

**Proposed Development at No 72 The Close,
Portskewett, Monmouthshire (DM/2020/00521)**

Archaeological Watching Brief

Written Scheme of Historic Environment Mitigation

Prepared for

Mr Ben Knight

23rd August 2023

Report No. 307



**- BLACK MOUNTAINS ARCHAEOLOGY -
- ARCHAEOLEG MYNYDD DU -**

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Crynodeb/Summary

Comisiynwyd Archeoleg Mynydd Du Cyf gan Mr Ben Knight i lunio Cynllun Ysgrifenedig ar gyfer Lliniaru Amgylchedd Hanesyddol (WSHEM), yn manylu ar y gofynion ar gyfer briff gwyllo archeolegol i'w gynnal cyn datblygiad arfaethedig yn Rhif 72 The Close, Porth Sgiwed, Sir Fynwy, NP26 5SN. Bydd y datblygiad arfaethedig yn cynnwys codi annedd tri llawr a gwaith daear cysylltiedig (DM/2020/00521). Bydd yr annedd arfaethedig wedi'i lleoli ar lain ardd siâp afreolaidd yn ffinio â phrif eiddo Rhif 72 The Close i'r dwyrain.

Argymhellodd cynghorwyr archeolegol yr ACLI (GGAT) y dylid cymhwyso rhaglen o liniaru archeolegol, ar ffurf briff gwyllo, i'r datblygiad arfaethedig, ac y dylid ysgrifennu WSHEM yn nodi'r gofynion ar gyfer y briff gwyllo. Argymhellwyd y rhaglen hon o liniaru archeolegol oherwydd presenoldeb yr ardal ddatblygu o fewn 50m i Heneb Gofrestredig Harold's House (SMMm029).

Gan ei fod wedi'i leoli yng nghyffiniau Heneb Gofrestredig Harold's House (SMMm029), mae gan y briff gwyllo'r potensial i ddod ar draws nodweddion archeolegol, dyddodion neu arteffactau o'r cyfnod canoloesol sy'n gysylltiedig â'r cyfadeilad o adeiladau y gwyddys eu bod wedi meddiannu'r heneb o ganol y dref. 11eg ganrif. Mae gan y briff gwyllo hefyd y potensial i ddod ar draws nodweddion archeolegol, dyddodion ac arteffactau o'r cyfnod Ôl-ganoloesol sy'n gysylltiedig â gweithgaredd amaethyddol sydd yn yr ardal ar hyn o bryd.

Mae'r adroddiad presennol yn nodi'r gofynion ar gyfer briff gwyllo archeolegol yn unol â 'Archaeologists' Standard and Guidance for an Archaeological Watching Brief' gan y Chartered Institute for Archaeologists (cyhoeddwyd 2014, diwygiedwyd 2020).

Black Mountains Archaeology Ltd have been commissioned by Mr Ben Knight to compile a Written Scheme of Historic Environment Mitigation (WSHEM), detailing the requirements for an archaeological watching brief to be conducted in advance of a proposed development at No 72 The Close, Portskewett, Monmouthshire, NP26 5SN. The proposed development will involve the erection of a two-storey dwelling and associated groundworks (DM/2020/00521). The proposed dwelling will be situated on an irregularly shaped garden plot adjoining the main property of No 72 The Close to the east.

The archaeological advisers to the LPA (GGAT) recommended that a programme of archaeological mitigation, in the form of a watching brief, be applied to the proposed development, and that a WSHEM should be written detailing the requirements for the watching brief. This programme of archaeological mitigation was recommended due to the presence of the development area within 50m of the Harold's House Scheduled Monument (SMMm029).

In being situated within the vicinity of the Scheduled Monument of Harold's House (SMMm029), the watching brief has the potential to encounter archaeological features, deposits or artefacts of medieval date associated with the complex of buildings known to have occupied the monument from the mid-11th century. The watching brief also has the potential to encounter archaeological features, deposits and artefacts of Post-medieval date associated with agricultural activity that have the area at this time.

The present report sets out the requirement for an archaeological watching brief in accordance with the Chartered Institute of Archaeologists' Standard and Guidance for an Archaeological Watching Brief (published 2014, revised 2020).

Acknowledgements and Copyright

The project is managed by Richard Lewis BA FSA MCIfA. The report, Welsh translations and Figure 1 were compiled by Dr Rhys Morgan PhD. The author would like to thank Mr Ben Knight for his cooperation. The copyright of this report is held by Black Mountains Archaeology Ltd, who have granted an exclusive licence to Mr Ben Knight and his agents, enabling them to use and reproduce the material it contains. Figure 2 was reproduced with the kind permission of Mr Ben Knight. Ordnance Survey maps are reproduced under licence 100058761. Black Mountains Archaeology Ltd retains copyright of any annotations.

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1 Introduction

1.1 Project Background and Proposals

- 1.1.1 Black Mountains Archaeology Ltd/*Archeoleg Mynydd Du Cyf* have been commissioned by Mr Ben Knight to compile a *Written Scheme of Historic Environment Mitigation* (WSHEM), detailing the requirements for an archaeological watching brief to be conducted in advance of a proposed development at No 72 The Close, Portskewett, Monmouthshire, NP26 5SN (Figure 1). The proposed development will involve the erection of a two-storey dwelling and associated groundworks (DM/2020/00521) (Figure 2). The proposed dwelling will be situated on an irregularly shaped garden plot adjoining the main property of No 72 The Close to the east.
- 1.1.2 Prior to the submission of planning application DM/2020/00521, three other applications were submitted to the LPA that related to the present development area. These included applications for the proposed erection of two semi detached dwellings (DM/2020/00521), which was withdrawn; another application detailing a similar development (DM/2018/01784), which was rejected; and an appeal to the latter application (APP/E6840/A/19/3224618).
- 1.1.3 The archaeological advisers to the LPA (GGAT) recommended that a programme of archaeological mitigation, in the form of a watching brief, be applied to the proposed development, and that a WSHEM should be written detailing the requirements for the watching brief. This programme of archaeological mitigation was recommended due to the presence of the development area within 50m of the Harold's House Scheduled Monument (SMMm029). In their consultation (MON2438/RD), GGAT state:
- "No development shall take place until the applicant, or their agents or successors in title, has secured agreement for a written scheme of historic environment mitigation which has been submitted by the applicant and approved by the local planning authority. Thereafter, the programme of work will be fully carried out in accordance with the requirements and standards of the written scheme.*
- "Reason: To identify and record any features of archaeological interest discovered during the works, in order to mitigate the impact of the works on the archaeological resource."*
- 1.1.4 The present report sets out the requirement for an archaeological watching brief in accordance with the Chartered Institute of Archaeologists' *Standard and Guidance for an Archaeological Watching Brief* (published 2014, revised 2020).

