUMO Geophysics, 2022)
  - Bro Tathan East: Archaeological Evaluation (Red River Archaeology, 2023)
  - Bro Tathan East: Archaeological Watching Brief (Red River Archaeology, 2023)

## 5.0 ARCHAEOLOGICAL SCOPING

The archaeological and historical background of the site was fully assessed in a desk-based assessment (DBA) undertaken by Tetra Tech (Tetra Tech, 2021), as well as several separate DBA's focusing on specific areas within Bro Tathan. The reports are summarised below.

### 5.1 DESIGNATED HERITAGE ASSETS

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A study area of 1km around the application site has previously been examined to assess the nature of the surrounding cultural heritage sites and to place the recorded sites within their context. There are no World Heritage Sites, Registered Battlefields nor, Registered Parks and Gardens; however, there are three Scheduled Monuments, two Conservation Areas and, twenty-three Listed Buildings (one Grade I, four Grade II\*, with the remainder being Grade II listed) that are located within the study area. Details of the designated heritage assets can be seen in Appendix E and their locations in relation to the proposed routes for utilities are shown on Figure 2. Bracketed numbers within the text refer to the identifiers on Figure 2 in Appendix B.

The West Orchard Manor House Scheduled Monument (GM083) is the only designated asset that lies along the proposed route of the utilities and services installation. This asset includes the remains of a medieval manor house with national importance due to its potential to enhance the archaeological record with knowledge of medieval secular architecture in Wales. It is suggested that the remains may yield information that relate to historic building techniques and the chronology of the site and its surrounding area (Cadw, 2023).



There are a number of designated assets that lie in close relation to the proposed development. This includes; the Grade II\* Listed Church of St Brise (13142), the Grade II Bethesda'r Fro Chapel (13242) and, Batslays Farmhouse (13299).

## **5.2 NON-DESIGNATED HERITAGE ASSETS**

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The Glamorgan-Gwent Archaeological Trust HER indicates the presence of 134 recorded archaeological monuments and findspots, as well as 40 archaeological events within the 1km study area. The details of non-designated assets can be seen in Appendix B, Figure 3.

There are no non-designated assets lying along the proposed route of the utilities and services installation. However, there are a number of archaeological assets situated in close relation to the proposed development. This includes; a post-medieval Former Rectory (GGAT05129s), possible medieval Grave Cuts (GGAT05127s), medieval Eglwys Brewis Churchyard (GGAT3730s), medieval Coin Hoard Findspot (GGAT00482s), Eglwys Brewis Farm and Garden (GGAT05130s) and a post-medieval Cremation all located centrally to the northern boundary with Northern Access Road. Additionally, a Bronze Age Round Barrow (GGAT05478s) to the north-north east, Batslays Farmhouse (GGAT06201s) and a World War II Pillbox (GGAT02042s) to the south-west, as well as the boundary walls for Bethesda'r Fro Chapel that are located to the north-west.

## **5.3 PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS AND EVALUATION RESULTS**

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There have been a number of previous archaeological evaluations within areas of the proposed route. This consists of a site-wide geophysical survey undertaken by the MOD in 2008, as well as focused geophysical surveys in Eglwys Brewis (West) (Headland Archaeology, 2019a), Beggars Pound (2020), Bro Tathan North (Headland Archaeology, 2022) and Bro Tathan East (SUMO, 2022). Additionally, archaeological evaluation in the form of trial trenching has taken place in Batslays (Cotswold Archaeology, 2008a), Beggars Pound (Cotswold Archaeology, 2008b), in Batslays/ close to the Church of St Brise (Wessex Archaeology, 2009), St John's Well (Headland Archaeology, 2010), Eglwys Brewis (West) (Headland Archaeology, 2019b) and in Bro Tathan East (Red River Archaeology, 2023). Additionally, a Desk-Based Assessment to consider the St Athan Northern Access Road was undertaken in 2017 (AECOM).

The locations of previous archaeological evaluation can be seen in Appendix C, Figure 4 and Figure 5.

The results of the report are discussed below:

### **BATSLAYS, RAF ST ATHAN (COTSWOLD ARCHAEOLOGY, 2007)**

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Trial trenched evaluation was undertaken by Cotswold Archaeology in 2007 for White Young Green (WYG) on behalf of the Welsh Assembly Government. This was undertaken to accompany a planning application (Ref: 2007/01565/FUL) prior to the erection of a new small hangar, construction of a ground slab and helipad, as well as external alterations to existing offices and car parking (Cotswold Archaeology, 2008a). The site was situated to the south-western part of the airfield. The evaluation revealed no artefacts nor archaeological features pre-dating the Modern period (ibid).

### **BEGGARS POUND, RAF ST ATHAN (COTSWOLD ARCHAEOLOGY, 2007)**

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Trial trenched evaluation was also undertaken at Unit 415 in Beggars Pound by Cotswold Archaeology in 2007, for WYG on behalf of the Welsh Assembly Government. The works were requested in conjunction with a planning application (Ref: 2007/01237/FUL) for the refurbishment and extension of an existing hangar for Aerospace Engineering (Cotswold Archaeology, 2008b). The site was located on the south-eastern edge of the base, and it was bordered on the east by St Athan to Cowbridge road and on the north, south and west by other airfield facilities. Cotswold Archaeology concluded that no artefacts or archaeological features pre-dating the modern period were encountered and suggested that any earlier archaeological features may have been damaged or removed by modern landscaping or construction (ibid).

#### **EM38 MAGNETIC SUSCEPTIBILITY SURVEY (INTERIM REPORT), DTRP, ST ATHAN (MOD, 2008)**

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The above survey was undertaken and reported by Dr T. P. Young on behalf of the Ministry of Defence in 2008. Only the areas of interest to this scheme will be discussed, which includes Area 3 (Bro Tathan North) and Area 4 (Bro Tathan West and East, as well as Beggars Pound and West Orchard Area). Survey on Area 3 revealed a high volume of disturbance and intrusion of buried services, and the author suggests that the area contains “no sites of known pre-20<sup>th</sup> century archaeological interest” (Young, 2008). It was further noted that the geophysical survey did not reveal any “potential sites of archaeological interest in areas 3 and 4” (ibid).

#### **DEFENCE TECHNICAL COLLEGE AND AEROSPACE BUSINESS PARK, ST ATHAN (WESSEX ARCHAEOLOGY, 2009)**

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Archaeological evaluation was undertaken at in five areas of Bro Tathan: Batslays, Picketston, Waycock Cross, Tremains Farm and land within MoD St Athan by Wessex Archaeology in 2009 for Entec UK acting on behalf of Metrix Ltd, Welsh Assembly Government and the Ministry of Defence. This work was undertaken in advance of a proposed planning application for a major redevelopment of land in and around MoD St Athan. The land of primary concern to this method statement is that within MoD St Athan (close to the Church of St Brise) and Batslays. 71 trenches were excavated at Batslays, with archaeological features recorded in thirty-three trenches, with evidence dating to the early Prehistoric, late Iron Age, Romano-British, medieval and Modern periods, as well as several undated features. Eight evaluation trenches were opened in close relation to the Church of St Brise, with six out of the eight trenches revealing archaeological features dating to the medieval, Post-medieval, Industrial and Modern periods (Wessex Archaeology, 2009).

#### **LAND AT ST JOHN’S WELL (HEADLAND ARCHAEOLOGY, 2010)**

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Both geophysical survey and trial trenched evaluation were undertaken on this site. Headland Archaeology were commissioned by the Environmental Dimension Partnership (EDP) in 2010, in support of a planning application for a new housing development. Six 35m by 1.8m wide trial trenches were machine excavated but no archaeological features were identified. Field boundaries previously identified by the geophysical survey were not evident below the survey (Glamorgan-Gwent Archaeological Trust, 2023a).

#### **ST ATHAN NORTHERN ACCESS ROAD (AECOM, 2017)**

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In 2017, AECOM were commissioned by the Welsh Government to prepare a Desk-Based Assessment in connection with the St Athan Northern Access Road. This report assessed an inner study area of 500m either side of the route, as well as a wider 2km area. No sites were identified within the footprint of the proposed road (Glamorgan-Gwent Archaeological Trust, 2023b).

