Coal Tip Remediation at the Site of the Former British Ironworks, Talywain Aberyschan, Torfaen

Desk-based Assessment



Prepared for

Capita Real Estate and Infrastructure Ltd

On behalf of

Torfaen County Borough Council

Ву



- BLACK MOUNTAINS ARCHAEOLOGY - - ARCHAEOLEG MYNYDD DU -

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Crynodeb/Summary

Comisyinwyd Archeoleg Mynydd Du Cyf gan Capita Real Estate and Infrastructure Ltd ar ran Cyngor Bwrdeistref Sirol Torfaen i paratoi asesiad desg archeolegol cyn rhaglen o waith adfer y domen lo ar safle 'r hen Gwaith Haearn British yn Nhalywain, Abersychan, Torfaen. Yn fwy penodol, bydd y rhaglen adfer hon yn cynnwys draenio dŵr o'r system cwlfert sy'n bodoli eisoes (ac sy'n dirywio) ac ailgyfeirio'r dŵr hwn i gyfres o gyrsiau dŵr arfaethedig ar wyneb y safle.

Mae'r asesiad wedi nodi effeithiau uniongyrchol ac anuniongyrchol posibl y datblygiad arfaethedig ar asedau treftadaeth ac wedi asesu'r effaith ar leoliad ac arwyddocâd asedau dynodedig statudol.

Mae'r adroddiad presennol yn cynnwys asesiad pen desg archeolegol, a'i ddiben yw sicrhau bod yr adnodd archeolegol o fewn safle'r hen Waith Haearn Prydeinig yn cael ei ddeall yn llawn cyn cychwyn ar y rhaglen adfer y manylir arni uchod. Mae'r adroddiad presennol hefyd wedi ei ysgrifennu yn unol â Standard and Guidance for Historic Environment Desk-based Assessment gan y Chartered Institute for Archaeologists (cyhoeddwyd 2014, dywigiwyd 2017 a 2020).

Black Mountains Archaeology Ltd were commissioned by Capita Real Estate and Infrastructure Ltd on behalf of Torfaen County Borough Council to prepare an archaeological desk-based assessment in advance of a programme of coal tip remediation at the site of the former British Ironworks in Talywain, Abersychan, Torfaen. More specifically, this programme of remediation will involve the draining of water from the pre-existing (and deteriorating) culvert system and the redirecting of this water into a series of proposed watercourses at the surface of the site.

The assessment has identified the potential direct and indirect effects of the proposed development on heritage assets and has assessed the impact on the setting and significance of statutory designated assets.

The present report comprises an archaeological desk-based assessment, the purpose of which is to ensure that the archaeological resource within the site of the former British Ironworks is fully understood prior to the commencement of the remediation programme detailed above. The present report has also been written in accordance with the Chartered Institute for Archaeologists' Standard and Guidance for Historic Environment Desk-based Assessment (published 2014, updated 2017 and 2020).

Acknowledgements and Copyright

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1 Introduction

1.1 Project Background and Proposals

- 1.1.1 Black Mountains Archaeology Ltd/Archeoleg Mynydd Du Cyf were commissioned by Capita Real Estate and Infrastructure Ltd on behalf of Torfaen County Borough Council to prepare an archaeological desk-based assessment in advance of a programme of coal tip remediation at the site of the former British Ironworks in alywain, Abersychan, Torfaen (Figure 2). More specifically, this programme of remediation will involve the draining of water from the pre-existing (and deteriorating) culvert system and the redirecting of this water into a series of proposed watercourses at the surface of the site (Figure 1). This programme has been divided into two stages, which include:
 - Firstly, a geotechnical investigation and remediation phase, involving the identification and remediation of mine entry points situated within the areas of the proposed watercourses, as well as those entry points that pose the greatest risk to the safety of site visitors.
 - And secondly, the creation of 'at surface' watercourses, that are compliant with the SuDS (Sustainable Drainage System) Approving Body (SAB), for the purposes of redirecting Blaengavog stream (south of Farm Road) from the pre-existing culvert system. This proposed watercourse will, in turn, involve the construction of a permanent pond connected to water attenuation depression/reed bed via an open watercourse.
- 1.1.2 The present report comprises an archaeological desk-based assessment, the purpose of which is to ensure that the archaeological resource within the site of the former British Ironworks is fully understood prior to the commencement of the remediation programme detailed above. The present report has also been written in accordance with the Chartered Institute for Archaeologists' *Standard and Guidance for Historic Environment Desk-based Assessment* (published 2014, updated 2017 and 2020).

1.2 Objectives

- 1.2.1 The purpose of an archaeological desk-based assessment, as set out by the Chartered Institute for Archaeologists' *Standard and Guidance for Historic Environment Desk-based Assessment* (published 2014, revised 2020), is to gain an understanding of the historic environment resource in order to formulate as required:
 - an assessment of the potential for heritage assets to survive within the area of study.
 - an assessment of the significance of the known or predicted heritage assets considering their archaeological, historic, architectural and artistic interests.
 - strategies for further evaluation (whether intrusive or not), where the nature, extent or significance of the resource is not sufficiently well defined.
 - an assessment of the impact of the proposed development or other land use changes on the significance of the heritage assets and their settings.