2 Background

2.1 History and Archaeology

2.1.1 Gwent Levels

- 2.1.2 The proposed development is situated approximately 0.5km north of the Gwent Levels Historic Landscape of Outstanding Historic Interest in Wales (HLW(Gt)2), which is detailed by Cadw and ICOMOS (1998). The Gwent Levels can be broadly divided into

three areas, all of which comprise alluvial wetlands and/or intertidal mudflats positioned towards the northern shores of the Severn Estuary. The two largest levels are Wentlooge to the west and Caldicot to the east, which are situated, in respective order, between the Rhymney and Ebbw Rivers and between the River Usk and Sudbrook. Yet the Gwent Levels are also characterised by more diminutive regions of alluvium, including the areas of Cardiff West, Leckwith and Penarth Moors; Cardiff East and Pengam Moors; the Mendalgief Level; and the St Pierre and Mathern Levels. The stratigraphy of the Gwent Levels has witnessed extensive archaeological study, which has included analyses of the buried archaeological deposits that make up both the Wentlooge (e.g. Allen and Fulford 1986; Fulford *et al* 1994; Locock 1999) and Caldicot Levels (e.g. Locke 1971; Allen and Haslett 2002; Locock 1998), as well as the Severn Estuary more broadly (e.g. Allen 1985; 2001; Bell 2013; Rippon 1997). The proposed development is situated within the vicinity of the Caldicot Level. Overall, the Gwent Levels are renowned as an artificial, 'hand crafter' landscape, that were formed via continual efforts to reclaim the land from the sea since the Roman periods, via drainage, enclosure, and the construction of sea walls. Such episodes of reclamation were, however, interspersed with inundation events, where flood defences failed due to lack of maintenance. The archaeological deposits that define the Gwent Levels are varied, ranging from Mesolithic footprints and campsites (Aldhouse-Green *et al* 1993) and Bronze Age houses and trackways (Bell 2013) to Roman and medieval sea walls (Allen and Fulford 1986; Locock 1998) and Post-medieval industrial sites.

2.1.3 Site Specific

2.1.4 Prehistoric

2.1.5 The earliest recorded archaeology within the vicinity of the proposed development are of Neolithic date and are concentrated on the site of Heston Brake Long Barrow (SMMm018), to the east of Portskewett. The monument was included in Daniel's famous survey of prehistoric chamber tombs in England and Wales (1950, 159), who recorded it Heston Bank as possessing an 'untransepted gallery' form. Archaeology of Bronze Age date is known in the area, which mainly comprises hunting/fishing sites, monrtuary monuments and isolated flint tools. The most notable Bronze Age site in the area is situated to the northwest, at Caldicot Castle, where the remains of a wooden fish trap were recorded, which was situated in a palaeochannel connected to the River Nedern. To the southeast, near Southbrook, an Early Bronze Age barbed and tanged flint arrowhead was found (Savory 1954, 50).

2.1.6 The broad area of Caldicot is also defined by Iron Age settlement. To the southeast, along the northern shores of the Severn Estuary, are the remains of the Iron Age hillfort of Sudbrook Camp (SMMm048). Wiggins (2006, 4) has stated that it is unlikely that the hillfort existed in isolation and was probably surrounded by other settlement sites that have long since eroded. On the northern edge of Caldicot are the remains of an Iron Age settlement at the present-day site of Woodland Cottages, the occupation of which continued into the Roman period.

2.1.7 Roman

2.1.8 The proposed development is situated within a rather rich Roman landscape that comprised roads and small-scale settlements, industrial and agricultural sites and cemeteries. To the south is the postulated route of a spur road, which diverted towards the Severn Crossing (RR60aa), from the main route running from Caerleon to the River Wye (RR60a). The road was included in Margary's comprehensive study of Roman Roads in Britain (1957, 56). The Roman settlement at Woodland Cottages has been mentioned above, which continued to be inhabited during the Roman period. To the north of Portskewett, on Portskewett Hill, was a more substantial settlement site (SMMm019). The site comprised a sizeable building complex within which high-status, Samian ware pottery was found along with some evidence of ironworking. Immediately east of the proposed development, near Sudbrook Road, another Roman settlement site was recorded. Remains of the settlement comprised pits, gullies, shallows banks and walls, along with considerable quantities of pottery (Dunning and Howell 2005, 17). On the north end of Portskewett, at Crick Lane, a potential agricultural site was recorded, which consisted of a series of pits. Caldicot to the west represented a notable pottery production site during the Roman period. At least five kilns have been recorded within this area, all comprising the sub-circular updraught type. Also situated in Caldicot were the remains cremation burials.