### **EGLWYS BREWIS (BRO TATHAN WEST) (HEADLAND ARCHAEOLOGY, 2019)**

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Both geophysical survey and trial trenched evaluation were undertaken on this site by Headland Archaeology in 2019 for WYG on behalf of the Welsh Government. This work was undertaken in advance of the construction of a new access road and new airside operational facilities (Headland Archaeology, 2019a). The geophysical survey revealed evidence of two possible archaeological anomalies noted as “*two parallel L-shaped low magnitude anomalies located in the south-west corner of Area 1*” (ibid). The results of the geophysical survey were investigated by trial trenched evaluation. Headland Archaeology suggested that these two anomalies were potentially “*associated with land enclosure [or] agricultural use of the land*”, as well as two further ditches that were not visible on the geophysical survey (Headland Archaeology, 2019b). No dateable material was recovered during the evaluation.

### **BEGGARS POUND (HEADLAND ARCHAEOLOGY, 2020)**

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Geophysical survey was undertaken at Beggars Pound by Headland Archaeology in 2020 for WYG on behalf of Welsh Government. The work was undertaken in advance of the construction of a new class B1 office floorspace and associated access route and parking. The site was located to the south-east of RAF St Athan and is bounded by Rectory Road to the east and hangars to the north. The survey did not reveal any anomalies considered to be an archaeological origin and deemed the site to have a low archaeological potential (Headland Archaeology, 2020).

### **BRO TATHAN NORTH/ PICKETSTON (HEADLAND ARCHAEOLOGY, 2022)**

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Geophysical survey was undertaken by Headland Archaeology in 2022 for Tetra Tech on behalf of Burroughs on land in consideration for potential development. The site is a piece of land to the north of the Northern Access Road in Picketston. The survey revealed high magnitude readings that presumably relates to the remains of airfield infrastructure and/ or the use of the land as an airfield in the modern period. No anomalies of an archaeological potential have been recorded and it is suggested that “*the 20<sup>th</sup> century airfield activity is likely to have destroyed or truncated any features pre-dating [its construction]*” (Headland Archaeology, 2022).

### **BRO TATHAN EAST (SUMO, 2022)**

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Further evaluation in the form of geophysical survey was undertaken on the area known as East Camp for Red River Archaeology on behalf of the Welsh Government. The survey was requested to provide the client with understanding of the archaeological potential on the site prior to redevelopment. The survey revealed a number of magnetic responses that correspond with features dating to World War II, as well as to later episodes of development. Other anomalies that correspond to footpaths, buildings and car parks known from aerial photography and historic mapping were also identified (SUMO, 2023).

### **BRO TATHAN EAST (RED RIVER ARCHAEOLOGY, 2023)**

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Red River Archaeology were commissioned in 2023 by Tetra Tech on behalf of the Welsh Government to undertake trial trenched evaluation to investigate anomalies identified by the above geophysical survey. No significant archaeological remains were revealed; however, a probable WWII structure and two post-war structures were encountered alongside other Modern remains and a non-archaeological feature.

## 6.0 METHODOLOGY

The works outlined in this MS include a year-long programme of trenching (approximately 20km) around the Bro Tathan site to install and/or replace utilities and services. The proposed route of the installation can be seen in Appendix B.

All appropriate groundworks will be carried out under the supervision of a suitably experienced archaeologist and archaeological features will be investigated in line with the methodology outlined below and in accordance with the two aforementioned written schemes of investigation for an archaeological watching brief and for archaeological trial trenching. The project management team - Burroughs - will be responsible for identifying the locations of the trenches for service installation, which will be monitored by the appointed archaeologist in accordance with this Method Statement and the attendant WSI.

Within the area of works close to West Orchard Manor House (SM GM083), the archaeological contractor will be responsible for identifying the locations of evaluation trenches in accordance with this Method Statement and set out on using a Survey Graded GPS system. The final locations of the trenches are anticipated to be confirmed on site, with factors such as the location of previously unknown services and ground conditions influencing the location of evaluation trenches. These positions are likely to be confirmed following engagement with Cadw.

The methodology for the archaeological watching brief should be read in conjunction with the constraints mapping presented in Appendix C. The constraint mapping has been created by utilising known archaeological assets and the results of previous archaeological evaluation.

### **GREEN AREAS:**

There are six separate areas identified as having negligible/low archaeological potential as a result of truncation or disturbance due to prior development or the results of previous archaeological evaluation.

Additionally, the proposed placement area of the substation within the confines of Aston Martin Lagonda (AML) site is deemed to have low archaeological potential. This area has been fully assessed during the construction of the AML and as such, does not require archaeological monitoring during its installation. No adverse effects are anticipated from these works, as the site has recently undergone development, with attendant archaeological works. In addition, potential adverse effects to the setting of the church will be reduced by distance from the church and by backdrop formed by the existing factory which will minimise potential adverse effects on setting.

Subsequently, it is believed that these areas do not require archaeological monitoring. Justification for each area can be found below:

#### **G1**

This area in the north of Bro Tathan, also known as Picketston, is deemed to have very little archaeological potential. Previous construction and subsequent demolition of development within this area is highly likely to have truncated any archaeology. Additionally, geophysical survey here revealed no archaeological anomalies, with high magnitude readings presumably relating to the remains of airfield infrastructure and/or the use of the land as an airfield in the Modern period.

#### **G2**

This area lies along the Northern Access Road. The construction of this road is presumed to have truncated or removed any remaining archaeology. A Desk-Based Assessment undertaken here in 2017 by AECOM assessed 500m either side of the route, as well as a wider 2km area were assessed. There were no sites found within the footprint of the proposed road.

### **G3**

This part of the site is known as Bro Tathan West and this area has been significantly developed since the origins of the site in the mid-20<sup>th</sup> century. As a result of development, it is considered highly likely that much of any archaeology previously present on site has been removed or significantly truncated. Previous geophysical survey here in 2008 suggested that no anomalies were of an archaeological nature. The proposed route lies within close relation to present buildings and subsequently it is not likely to encounter any archaeology.

### **G4**

This area is known as Batslays. As with other areas of the site, this has been developed and it is highly likely that any archaeological remains here have been removed or largely truncated. Archaeological evaluation in this area revealed evidence dating to the early Prehistoric, late Iron Age, Romano-British, medieval and Modern periods, as well as several undated features; however, this material was all focused to the east of this site (labelled as R5), with very little evidence of significance extending into this section which has subsequently been labelled as G4.

### **G5**

This area is also known as Beggars Pound. As with other areas of the site, this has been developed on and it is highly likely that any archaeological remains here have been removed or largely truncated. Archaeological evaluation in this area did not reveal any deposits considered to be of archaeological origin and deemed the site to have a low archaeological potential. The proposed route lies within close relation to present buildings and subsequently it is not likely to encounter any archaeology.

### **G6**

This area lies within Bro Tathan East. This part of the base has been heavily developed and re-developed over time. Many of the buildings and associated air raid shelters have now been demolished. As a result of development, any archaeological remains are highly likely to have been truncated or removed. Previous evaluation here in 2022 revealed evidence only of Modern structures dating from World War Two onwards. No other archaeological remains were encountered.

In the event that archaeological remains are recovered, the contractor should contact Tetra Tech as the archaeological consultant, in the first instance, who will then decide on the correct strategy moving forward.

### **ORANGE AREAS:**

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There are two areas identified as having a moderate archaeological potential. These areas have been determined based on known archaeological and heritage assets within the areas, as well as the results of previous archaeological evaluation.

It is proposed that these areas should be fully monitored by archaeological watching brief, as appropriate; however, the detailed requirements be determined based on placement of the trenches and the potential for pre-existing disturbance. Justification for each area can be found below:

## **O1**

This section of land to the south-east of the Bro Tathan site is located close to the Grade II Listed Batslays Farmhouse (13299). As a result, there is identified potential for archaeological evidence to remain around the building and, as such, in the area to be impacted by the proposed route. Despite this identified potential, the construction of the railway toward the southern edge of the site may have truncated or removed archaeological remains. As a result, there is deemed to be moderate potential for archaeological remains to be present here.

## **O2**

This small area is located within the west of Bro Tathan. Although the area is located within a significantly developed part of the site, some archaeological potential is identified here due to the identification of two magnetic anomalies potentially “*associated with land enclosure [or] agricultural use of the land*”, as well as two further ditches that were not visible on the geophysical survey. As a result, there is a moderate potential for archaeological remains to be present here.

## **RED AREAS:**

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There are five areas identified as having high archaeological potential. Potential has been determined based on either the results of previous evaluation that have encountered archaeological remains, or the proposed route of service trenches across ground with no identified prior disturbance.