2.1.9 Medieval

2.1.10 The most significant medieval site near the proposed development is Harold's House monument (SMMm029), situated approximately 50m to the east. The monument comprises the remains of a hunting lodge thought to have belonged to Harold Godwinson, the King of Anglo Saxon England during the mid-11th century. The lodge was mentioned in the *Anglo Saxon Chronicles*, in which it is stated that the lodge was destroyed during its construction by the forces Caradog ap Guffydd in 1065. In addition to destroying the lodge, it is also stated that Caradog killed all the workmen and labourers, as well as all the servants inside. It is likely that the attack by Caradog on Harold's property was provoked by his exile from England in 1063 (Davies 2016, 54). An archaeological field evaluation was undertaken on the monument in 2007 by Time Team, during which no evidence of a hunting lodge was uncovered. The structures discovered during the evaluation post-dated the Norman Conquest and comprised a pair of buildings, which were interpreted as a tower house and an animal shelter (Thompson and Birbeck 2010).

2.1.11 On the north edge of Harold's House (SMMm029) is the medieval Church of St Mary (LB2044). The nave of the church was constructed during the Norman period, yet the chancel is likely of 14th century date, while the tower and porch are probably of 16th century date. The Norman chancel is plain in form and includes arches built from impost blocks. Situated within the churchyard to the north is St Mary's Cross (SMMm315), which is highly ornate in form. The precise date of the cross is not known, although it is potentially Norman in date and therefore contemporary with the Church of St Mary. Within the vicinity of the churchyard a small series of medieval ditches

were excavated during an archaeological field evaluation, while the footings of a medieval wall were also recorded.

2.1.12 Throughout the medieval period, Portskewett formed part of the St Pierre Estate, which centred on the manor house at Runston. However, it seems the area of Portskewett failed to comprise a settlement proper and could instead be described as a 'hardwick' or cattle ranch, with adjoining hunting grounds.

2.1.13 Post-medieval

2.1.14 By at least the 17th century, the area of Portskewett had developed into a small settlement, mainly comprising a small collection of dispersed farmsteads centring on the Church of St Mary. During this time, a rectory was constructed near Crick Road, to the northwest of the church, while a nursery garden was established on the north side of Caldicot Road. Within the vicinity of the rectory, Manor Farmhouse was constructed by at least the 17th century. The house, which now comprises a Grade II* Listed Building (LB2768), comprises a three-celled cross-passage house. On the site of Harold's House, three small buildings were erected, which were perhaps associated with the Church of St Mary nearby. Small-scale industrial activity also characterised the settlement of Portskewett, particularly along its outskirts. To the north, for example, are the sites of at least two lime kilns, while near Sudbrook to the south are the remains of a watermill. Ironstone mining is also known to have taken place in areas surrounding the settlement. By the 19th century, the population of Portskewett witnessed significant decline and by the middle of the century the settlement contained under 200 inhabitants. From at least this time, the area now occupied by The Close was bounded towards the south and east by a reën, which was itself connected to a pond towards the north end of what is now Manor Way, and to a far larger network of reëns to the south.

2.1.15 Modern

2.1.16 Within the churchyard of St Mary's, a war memorial (LB24004) was erected in around 1920, which commemorated the fallen soldiers of WWI. The memorial was built using grey granite ashlar and in form comprises an obelisk set on a plinth. To the south of here, a pillbox was constructed during WWII

2.1.17 Previous Investigations

2.1.18 Black Mountains Archaeology Ltd undertook an archaeological watching brief at The Close, Portskewett, Monmouthshire on 24th August 2023 for National Grid Electricity Distribution (South Wales). The watching brief monitored groundworks associated with erection of a single steel pole, situated within a garden plot on the east end of No 72 The Close, within 50m of the Harold's House Scheduled Monument (SMMm029). The watching brief did not identify any significant archaeological features, deposits, or artefacts.

3 Location, Topography and Geology

- 3.1.1 The proposed development area comprised the garden attached to the eastern side of the main property of No 72 The Close, Portskewett, Monmouthshire, NP26 5SN (NGR ST 49698 88042) (Figure 1). The garden consists of an irregularly shaped plot of land positioned towards the juncture of The Close to the west and Manor Way to the east. The property of No 72 is a semi-detached dwelling, which adjoins No 71 to the west.
- 3.1.2 Topographically, Portskewett is situated in an area of lowland at approximately 10mOD within the vicinity of the Caldicot Level, on the northern shore of the Severn Estuary. Portskewett is also overlooked from the north by a small area of upland, which sits at approximately 45mOD, on the southern hillslopes of which is Leechpool. Immediately west of the Portskewett is the Lower Nedern Valley, which separates Portskewett from Caldicot to the west.
- 3.1.3 The superficial geological layers within the area generally comprise river terrace deposits of sands and gravels, formed between 2.588 million years ago and the present during the Quaternary period. The underlying bedrock comprises sandstone of the Mercia Mustone Group, which formed between 252.2 and 201.3 million years ago during the Triassic period (BGS 2023).

4 Objectives

- 4.1.1 The definition of an archaeological **watching brief** as set out by the Chartered Institute for Archaeologists (CIfA) is a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive.
- 4.1.2 The purpose of an archaeological watching brief as defined CIfA (published 2014, revised 2020) is:
- to allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works.
 - to provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard.
- 4.1.3 A watching brief is not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

- 4.1.4 The objective of a watching brief is to establish and make available information about the archaeological resource existing on a site.
- 4.1.5 (Chartered Institute for Archaeologists' Standard and Guidance for an Archaeological Watching Brief, published 2014, revised 2020)
- 4.1.6 The Research Framework for Wales sets out the knowledge base of past research and sets out a rationale for future studies (<https://www.archaeoleg.org.uk/index.html>). The present investigations will be undertaken considering the key themes and where there are limitations in current knowledge, particularly where the present investigations can enhance our understanding of some of these key areas.