As a result, these areas should have the presence of an archaeologist to monitor all works under a watching brief. Justification for each area can be found below:

## **R1**

This section of land surrounding the Grade II\* Listed Church of St Brise (13142) is an area of known archaeological potential. This potential includes possible graves and the location of the former Rectory building, as well as archaeology associated with the church. Archaeological evaluation trenches were opened in close proximity to the Church of St Brise, with six out of the eight trenches revealing archaeological features dating to the medieval, post-medieval, Industrial and Modern periods. As a result, there is high potential for archaeological remains to be present in this area.

## **R2**

This section of land in Bro Tathan West is relatively undisturbed by either development or archaeological evaluation. Additionally, it lies in close relation to identified archaeology such in the form of the Grade II Listed Bethesda'r Fro Chapel (13242), its associated boundary walls and Fishersbridge Farmstead (GGAT06606s). As a result, there is moderate to high potential for archaeological remains to be present in this area.

## **R3**

Both aerial photography and historic mapping indicate that this part of Bro Tathan remains completely undisturbed from the time prior to the construction of the RAF station. As a result, there is considered to be high potential for archaeological remains to be present.

## **R4**

Aerial photography and historic mapping indicate that the proposed route of utilities in this area of Bro Tathan remains relatively undisturbed. Additionally, this lies in close relation to the Grade II listed Batslays Farmhouse (13299). As a result, there is high potential identified for archaeological remains to be present in this area.

#### **R5**

This section of the proposed route runs alongside undisturbed land around St John's Valley, as well as a section of land to the south-west of the Scheduled West Orchard Manor House (GM083) where there is known archaeology present. Previous evaluation in this area by Wessex Archaeology in 2010 recorded evidence dating to the early Prehistoric, late Iron Age, Romano-British, medieval and Modern periods, as well as several undated features. Additionally, the land around St John's Valley has not seen extensive archaeological evaluation but it borders the Scheduled Monument of West Orchard Manor House (GM083). As a result of the above, this area is deemed to have high potential for archaeological remains to be present.

#### **RED HATCHED AREA:**

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There is a single red hatched area on the constraints plan that signifies the area around West Orchard Manor House (GM83). This area has been identified for the trial trenched archaeological evaluation, which is a condition of Scheduled Monument Consent.

## 7.0 MONITORING AND EXCAVATION STRATEGIES

### 7.1 ARCHAEOLOGICAL MONITORING

Suitably qualified and experienced archaeologists will be in attendance during all groundworks within the areas highlighted above and shown on Figure 1.

Topsoil and subsoil will be carefully removed by a tracked mechanical excavator fitted with a toothless (flat bladed) bucket, under the close supervision of an archaeologist at a ratio of one archaeologist to each excavating machine. Where necessary, for example, areas of hardstanding, modern levelling layers, and similar rubble, a toothed bucket may be used to break modern, hardened surfaces but the toothless bucket should be employed as soon as is practicable. All machine work will cease if significant archaeological features are identified. Mechanical excavators and other construction plant will not track or drive over an area that has been excavated until an archaeologist has confirmed that no archaeological remains are present, or that recording is complete.

Excavation will cease at the uppermost horizon of any archaeological remains, where these are revealed. Excavation will not commence until any identified archaeological features or deposits have been recorded in line with the sampling strategy outlined in Sections 6.5-6.7. In the event that unexpectedly significant or complex remains are identified, the scope of the WSI should be reviewed in line with the sections below.

If no features/finds are revealed, supervised excavation will continue until either natural geology or the base of the excavation is reached, whichever comes first. When the archaeologist is satisfied that any remains found have been adequately recorded or preserved in situ, or the groundworks are devoid of archaeological features or finds, no further monitoring will be required. There will be no requirement for archaeological supervision during subsequent backfilling.

#### EXCAVATION AND SAMPLING STRATEGY

Excavation and sampling strategies will be proportionate to the archaeological significance of the features identified and be sufficient to mitigate harm to the archaeological record and reasonably record and characterise features.

Should the archaeologist on site determine that the remains are significant, they should contact Tetra Tech to resolve the issue in line with the contingency procedure in Sections below.

Any artefacts will be retained for processing, other than obviously modern (late 20th century) material. Suitable samples for dating should be taken if encountered during the investigation. All retained artefacts shall be removed from the site for specialist examination and analysis and, if deemed necessary, conservation. Cleaning of objects may take place on site, or upon removal as is deemed appropriate. All recording, cleaning, storage, and conservation of finds will be in accordance with ClfA guidance (ClfA 2014b) and Watkinson and Neal (1997).



## 7.2 EXCAVATION STRATEGY

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Due to the proposed route of the utilities and services installation across the West Orchard Manor House (GM083) the project management team at Burroughs has engaged with Cadw and sought Scheduled Monument Consent for the proposed works in this area. Dr Jon Berry (Cadw) has requested that this monument should be subject to trial trenched evaluation to ensure that “*no scheduled archaeological remains are in the way of [the] proposed services or harmed [by the proposed works]*”.

This section of the route will be dealt with in a dedicated Written Scheme of Investigation for Archaeological Evaluation that should be read in conjunction with this document. This investigative work is highly likely to be a condition of Scheduled Monument Consent.

### EXCAVATION AND SAMPLING STRATEGY

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All works will be undertaken in accordance with the methodology set out below and in compliance with the standards outlined in the Chartered Institute for Archaeologists Standard and Guidance for Archaeological Excavation (2014).

The archaeological contractor will be responsible for the fencing and signage of open trenches and spoil heaps during the project. The archaeological contractor must provide or ensure there are suitable welfare facilities available.

Services location plan have been obtained from the client, identifying buried services. Service location plans should not be taken as exhaustive and appropriate precautions should be adopted with regard to potentially unmapped services. The trenches must be scanned by an archaeologist trained in the use of a cable avoidance tool prior to excavation commencing.

Overburden and subsoils will be stripped mechanically using an appropriately sized excavator fitted with a toothless grading bucket. All machining will stop at the first significant archaeological horizon, or natural substrate where no archaeology is present. The topsoil and subsoil will be separated and stockpiled at a safe working distance from the trench sides. Where there are compacted modern, made ground deposits which cannot be removed with a flat-bladed bucket, a toothed bucket may be used, with excavation reverting to a flat-bladed bucket as soon as practicable.

The archaeological contractor will be required to shore or step excavation areas as appropriate to allow the aims of the evaluation to be achieved without compromising health and safety. The archaeological contractor may be required to use a water pump in the event of flooded trenches.

A sufficient sample of any archaeological features and deposits revealed will be hand excavated in an archaeologically controlled and stratigraphic manner, in order to establish their extent, form, date, function and relationship to other features. Excavation and sampling strategies will be proportionate to the archaeological significance of the features identified and be sufficient to mitigate harm to the archaeological record and reasonably record and characterise features.

The following sampling strategy is recommended, however, should the archaeologist on site believe that this should be varied due to the specific circumstances of the identified remains then they should contact Tetra Tech to resolve the issue in line with the contingency procedure in the Strategy Review:

- 50% of all intrusive, non-structural features (pits, isolated postholes). Up to 50% (by number) to be then fully excavated following assessment;

- 10% of each linear feature's exposed area, plus all terminals and intersections to define relationships;
- 50% of structural features (beam slots, ring ditches), 75% investigation of debris areas, collapsed structures, walls. All structurally associated postholes to be 1/2 sectioned then fully excavated;
- Built structures, such as walls, will be examined and sampled to a degree whereby their extent, form, date, function and relationship to other features and deposits can be established;
- 50% domestic/industrial working features (hearths, ovens). Such features are to be sampled for archaeomagnetic dating as standard if appropriate (this applies to any in-situ burnt features unless agreed otherwise following on site discussion); and

These percentages should be used as a guide and taken on a feature-by-feature basis.

All artefacts will be retained for processing except for unstratified 20th century material which will be noted and discarded. Suitable samples for dating should be taken if encountered during the investigation. All retained artefacts shall be removed from the site for specialist examination and analysis and, if deemed necessary, conservation. Cleaning of objects may take place on site, or upon removal as is deemed appropriate. All recording, cleaning, storage, and conservation of finds will be in accordance with the Chartered Institute for Archaeologists Standards and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials (2014) and Watkinson and Neal (1997).

## **HUMAN REMAINS AND TREASURE**

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If human remains are encountered, their excavation and lifting will be undertaken under licence from the Ministry of Justice and comply with the requirements of the 1857 Burial Act. If required, provision should be made for specialist reports on the remains by a recognised osteoarchaeologist. Excavation and reordering of articulated human remains will be carried out in accordance with ClfA and BABAO guidelines (2017). Should articulated human remains and in situ burials be found, all relevant groundwork will cease immediately and consultation between the client, Tetra Tech and GGAT will be carried out as outlined in Sections above. The requirement for a Ministry of Justice Licence applies to both inhumation and cremated remains.

The terms of the Treasure Act 1996 will be followed as regards to any finds that might fall within its purview. Any finds must be removed and to a safe place and reported to the local coroner as required by the procedures as laid down in the Treasure Act Code of Practice 2002. Where removal cannot be on the same working day as the discovery, suitable security measures must be taken to protect the find(s) from theft. Objects defined as treasure under the Act, must be reported to the local coroner.

## **ENVIRONMENTAL SAMPLING STRATEGY**

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Deposits which are identified as having the potential for the survival of biological remains should be sampled. Bulk samples must be taken from all securely stratified deposits using a strategy which combines systematic and judgement sampling, but which follows good practice guidance. Historic England's Environmental Archaeology: a Guide to the Theory and Practice of Method, from Sampling and Recovery to Post-excavation (Second Edition) should also be adhered to (Historic England, 2011).

## **CONTINGENCIES AND UNEXPECTED SIGNIFICANT OR COMPLEX DISCOVERIES**

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Should unexpectedly extensive or complex archaeological remains be uncovered; work will cease in the immediate area and the scope of the project design should be reviewed to determine the most appropriate recording and sampling strategy. Should this be required, the locations and extent of additional excavation will be agreed by all parties on site.

In the event of a review of the written scheme of investigation being required, the contractor will urgently contact the client or their consultant (if applicable) with the relevant information to enable them to resolve the matter with the client and the Glamorgan-Gwent Archaeological Trust. This will require an on-site meeting between the relevant stakeholders to review the archaeological remains on site and identify a way forward.

Any variations to the written scheme of investigation will be put in writing and agreed by the relevant stakeholders including the client and the contractor.

## **STRATEGY REVIEW**

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The strategy will be held under continuous review during on-site archaeological monitoring. Should the strategy be considered unsuitable by the contractor, then an alternative strategy will be proposed. This strategy will be communicated to the client in the first instance and agreed by all parties subject to the procedure in the above sections.

# **8.0 POST-EXCAVATION, REPORTING AND ARCHIVING**

## **POST-EXCAVATION**

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Upon completion of fieldwork, all retained artefacts will be assessed and recorded using pro forma recording sheets, by suitably qualified and experienced staff. Initial artefact dating will be integrated with the site matrix (finds of 19<sup>th</sup> and 20<sup>th</sup> century date should be noted, quantified, and summarily described, but can then be discarded if appropriate). The potential for further analysis of artefacts will be assessed.

All retained environmental samples will be processed by suitably experienced and qualified staff and recorded using pro forma recording sheets, to identify at this stage the presence or absence of environmental remains and the potential for further analysis.

## **REPORTING**

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A preliminary report on the excavation shall be required within one week of the completion of the fieldwork. This will comprise a written summary of any key findings of the exercise and initial interpretation of the any remains encountered and their potential significance. This report will be supported by drawings and photographs as necessary.

A full report on the excavation shall be required within four weeks of the completion of the fieldwork, unless there are significantly complex remains. The report shall be prepared in accordance with ClfA guidelines. As a minimum the report shall contain the following information:

- A title page, with the name of the project, the name of the contractor and author(s) of the report, the title of the report and date of the report and grid reference;
- A non-technical summary of the findings;
- A description of and a background to the nature of the works, including dates of fieldwork;
- A brief description of the site location (including grid references) and any previously known archaeology in the survey area;
- Description of the methodology employed and explanation of any agreed variations to the brief and justification for any analyses not undertaken;
- The results of the excavations identified by location including post-excavation analysis of the stratigraphic and other written, drawn and photographic records;
- A catalogue and brief post-excavation analysis of each category of artefact recovered during excavation and the results of biological samples, including the potential for further analysis;
- Discussion of the excavation results including site phasing and interpretation and discussion of the results within the local and regional context;
- A summary of the contents of the project archive and its location;
- References and bibliography of all sources used; and
- An appendix containing a list and summary descriptions of all contexts recorded.

The report will be supported by an overall plan of any archaeological remains, indicating the location of archaeological features and individual plans of features or groups as excavated, with supporting section drawings where appropriate.

The report will be supported by general site photographs to place the area and any archaeological features encountered within context. The report will also include colour photographs of any identified archaeological features and artefacts.

The report will outline the archaeological significance of any deposits identified. The report will provide an interpretation of the results in relation to other sites in the region and make reference to other known archaeological sites in the close vicinity of the site. Once any further phases of archaeological excavation or monitoring have been completed, all post-excavation data will be drawn together and a more complete, single synthesis report will be produced for works across the entire site.

Copies of the final report should be produced and submitted to:

- Tetra Tech (digital copies, report and data);
- Glamorgan-Gwent Archaeological Trust Historic Environment Record (HER) in PDF;
- the Royal Commission on the Ancient and Historical Monuments of Wales; and
- Digital GIS shapefiles and /or AutoCAD format files of the survey results should also be made available to the Glamorgan-Gwent Archaeological Trust HER.

## ARCHIVE DEPOSITION

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The archaeological contractor should liaise with National Museum of Wales to establish the detailed requirements of the recipient museum and discuss archive transfer in advance of fieldwork commencing. It is recommended that the specific requirements of the museum are confirmed with the curator prior to deposition.

The archive will be prepared in accordance with the guidelines published in Brown (2007), *Archaeological Archives a Guide to Best Practice in Creation, Compilation, Transfer and Curation*, and ClfA (2014) *Standard and Guidance for the Creation, Compilation, Transfer, The National Standard and guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales* (2017) and should adhere to the requirements of the National Museum. Any digital data arising from the project should also be undertaken in a manner consistent with professional standards and guidance (Richards and Robinson, 2000). The *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* should also be adhered to. A digital copy of the archive should be sent to the Royal Commission on the Ancient and Historical Monuments of Wales and should adhere to their guidelines *RCAHMW Guidelines for Digital Archives* (2015).

The archaeological contractor should also liaise with the Sites and Monuments Record Officer, to make arrangements for digital information arising from the project to be submitted to the Glamorgan-Gwent Archaeological Trust HER for HER enhancement purposes and the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW). This should include the submission of all digital data generated, which may include but may not be limited to: CAD files, GIS files, geophysics results and photographs. All digitised survey information should be geo-referenced to the Ordnance Survey and should also be provided to the client.

## PUBLICATION

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If the archaeological fieldwork produces particularly significant results that would merit publication, allowance should be made for the provision and publication of a summary of the results in a local or national journal, as appropriate and subject to the agreement of the client.

## 9.0 CONTRACTOR AND STAFFING

A specialist archaeological contractor, who is a registered organisation with ClfA will undertake the archaeological monitoring. The archaeological contractor appointed for the trial trenching will be approved by Cadw.

The appointed sub-contractor should submit a project design to GGAT and Cadw for approval prior to the commencement of both the archaeological monitoring and the trial trenched evaluation. At the request of Cadw, a method statement will be written prior to the commencement of trial trenched evaluation to detail arrangements of vehicle movement, arrangements of storage facilities for architectural pieces and archaeological finds and to detail the locations of spoil storage away from the Scheduled Monument.

## 10.0 HEALTH AND SAFETY

Health and Safety concerns will always take priority over archaeological matters. All archaeologists undertaking fieldwork must comply with all Health and Safety Legislation. All archaeologists or archaeological organisations undertaking the fieldwork should ensure that they, or any proposed sub-contractors, are appropriately qualified and adequately insured to undertake such projects.

## 11.0 MONITORING

The works are anticipated to take place in Summer 2023. It is anticipated that the overall programme will approximately take 1 year to undertake 20km of trenching for the installation of utilities and services. The services of the archaeological sub-contractor will be intermittent within this year in order to monitor the areas highlighted within this WSI and within the Method Statement.

A programme for monitoring the fieldwork will be agreed in advance of the commencement of fieldwork. The Glamorgan-Gwent Archaeological Trust will receive as much notice as possible of the intention to start fieldwork confirmed in writing.

The representatives of the Glamorgan-Gwent Archaeological Trust and Tetra Tech will be afforded access to the site at any reasonable time. The representative will be provided with a site tour and an overview of the site by the senior archaeologist present and should be afforded the opportunity to view all open areas, any finds made that are still on site, and any records not in immediate use.