5 Legislative Framework

- 5.1.1 Planning legislation is set out in the *Town and Country Planning Act 1990*. *Planning Policy Wales* (PPW 11th Edition) sets out the land use planning policies of the Welsh Government. Chapter 6 sets out the Welsh Government's policy towards the historic environment. It states "*The planning system must take into account the Welsh Government's objectives to protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations. The historic environment is a finite, non-renewable and shared resource and a vital and integral part of the historical and cultural identity of Wales. It contributes to economic vitality and culture, civic pride, local distinctiveness and the quality of Welsh life. The historic environment can only be maintained as a resource for future generations if the individual historic assets are protected and conserved. Cadw's published Conservation Principles highlights the need to base decisions on an understanding of the impact a proposal may have on the significance of an historic asset.*" (PPW 2021, 126).
- 5.1.2 Underpinning PPW are a series of legislative powers and TANs. The *Planning (Wales) Act 2015* sets out a series of legislative changes to deliver reform of the planning system in Wales, to ensure that it is fair, resilient and enables development. The 2015 Act also introduces a mandatory requirement to undertake pre-application consultation for certain types of development. The *Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016* defines in *Schedule 4(I)* the parameters and definitions for the requirement of pre-application consultation by Welsh Ministers, particularly in response to the effect of statutory designated monuments, buildings, and parks and gardens.
- 5.1.3 Advice on archaeology and buildings in the planning process was contained in *Welsh Office Circulars 60/96, 1/98 and 61/96*. Following adoption of the *TAN 24 Historic Environment* on 31st May 2017, *Welsh Office Circulars 60/96, 1/98 and 61/96* have been cancelled.
- 5.1.4 Any works affecting an ancient monument and its setting are protected through implementation of the *Ancient Monument and Archaeological Areas Act 1979*. In

Wales the 1979 Act has been strengthened by *The Historic Environment (Wales) Act 2016*. The 2016 Act makes important improvements for the protection and management of the Welsh historic environment. It also stands at the centre of an integrated package of secondary legislation (Annexes 1-6), new and updated planning policy and advice, and best-practice guidance on a wide range of topics (*TAN 24 Historic Environment*). Taken together, these will support and promote the careful management of change in the historic environment in accordance with current conservation philosophy and practice.

- 5.1.5 The *Ancient Monument and Archaeological Areas Act 1979* and *The Historic Environment (Wales) Act 2016* sets out a presumption in favour of preservation *in-situ* concerning sites and monuments of national importance (scheduled/listed), and there exists in the current *Planning Policy Wales (Chapter 6)* a presumption in favour of preservation *in-situ* of all types of heritage assets.

6 Scope

- 6.1.1 The archaeological watching brief will monitor all ground penetrating works associated with the erection of the two-storey dwelling within the garden of No 72 The Close, Portskewett, Monmouthshire, NP26 5SN (DM/2020/00521) (Figure 1).
- 6.1.2 In being situated within the vicinity of the Scheduled Monument of Harold's House (SMMm029), the watching brief has the potential to encounter archaeological features, deposits or artefacts of medieval date associated with the complex of buildings known to have occupied the monument from the mid-11th century. The watching brief also has the potential to encounter archaeological features, deposits and artefacts of Post-medieval date associated with agricultural activity that have the area at this time.
- 6.1.3 The watching brief will meet the standards of the Chartered Institute for Archaeologists' *Standard and Guidance for Archaeological Watching Briefs* (published 2014, revised 2020) and shall be undertaken on the specified groundworks likely to expose archaeological features, deposits and structures.
- 6.1.4 A watching brief involves the observation of groundworks by an archaeologist. These works may take several different forms and may include (but are not limited to) excavation or ground clearance.
- 6.1.5 An archaeological watching brief is a staged process, as outlined below.
- If archaeological features or deposits are revealed then the archaeologist will quickly record these with minimum interruption to the construction programme.
 - Should the discovery be more complex and require more time and resources then a programme that allows the archaeological discovery to be recorded/mitigated can be agreed on-site with the developer and archaeologist.
 - Should the archaeological discovery be of such a scale or complexity, or result in significant difficulties to the construction programme, then a meeting would have to be convened with the client and Cadw to agree an appropriate way forward for the

watching brief and the construction programme. This may include contingency arrangements for additional staff to be deployed. Contingency costs are beyond the scope of this specification and would need to be agreed in advance before any extension to the programme commences.

- 6.1.6 The contractors on site will need to allow the site archaeologist conducting the watching brief reasonable access to their works for the purpose of recording archaeological remains. No groundworks should be undertaken without the site archaeologist.
- 6.1.7 Should human remains be encountered, the nature and extent of those remains will be established and recorded, and the coroner, police, the client and Cadw will be informed. However, the remains will be left *in-situ*, with suitable measures in place to ensure their protection during backfilling.
- 6.1.8 Special circumstances may dictate the need to remove human remains. In such cases, contingency arrangements would need to be agreed. The human remains would be archaeologically recorded and removed under current professional guidelines and legislation, including the provision of exhumation licences and for eventual reburial following appropriate analysis. All human remains would be excavated by hand in accordance with the Chartered Institute for Archaeologists' *Professional Practice Paper No 7 Guidelines to the Standards for Recording Human Remains* (2004) and *Excavation and Post-Excavation Treatment of Cremated and Inhumed Human Remains: Technical Paper Number 13* (1993).

7 Programme

- 7.1.1 Black Mountains Archaeology Ltd is happy for its work to be monitored at any time during the programme of works by:
- The client and/or their representatives,
 - Cadw and/or their representatives,
 - The client,
 - The Chartered Institute for Archaeologists (CIfA) and/or their representatives,
 - Provided that:
 - Advance notice is provided for the monitoring visit,
 - Attendees fully observes site and Health & Safety rules,
 - Attendees cause no undue delay to the programme of works,
 - Attendees do not provide any instruction to vary the agreed works without prior consultation and agreement with all relevant parties,
 - Attendees have the appropriate academic and professional qualifications and relevant experience to comment on the archaeological works being undertaken, or in lieu of are attended by an appropriate specialist.
 - Attendees provide a written monitoring report in line with CIfA guidance, particularly *Para 1.69.3, Chartered Institute for Archaeologists (CIfA) Standard and*

guidance for archaeological advice by historic environment services (Published December 2014, updated June 2020). Monitoring reports should be provided within one week of the visit or in line with the organisation's monitoring policy.