## 12.0 COPYRIGHT

Under the Copyright, Designs and Patents Act 1988, all material and supporting data generated by this contract shall be passed to the client unless and except where such material or data is existing material or data acquired from a third party. In the latter case, the contractor will supply details of data sources, a description of what the data shows, the terms under which the material or data was acquired, and wherever possible, a contact name and address.

Copyright in the documentation prepared by the archaeological contractor and any specialist sub-contractors should be the subject of additional licences in favour of the repository accepting the archive and Glamorgan-Gwent Archaeological Trust to use such documentation for their statutory and educational functions, and to provide copies to third parties as an incidental to such functions.

Under the Environmental Information Regulations 2005 (EIR), information submitted to the HER becomes publicly accessible, except where disclosure might lead to environmental damage, and reports cannot be embargoed as 'confidential' or 'commercially sensitive'.

Requests for sensitive information are subject to a public interest test, and if this is met, then the information has to be disclosed. The archaeological contractor should inform the client of EIR requirements and ensure that any information disclosure issues are resolved before completion of the work. Intellectual property rights are not affected by the EIR.

## 13.0 RESOLUTION OF ISSUES

In the event of issues arising regarding the implementation of this specification or the scope of the excavation, these will be resolved in the first instance by contacting Tetra Tech who will facilitate a resolution through contact with the key stakeholders. Should the issue not be resolved remotely, a meeting will be held between key stakeholders to facilitate discussion of the issues and identification of a suitable strategy to be agreed by all parties.

In the event of any dispute arising out of this Agreement (including those considered as such by only one of the parties) either party may forthwith give to the other notice in writing of such a dispute or difference and the same shall be and is hereby referred for decision in accordance with the Rules of the Chartered Institute of Arbitrators' Arbitration scheme for the Chartered Institute for Archaeologists applying at the date of this Agreement (Chartered Institute for Archaeologists, 2019).

## REFERENCES

### LEGISLATION, POLICIES, STANDARDS AND GUIDANCE DOCUMENTS

- Chartered Institute for Archaeologists (CIfA), (2022). *Code of Conduct*. Reading: University of Reading.
- Brown, D.H. (2007) *Archaeological Archives A Guide To Best Practice In Creation, Compilation, Transfer and Curation*
- Chartered Institute for Archaeologists (CIfA) (2014a) *Code of Conduct*. Reading: University of Reading.
- Chartered Institute for Archaeologists (2014b) Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives
- Chartered Institute for Archaeologists. (2014c) Standard and guidance for the collection, documentation, conservation and research of archaeological materials
- Chartered Institute for Archaeologists (2014d). Standard and guidance for an archaeological field evaluation.
- Glamorgan-Gwent Archaeological Trust (2018) *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)*. [online] available at: <http://www.ggat.org.uk/her/downloads/Guidance%20for%20the%20Submission%20of%20Data%20to%20Welsh%20HERs.pdf> [Accessed 27<sup>th</sup> June 2023]
- Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) *Guidelines for Digital Archives* (2015) [online] Available at: <https://rcahmw.gov.uk/wp-content/uploads/2016/09/RCAHMW-Guidelines-for-Digital-Archives.pdf> [Accessed January 2021]
- Watkin, D. and Neal, V. (1997) *First aid for finds: practical guide for archaeologists*. Rescue and United Kingdom Institute for Conservation Archaeology Section, 3rd Edition

### Bibliography

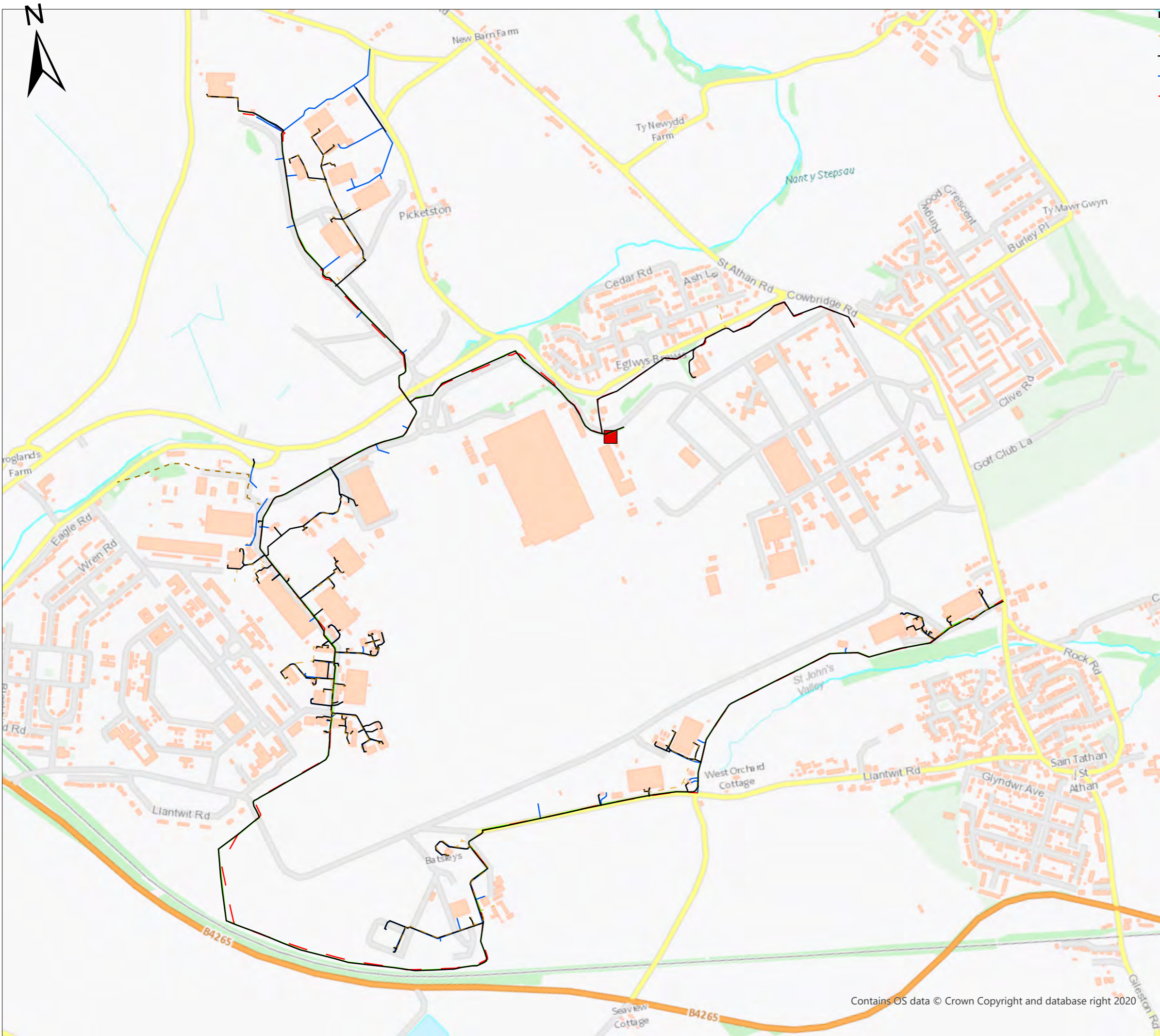
- Cadw (2023) *Scheduled Monument Report: West Orchard Manor House*. Available at: <https://cadwpublic-api.azurewebsites.net/reports/sam/FullReport?lang=&id=989> [Accessed 28<sup>th</sup> June 2023]
- Cotswold Archaeology (2008) *Batslays, RAF St Athan, RAF St Athan: Archaeological Evaluation*, s.l.: s.n
- Cotswold Archaeology (2008) *Unit 415, Beggars Pound, RAF St Athan: Archaeological Evaluation*, s.l.: s.n
- Cranfield University (2023). *Cranfield Soil and Agrifood Institute: Soilscales Map*. [online] Available at: <http://www.landis.org.uk/soilscales/> [Accessed 27<sup>th</sup> June 2023].
- Headland Archaeology (2019) *Bro Tathan, Eglwys-Brewis: Geophysical Survey*, s.l.: s.n
- Headland Archaeology (2019) *Land at Bro Tathan, Eglwys-Brewis: Archaeological Evaluation*, s.l.: s.n
- Glamorgan-Gwent Archaeological Trust (2023a) *Land at St John's Well, St Athan*. Available at: <https://archwilio.org.uk/her/chi3/report/page.php?watprn=GGATE003959&dbname=ggat&tbnam=e=event&sessid=CHI3dhd3gae&queryid=Q768128001690362188> [Accessed 26<sup>th</sup> July 2023]