7.2 Fieldwork

7.2.1 The archaeological watching brief will be conducted in accordance with the programme of works. The total requirement of the watching brief is entirely dependent upon this programme, however, where areas have been proved devoid or mitigated (recorded) of archaeological deposits and features then, with approval from the client, the watching brief will no longer apply to these areas.

7.3 Reporting

7.3.1 Depending on the extent of the archaeological programme and the required professional response (analysis and reporting), and provided no separate post-excavation programme is agreed, the watching brief report would usually be completed within four weeks of the cessation of fieldwork activities.

8 Fieldwork Methodology

8.1 Method of Recording

8.1.1 The archaeological recording techniques will conform to the best industry standard. All significant archaeological deposits will be recorded with a single continuous context numbering system pro forma. Contexts will be drawn at a suitable scale in plan and in section usually, but not always, 1:20 in plan and 1:10 in section. All significant contexts will be photographed in digital and the images archived in RAW or TIFF format. If relevant, excavated areas will be subjected to 3D photogrammetric recording in high resolution by 35mm equivalent 20mp, 1" sensor, 4k UHD camera, or a 35mm equivalent (24mm) camera with a 12mp 1/2.3" CMOS sensor and/or a terrestrial Canon EOS 650D DSLR camera with a 20mp CMOS sensor. All ground investigations will be tied into the Ordnance Survey National Grid and Datum using a GNSS/Glonass (GPS) Receiver and data logger with a <20mm tolerance. All photogrammetric 3D models will be produced using proprietary photogrammetry software and aligned using known ground control points (GCPs). Dimensional control will then be applied to each model and then reprocessed using the new parameters and optimised cameras to create dense point clouds and high face count meshes exported to OBJ format. Any high resolution orthographic renders (orthoplanes and orthomosaics) will be exported and scaled in georeferenced raster (TIFF and JPEG) format.

8.1.2 The use of photogrammetry in modern survey is rapidly evolving and as such there are a limited number of published standards and guidance documents available to help clients (commissioners of work) and surveyors maintain quality control. Historic England's *Photogrammetric Applications for Cultural Heritage Guidance for Good Practice* (published 2017) provides guidance on SfM techniques in relation to cultural heritage, particularly the photogrammetric recording of historic buildings and landscapes, and outputs (3D models, 2D topographical plans, building plans and

elevations etc). The principles of this guidance will be followed by any archaeologist undertaking the survey work.

- 8.1.3 The Survey Association have produced a series of handy guides to surveying with drones and photogrammetry. They are primarily aimed at other professionals such as engineers, architects, planners and clients in general. They are not intended to go 'in depth' into practical issues but to act as a basic guide on a particular topic and, in particular, on procedures and regulations which may govern how a particular aspect of the survey is carried out. Further information can be found here <https://www.tsa-uk.org.uk/downloads>.

8.2 Artefact Recovery and Recording

- 8.2.1 All items that may be subject to *The Treasure Act 1996* will be reported to the HM Coroner for the local area and Cadw.
- 8.2.2 All classes of finds will be retained (cleaned and catalogued) in appropriate conditions until arrangements for final deposition have been agreed, in line with the requirements of the Chartered Institute for Archaeologists' *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (published 2014, revised 2020). Ownership will be transferred to the institution receiving the archive unless other arrangements are agreed with Cadw.
- 8.2.3 If substantial quantities of undiagnostic, residual or modern material are recovered, an on-site recording and discard policy for these classes of find will be employed. However, sufficient material will be retained to understand the nature, date and function of the deposit from which it was recovered.
- 8.2.4 Specialist contingency artefact advice, analysis or conservation may be necessary during the course of the fieldwork or in post-excavation. The scope for such work would need to be agreed in advance with Cadw.

8.3 Sampling

- 8.3.1 Environmental recording and sampling will follow the principles Historic England's Guidelines for Environmental Archaeology (2011). All deposits will be assessed for high potential for the preservation of palaeoenvironmental material. Sampling of such deposits would be carried out by column, bulk etc, for subsequent analysis. In accordance with professional guidelines sampling and recording will be the responsibility of an identified member of the field team with relevant experience.

9 Post-excavation and Reporting

- 9.1.1 Following completion of the fieldwork programme all artefacts, ecofacts and samples will be processed, assessed, conserved and packaged in accordance with Chartered Institute for Archaeologists' *Standards and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (published 2014, revised 2020), and *Museums and Galleries Commission Standards in the Museum Care of Archaeological Collections* (1994). The archive of archaeological

records and artefacts will be prepared to the guidelines set out in Historic England's *Management of Archaeological Projects* (1991) Appendix 3 and if appropriate for the project the *Management of Research Projects in the Historic Environment MoRPHE* (2015).

- 9.1.2 Should a significant archaeological discovery be made and/or archive of artefacts and other materials be recovered, a formal post-excavation assessment will be undertaken following the completion of the fieldwork. A Post Excavation Research Design (PERD) will be prepared and submitted to the client. A full post-excavation analysis would be undertaken complete with final written report incorporating all of the evidence and material recovered during the watching brief. The report would consider all available archaeological and historical sources in order to place the results of the fieldwork in an appropriate archaeological and historical framework.
- 9.1.3 Should the outcome of the archaeological watching brief not warrant the formal post-excavation process, i.e. little or no archaeology was discovered and/or recorded, then a report on the watching brief would be produced to discharge professional obligations. However, the report would still assess the potential of any recovered evidence and then a programme of analysis and research would be undertaken (however brief) resulting in the preparation of a site narrative and supporting information, including finished drawings and photographs if required.
- 9.1.4 Subject to the landowner's permission the site archive, including all artefacts, ecofacts, samples and records will be deposited whole with a receiving institution (excepting any that may be subject to the Treasure Act 1996) in accordance with ClfA Guidelines (*Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation* (2011)). The final archive of records relating to the preparation of the reports will be prepared to Historic England's guidelines set out in the *Management of Archaeological Projects* (1991), Appendix 6, the *National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales* 2017 and if appropriate for the project the *Management of Research Projects in the Historic Environment MoRPHE* (2015).
- 9.1.5 A final report detailing the results of the work will be submitted when the fieldwork and post-excavation analysis process has been completed. The report and archive will conform to the professional standards as set out in section 3.4 of the Chartered Institute for Archaeologists' *Standard and Guidance for an Archaeological Watching Brief* (published 2014, revised 2020), as well as the *Guidance for the Submission of Data to the Welsh Historic Environmental Records* (HERs) (published 2018). A digital copy of the report and archive summary will be supplied to the client. Paper copies can be provided on request at a small cost.

9.2 Publication

- 9.2.1 As a minimum, and if appropriate, short summaries of the report should be submitted to the local CBA Journal or regional equivalent. Larger journal contributions should be

set according to the agreed post-excavation project design for more significant archaeological discoveries. Notification of important remains

- 9.2.2 Where it is considered that remains that may satisfy the criteria for statutory protection have been identified, the archaeologist will inform the client and the national archaeological agency with statutory responsibility (Cadw).

9.3 Archive deposition

- 9.3.1 With the permission of the landowner, the report and archive will be deposited with Chepstow Museum. An accession number will be generated on completion of the project. A digital copy of the archive will also be offered to the regional HER (GGAT) and the *Royal Commission on the Ancient and Historical Monuments of Wales* (RCAHMW). Submission of photogrammetric images acquired by drone to the RCAHMW will follow *RCAHMW Unmanned Aerial Vehicle (UAV) Policy*.
- 9.3.2 Black Mountains Archaeology Ltd Data Management Plan sets out the company's policy on managing data during archaeological projects and is available upon request. We operate a paperless office system, whereby we effectively reduce the use of all paper records as far as feasibly possible. All data gathered in the field, whether paper or digital records, are digitised and stored on our servers, which are both physical servers on-site, duplicated live on cloud servers hosted by Microsoft and regularly backed up off-site. All data is digitally stored in appropriate formats (SHP, DXF, TIFF, RAW, JPEG, PDF etc) with the archive destination in mind. All data will be submitted to the relevant archives in accordance with the RCAHMW's *Guidelines for Digital Archaeological Archives* (2015) and the WAT's *Guidance for the Submission of Data to the Welsh Historic Environmental Records (HERs)* (published 2018).

10 Project

- 10.1.1 The project will be managed by Richard Lewis, who is a full *Member* of the *Chartered Institute for Archaeologists* (MCIfA) and implemented by a suitably qualified members of our team (please see here for details of our team). All work will be carried out to the Codes of Conduct, Bylaws and Guidelines of the *Chartered Institute for Archaeologists*, irrespective of the status of individual's membership of the Chartered Institute.

10.2 Staff Structure

- Richard Lewis BA FSA MCIfA, Managing Director: responsible for project management, fieldwork and post-excavation operations.
- Elizabeth Langlands MA, Senior Project Officer: responsible for community engagement, fieldwork and post-excavation finds analysis.
- Dr Rhys Morgan PhD, Project Officer: responsible for community engagement, fieldwork and post-excavation finds analysis.

11 Specialists

11.1.1 Black Mountains Archaeology Ltd have an established network of specialist advisors, these include:

- Agricultural (Post-medieval) implements and tools: Richard Lewis (Black Mountains Archaeology)
- Buildings, Architectural and Dendrochronology: Ross Cook (ArchaeoDomus)
- Clay tobacco pipes: Joyce Compton (Freelance)
- Conservation: Phil Parkes (Cardiff University)
- Early-medieval and Medieval Ceramics: Joyce Compton (Freelance); Steve Clarke (Monmouth Archaeology)
- Faunal remains: Cardiff University
- Flint/worked stone: Richard Lewis (Black Mountains Archaeology); Elizabeth Walker (National Museum of Wales)
- Human remains: Cardiff University
- Industrial Archaeology: Jennifer Protheroe-Jones (Principal Curator NMW), Richard Lewis (Black Mountains Archaeology), Ross Cook (ArchaeoDomus)
- Metallurgical analysis and geophysics: Dr Tim Young (Geoarch)
- Mortar analysis: Ross Cook (ArchaeoDomus)
- Palaeo-environmental remains: Dr Nigel Nayling and Dr Kate Griffiths (University of Wales Trinity St David); QUEST Reading University
- Post-medieval ceramics: Joyce Compton (Freelance); Richard Lewis and Dr Rhys Morgan (Black Mountains Archaeology)
- Prehistoric ceramics: Dr Adam Gwilt and Jody Deacon (National Museum Wales)
- Preserved organic leather and textiles: Quita Mold (Freelance)
- Roman brick, tile and other ceramic building materials: Joyce Compton (Freelance); Dr E M Evans (GGAT); Dr Graham Eyre-Morgan (Freelance)
- Roman glass: Joyce Compton (Freelance);
- Roman metalwork: Johnny Crawford (Freelance); Dr Graham Eyre-Morgan (Freelance)
- Roman pottery: Joyce Compton (Freelance); Dr Peter Webster (Freelance); Dr Graham Eyre-Morgan (Freelance)
- Roman/later coins: Edward Besly (National Museum of Wales)

11.1.2 Should further specialist expertise be required then these will be sought as required from suitably qualified institutions and individuals.