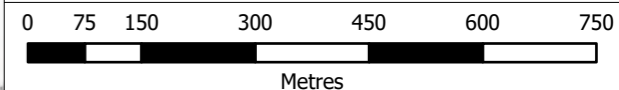
- Glamorgan-Gwent Archaeological Trust (2023b) *St Athan Northern Access Road*. Available at: <https://archwilio.org.uk/her/chi3/report/page.php?watprn=GGATE006015&dbname=ggat&tbnam e=event&sessid=CHI3dhd3gae&queryid=Q118169001690362795> [Accessed 26<sup>th</sup> July 2023]
- Natural Environment Research Council (NERC) (2023), . 2019. *British Geological Survey Map*. [online] Available at: <<<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>>> [Accessed 28<sup>th</sup> June 2023].
- Red River Archaeology (2023) *Bro Tathan East: Archaeological Evaluation*, s.l.: s.n
- Red River Archaeology (2023) *Bro Tathan East: Archaeological Watching Brief*, s.l.: s.n
- SUMO Geophysics (2022) *Bro Tathan East: Geophysical Survey Report*, s.l.: s.n
- Tetra Tech (2021) *Bro Tathan Area 9: Archaeological Assessment*, s.l.: s.n
- Tetra Tech (2022) *Bro Tathan East Archaeological and Heritage Desk-Based Assessment*, s.l.: s.n
- Wessex Archaeology (2009) *Defence Technical College and Aerospace Business Park, St Athan, Glamorgan*, s.l.: s.n
- WYG (2019) *Beggar's Pound Archaeological Desk-Based Assessment*, s.l.: s.n
- WYG (2019) *Eglwys-Brewis, Bro Tathan, Archaeological and Heritage Desk-Based Assessment*, s.l.: s.n
- WYG (2020) *Picketston, Bro Tathan, BV Giga Factory Archaeological and Heritage Desk-Based Assessment*, s.l.: s.n.
- WYG (2020) *Site Wide Bro Tathan Archaeological and Heritage Desk-Based Assessment*, s.l.: s.n
- Young, Dr T.P. (2008) *Interim Report on the EM38 Magnetic Susceptibility Survey with recommendations for the initial phase 2 magnetometer surveys: DTRP, St Athan*, s.l.: s.n

## APPENDICES

**APPENDIX A – SITE LOCATION AND INSTALLATION ROUTE PLAN**



- Legend**
- Proposed Low Voltage Cable Network
  - Proposed Spare Ducting Network
  - Proposed Potable Water Network
  - Proposed High Voltage Cable Network (11V)
  - Proposed Comms Network
  - - - Proposed Foul Water Network Diversion
  - - - Proposed Gas Network Diversion AML
  - Proposed Substation



<b>LH</b> Created:	<b>MB</b> Checked:	<b>July 2023</b> Date:	<b>v2</b> Version:
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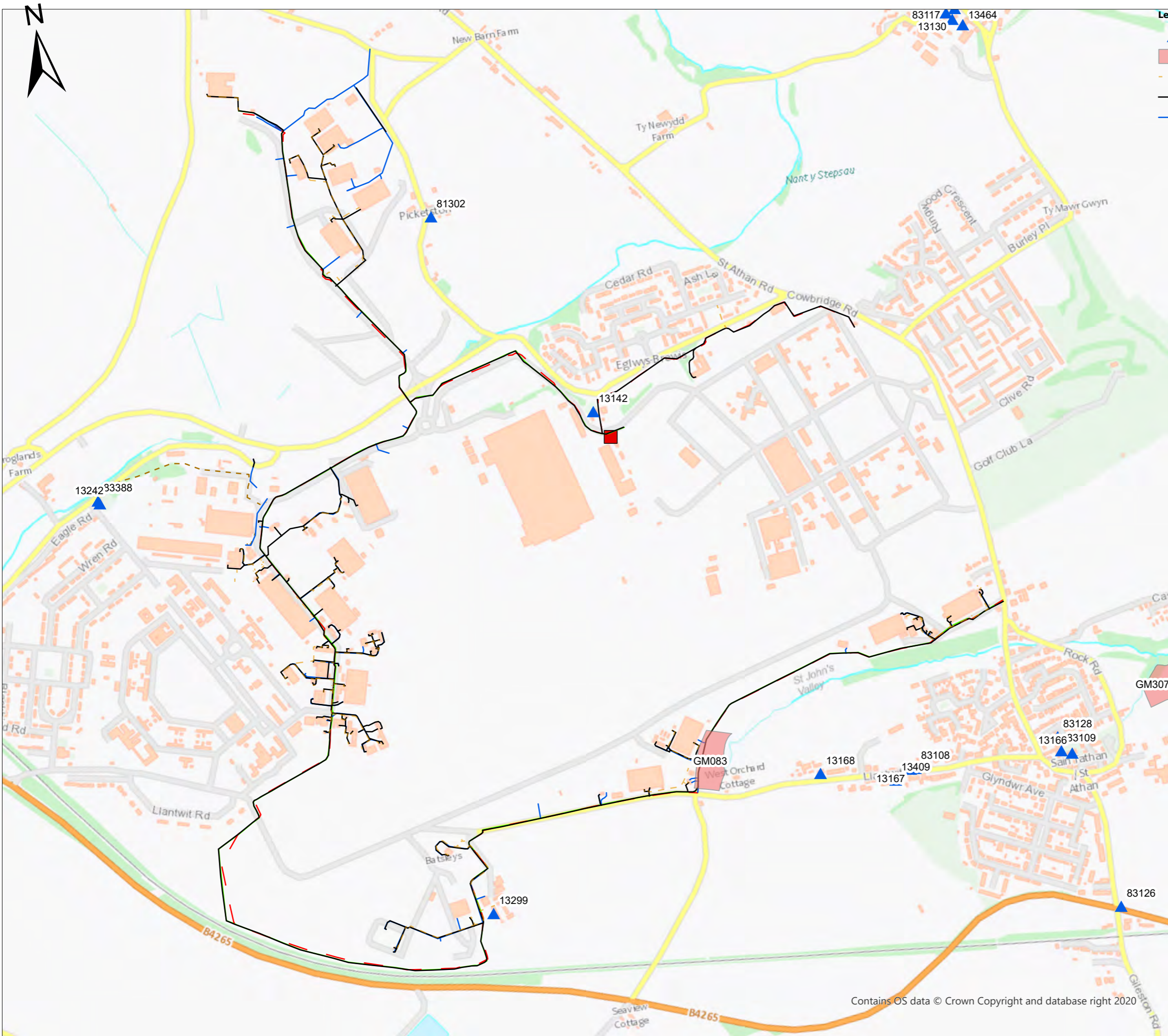
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Title: **Site Location and Proposed Route of Utilities**

Office: <b>4154</b>	Project No: <b>784-B048494</b>	Figure No: <b>1</b>
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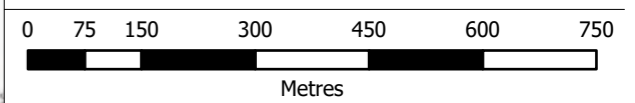
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## APPENDIX B – ARCHAEOLOGICAL ASSETS



**Legend**

- ▲ Listed\_Buildings
- Scheduled\_Monuments
- Proposed Low Voltage Cable Network
- Proposed Spare Ducting Network
- Proposed Potable Water Network
- Proposed High Voltage Cable Network (11kV)
- Proposed Comms Network
- Proposed Foul Water Network Diversion
- Proposed Gas Network Diversion AML
- Proposed Substation