12 Community Archaeology

12.1.1 Community archaeology is a strong focus for the company and we have successfully delivered several major community projects in south Wales. Our experience and energy make our community projects both rewarding and fun whilst delivering important academic results. Our volunteers gain many transferable skills into the

workplace and we routinely host work experience placements. Where possible and practicable from a health and safety/contractual perspective we aim to have some community benefit from all of our investigations. Whether by publication of archaeological findings, local talks, information panels or a more 'hands on' experience 'digging' and surveying we are keen to involve the local community in our projects. However, we do have limitations placed on us from an insurance and safety standpoint and it is not always possible to engage with the local community where sites are deemed inappropriate and/or unsafe.

13 Variations to the Specification or Contract

13.1.1 The archaeological resource is unpredictable, and the encountering of unexpected archaeological deposits on the site cannot be ruled out. Where the examination of such archaeological deposits is required but exceeds the scope of this specification a variation to the contract may be required and this specification updated. Such variations will be agreed in advance with the Client and notified to, and wherever possible or appropriate, agreed in advance with, the relevant Planning Authority or their agents.

14 Reinstatement

14.1.1 The reinstatement of any part of the archaeological work outlined in this document are beyond the scope of this specification and if required must be agreed by separate negotiation.

15 Insurance

15.1.1 Black Mountains Archaeology Ltd is fully insured to undertake the work and full details of our policies can be supplied on request.

15.1.2 Black Mountains Archaeology Ltd will not be liable to indemnify the client against any compensation or damages in discharging the responsibilities set out in this document, including satisfying professional and statutory/legislative obligations.

16 Health and Safety

16.1.1 Black Mountains Archaeology Ltd takes health and safety issues seriously and is committed to protecting the health and safety of its staff and all those affected by its business activities and attending its premises or places of work (site). We have prepared a Health and Safety Policy (2023) in accordance with current legislation, including *The Health and Safety at Work etc Act 1974* and *The Management of Health and Safety Regulations 1999*. At the design stage of any project a Health and Safety Risk Assessment will be undertaken and continuously updated as risks are identified/mitigated. A copy of these documents is both available on request, and will be displayed in any site office, and will be supplied to any other contractors working on site.

16.1.2 Archaeological work is not covered under the *Construction Design and Management Regulations 2015*; however, archaeological work may be undertaken where CDM regulations are applied. In such cases we will prepare any documentation required.

17 Professional Standards

17.1.1 Black Mountains Archaeology Ltd is not currently a registered archaeological organisation with the *Chartered Institute for Archaeologists*. However, irrespective of corporate membership all employees are expected to adhere to the *Codes of Conduct, Bylaws and Guidelines* as a condition of employment. All work is overseen by a full *Member of the Chartered Institute for Archaeologists*.

18 Copyright and Arbitration

18.1.1 Black Mountains Archaeology Ltd/*Archaeoleg Mynydd Du Cyf* shall retain full copyright of any commissioned reports, tender documents or other project documents, under the *Copyright, Designs and Patents Act 1988* (chapter IV) with all rights reserved; excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project.

18.1.2 Any dispute or difference arising out of a contract 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 Chartered Institute for Archaeologists* applying at the date of the agreement.

19 Bibliography

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Other Sources

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20 Appendix – Figures

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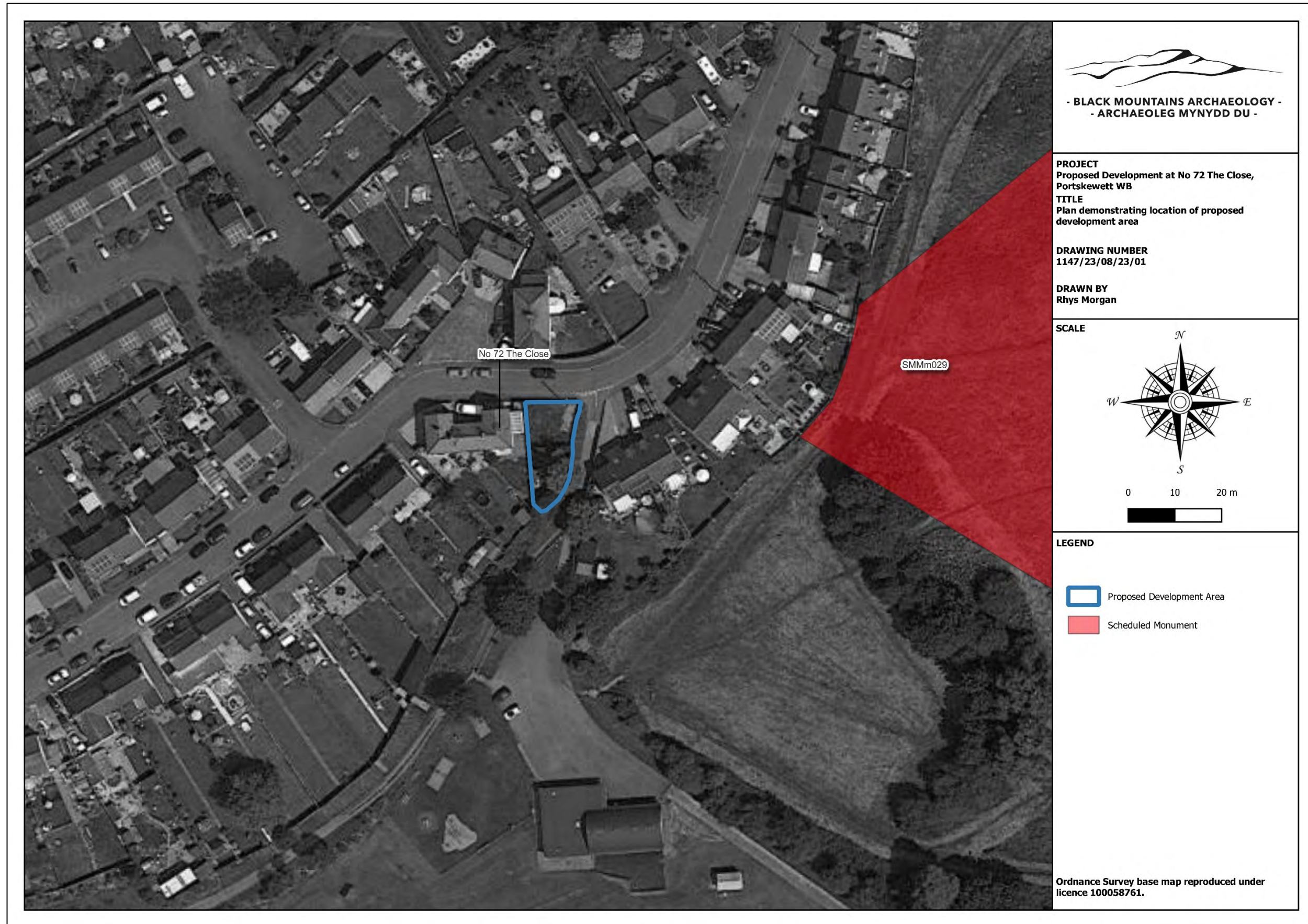


Figure 1. Map demonstrating location of proposed development area (copyright Airbus, Bluesky, Infoterra Ltd and COWI A/S, Getmapping plc and Maxar Technologies)

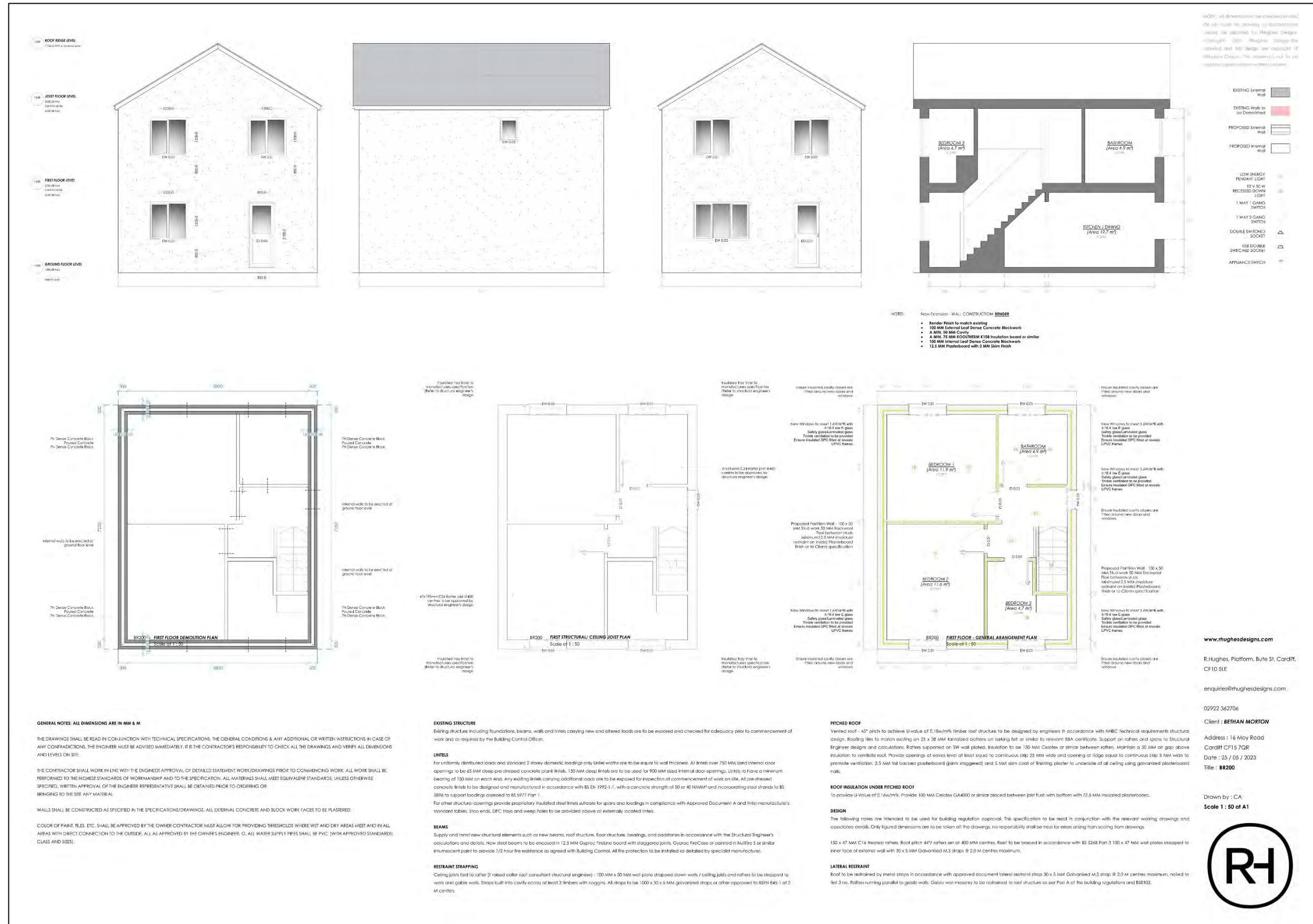


Figure 2. Plans and section of proposed development



**- BLACK MOUNTAINS ARCHAEOLOGY -
- ARCHAEOLEG MYNYDD DU -**

Yn rhan o'n hawydd i wella ansawdd ein gwasanaeth, rydym yn croesawu unrhyw adborth y gallwch ei ddarparu.

As part of our desire to improve our quality of service we welcome any feedback you are able to provide.

Archaeoleg Mynydd Du Cyf/Black Mountains Archaeology Ltd

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