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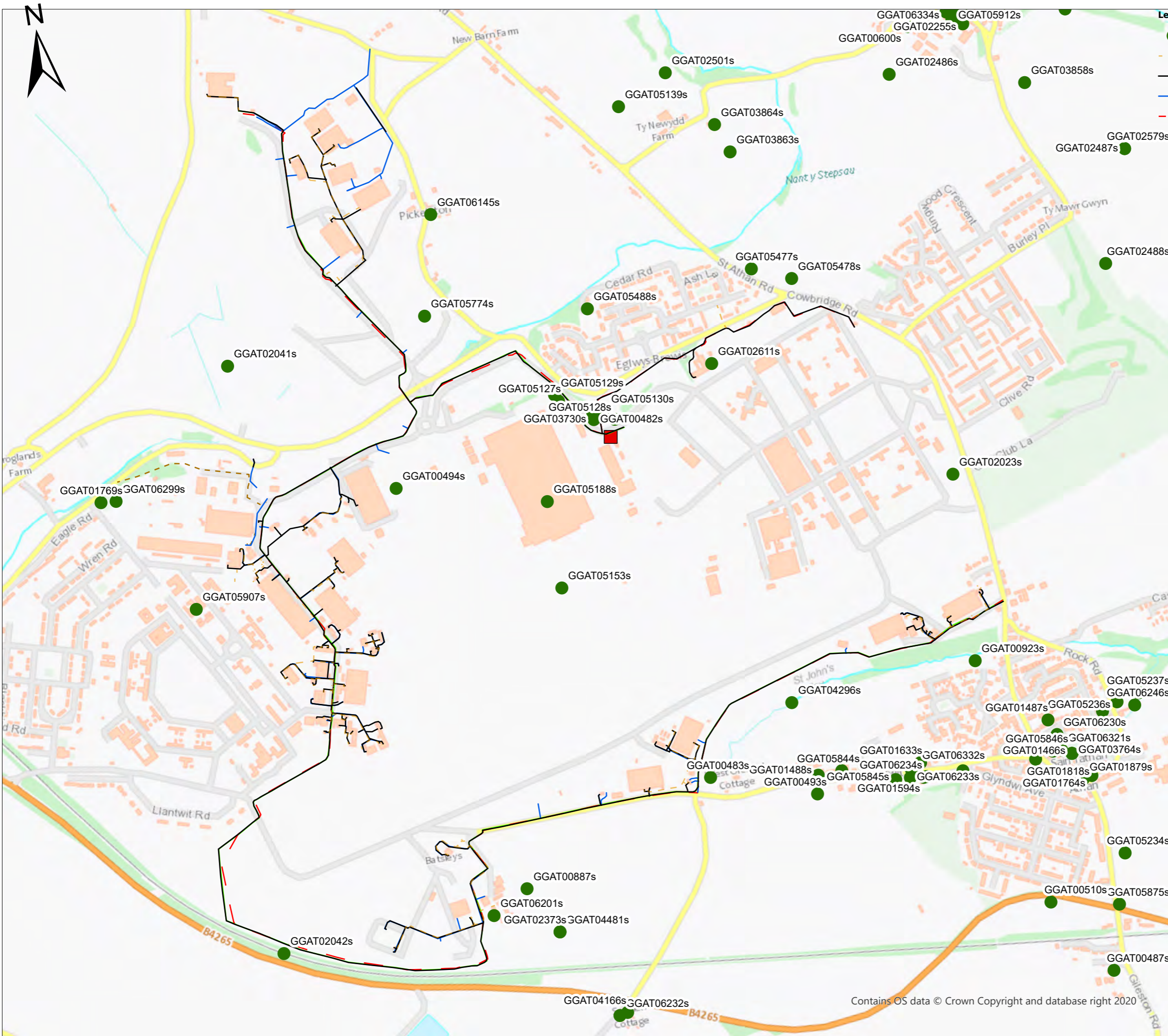
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Project: **Bro Tathan Utilities Upgrade**

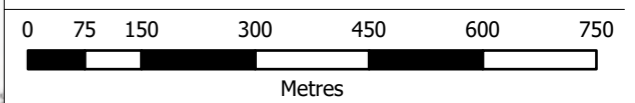
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Office: <b>4154</b>	Project No: <b>784-B048494</b>	Figure No: <b>2</b>
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- Legend**
- HER\_Core
  - Proposed Low Voltage Cable Network
  - Proposed Spare Ducting Network
  - Proposed Potable Water Network
  - Proposed High Voltage Cable Network (11V)
  - Proposed Comms Network
  - Proposed Foul Water Network Diversion
  - Proposed Gas Network Diversion AML
  - Proposed Substation



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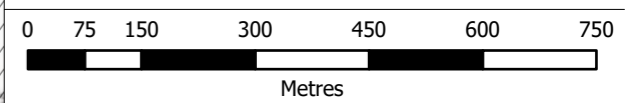
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Office: <b>4154</b>	Project No: <b>784-B048494</b>	Figure No: <b>3</b>
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- Legend**
- Northern Access Road Evaluation
  - St John's Well Evaluation
  - MOD St Athan Trenches 2009
  - Batslavs Trenches 2009
  - Batslavs Trenches 2008
  - Unit 415, Beggars Pound Trenches 2008
  - Picketston Geophysical Survey 2022
  - Beggars' Pound Geophysical Survey Area 2020
  - Mod Geophysical Survey 2008
  - Area of Archaeological Monitoring- Watching Brief Condition-in the hands of the contractor on site
  - Bro Tathan Airfield Trenches 2019
  - Eglwys-Brewis Geophysical Survey 2019
  - East Trial Trenched Evaluation Trenches 2023
  - East Geophysical Survey Area 2023
  - Proposed Low Voltage Cable Network
  - Proposed Spare Ducting Network
  - Proposed Potable Water Network



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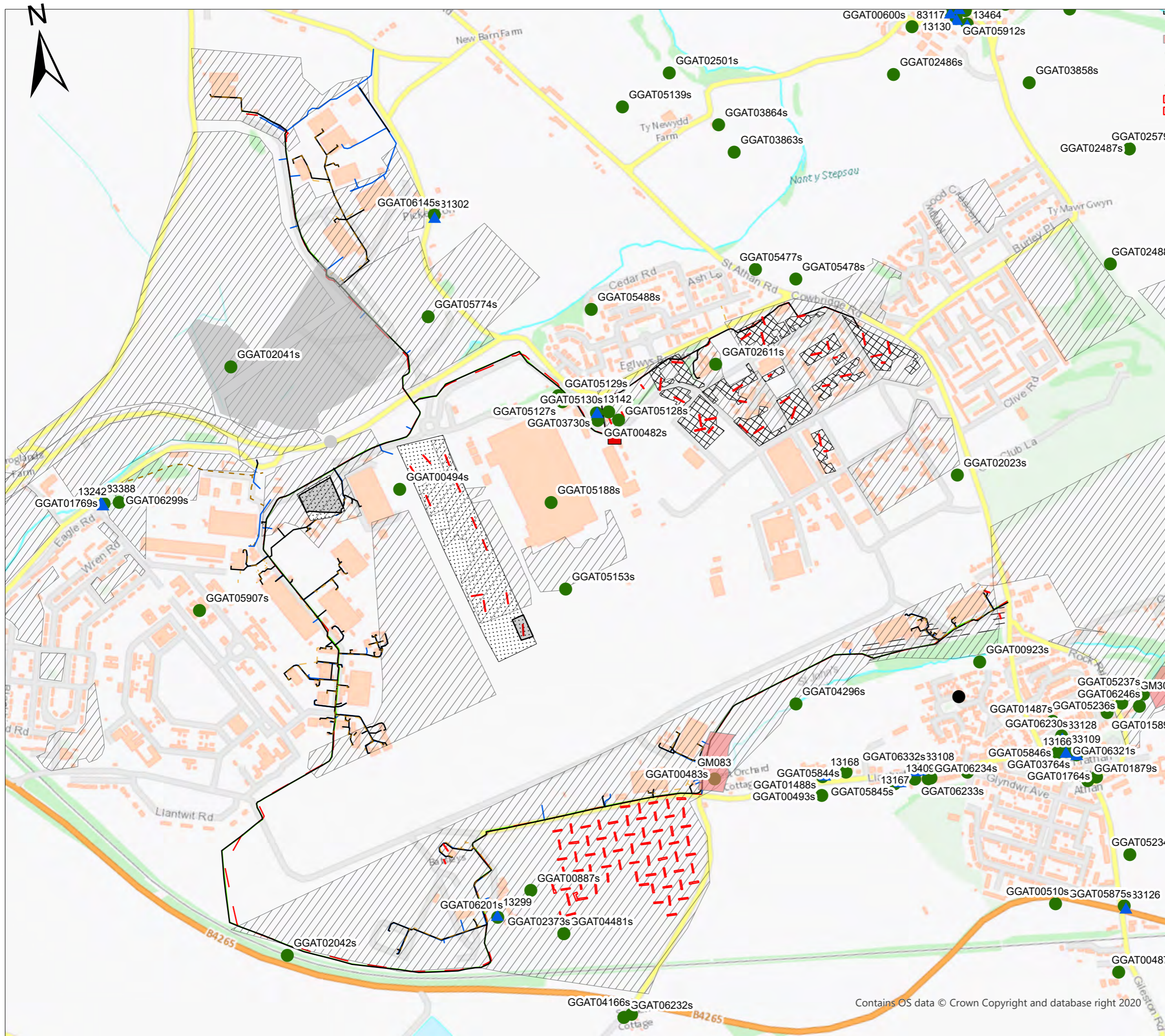
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Title: **Previous Archaeological Evaluation**

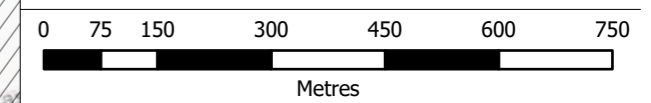
Office: <b>4154</b>	Project No: <b>784-B048494</b>	Figure No: <b>4</b>
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- Legend**
- Listed Buildings
  - Scheduled Monuments
  - HER Core
  - Northern Access Road Evaluation
  - St John's Well Evaluation
  - MOD St Athan Trenches 2009
  - Batlays Trenches 2009
  - Batlays Trenches 2008
  - Unit 415, Beggars Pound Trenches 2008
  - Picketston Geophysical Survey 2022
  - Beggar's Pound Geophysical Survey Area 2020
  - Mod Geophysical Survey 2008
  - Area of Archaeological Monitoring- Watching Brief Condition-in the hands of the contractor on site
  - Bro Tathan Airfield Trenches 2019
  - Eglwys-Brewis Geophysical Survey 2019
  - East Trial Trenched Evaluation Trenches 2023



<b>LH</b> Created:	<b>MB</b> Checked:	<b>July 2023</b> Date:	<b>V2</b> Version:
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Client: **Welsh Ministers**

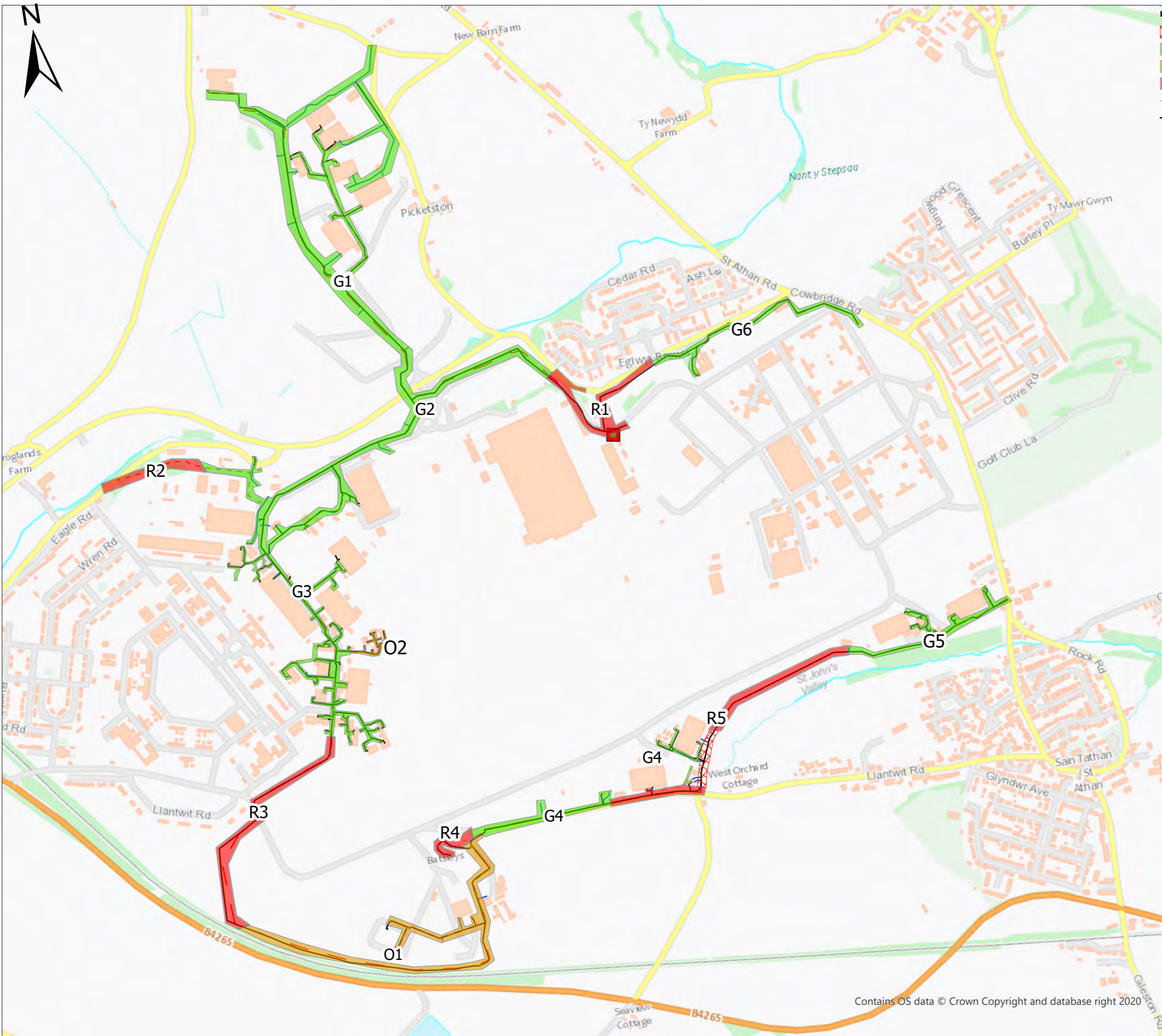
Project: **Bro Tathan Utilities Upgrade**

Title: **Previous Archaeological Evaluation and Known Assets**

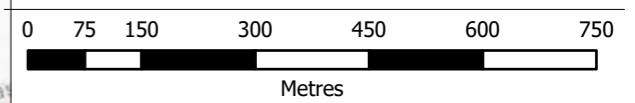
Office: <b>4154</b>	Project No: <b>784-B048494</b>	Figure No: <b>5</b>
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## APPENDIX C – CONSTRAINTS MAP



- Legend**
- Area for Trial Trenching
  - Low Archaeological Potential
  - Moderate Archaeological Potential
  - High Archaeological Potential
  - Proposed Low Voltage Cable Network
  - Proposed Spare Ducting Network
  - Proposed Potable Water Network
  - Proposed High Voltage Cable Network (11V)
  - Proposed Comms Network
  - Proposed Foul Water Network Diversion
  - Proposed Gas Network Diversion AML
  - Proposed Substation



<b>LH</b> Created:	<b>MB</b> Checked:	<b>July 2023</b> Date:	<b>v2</b> Version:
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Client: **Welsh Ministers**

Project: **Bro Tathan Utilities Upgrade**

Title: **Constraints Mapping**

Office: <b>4154</b>	Project No: <b>784-B048494</b>	Figure No: <b>6</b>
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## APPENDIX D – REPORT CONDITIONS

### **Archaeological Scoping and Method Statement, Bro Tathan Utilities and Services Installation**

This report is produced solely for the benefit of the Welsh Government and no liability is accepted for any reliance placed on it by any other party unless specifically agreed by us in writing.

This report is prepared for the proposed uses stated in the report and should not be relied upon for other purposes unless specifically agreed by us in writing. In time technological advances, improved practices, fresh information or amended legislation may necessitate a re-assessment. Opinions and information provided in this report are on the basis of Tetra Tech using reasonable skill and care in the preparation of the report.

This report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times.

This report is limited to those aspects reported on, within the scope and limits agreed with the client under our appointment. It is necessarily restricted and no liability is accepted for any other aspect. It is based on the information sources indicated in the report. Some of the opinions are based on unconfirmed data and information and are presented accordingly within the scope for this report.

Reliance has been placed on the documents and information supplied to Tetra Tech by others, no independent verification of these has been made by Tetra Tech and no warranty is given on them. No liability is accepted or warranty given in relation to the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report.

Whilst reasonable skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal, budget and weather related conditions.

Although care is taken to select monitoring and survey periods that are typical of the environmental conditions being measured, within the overall reporting programme constraints, measured conditions may not be fully representative of the actual conditions. Any predictive or modelling work, undertaken as part of the commission will be subject to limitations including the representativeness of data used by the model and the assumptions inherent within the approach used. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions.

The potential influence of our assessment and report on other aspects of any development or future planning requires evaluation by other involved parties.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

July 2023- Tetra Tech Limited