- strategies to conserve the significance of heritage assets, and their settings.
- design strategies to ensure that the new development makes a positive contribution to the character and local distinctiveness of the historic environment and local placeshaping.
- proposals for further archaeological investigation within a programme of research, whether undertaken in response to a threat or not.
- 1.2.2 To this we can further add that the objectives of a desk-based assessment are:
 - to assess the available information to determine the extent and character of heritage assets, in local, regional and national contexts.
 - to assess the significance of heritage assets considering all of the cultural heritage values that people associate with it, or which prompt them to respond to it.
 - to assess the impact (physical or visual) on heritage assets and their setting.
 - To carefully consider and present mitigation recommendations aimed at reducing the impact of the new development on heritage assets and their settings.
 - Finally, to present this information in a written report and the preparation and deposition of an archive of data generated by the assessment in line with professional standards.

1.3 Legislative Framework

- 1.3.1 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).
- 1.3.2 Underpinning PPW are a series of legislative powers and Technical Advice Notes (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.
- 1.3.3 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 support and promote the careful management of change in the historic environment in accordance with current conservation philosophy and practice.
- 1.3.4 Following adoption of the TAN 24 Historic Environment on 31st May 2017, Welsh Office Circulars 60/96 Planning and the Historic Environment: Archaeology; 61/96 Planning and the Historic Environment: Historic Buildings and Conservation Areas; and 1/98 Planning and the Historic Environment have been cancelled.
- 1.3.5 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.
- 1.3.6 Cadw are the Welsh Government body responsible for determining applications for Scheduled Monument Consent (SMC) and is a statutory consultee for certain types of Developments affecting Scheduled Ancient Monuments, World Heritage Sites and Registered Historic Parks, Gardens and Landscapes, Strategic Environmental Assessments and scoping opinions for Environmental Impact Assessments (PPW 2016). Cadw published their *Conservation Principles for the Sustainable Management of the Historic Environment in Wales* in 2011. These principles provide the basis upon which Cadw discharges its statutory duties, makes decisions or offers advice about changes to historic assets. Cadw further advise that the *Conservation Principles* should also be used by others (including owners, developers and other public bodies) to assess the potential impacts of a development proposal on the significance of any historic asset/assets and to assist in decision-making where the historic environment is affected by the planning process (PPW 2021).
- 1.3.7 Important or historic hedgerows (and boundaries) are protected under *The* Environment *Act 1995* (section 95). *The Hedgerow Regulations 1997* (under the 1995 Act) provides protection and guidance for those development/agricultural activities outside of planning. The regulations permit the removal of any hedgerow (including any length of hedgerow) for 'carrying out Development for which planning permission has been granted' provided the loss of the hedgerow has been properly assessed against the benefits of the proposed Development.

1.3.8 Following review in 1998, a simplified set of assessment criteria was proposed where all substantially complete boundaries (hedgerows) that predate 1845 were to be afforded consideration/protection. The Environment, Transport and Regional Affairs Committee's Report 'The Protection of Field Boundaries' 1999 was acknowledged by the government, but no amendments were made to the 1997 regulations. Judicial Review of the application in 2002 of the regulations (Flintshire County Council v NAW and Mr J T Morris) has clarified the interpretation of some of the criteria (see The Hedgerow Regulations 1997, Schedule 1, Part 2 Archaeology and History and Section 1.5 below).

2 Methodology

2.1 Identifying Heritage Assets for Assessment

- 2.1.1 The assessment of the historic environment includes the interrogation of a number of sources (including, but not limited to):
 - Statutory designated monuments, buildings and landscapes (including conservation areas, parks, gardens and battlefields).
 - Regional Historic Environment Record (HER).
 - National Monuments Record (NMR).
 - Aerial photographic archives.
 - Local and national archives.
 - Cartographic and documentary sources.
- 2.1.2 Information on statutory designated sites (World Heritage Sites, Scheduled Ancient Monuments, Listed Buildings, Conservation Areas, Registered Landscapes, Battlefields, Parks and Gardens) were obtained from Cadw on the 12th April 2022 and accessed through Cof Cymru National Historic Assets of Wales (a Welsh Government online mapping resource). Information recorded on the National Monuments Record (NMR) were obtained from the RCAHMW on the 12th April 2022 and information recorded on the Regional Historic Environment Record were obtained from the Glamorgan-Gwent Archaeological Trust (GGAT) on the 12th April 2022 (RCAHMW License No RCPL2/3/88/010 and GGAT Enquiry No 6789). Cartographic and documentary sources were also consulted as would the national and local archives.
- 2.1.3 The assessment reviewed the existing information pertaining to the Historic Environment based on a primary study area comprising a 250m radius centred on National Grid Reference (NGR) SO 51208 12809 (the area of remediation works at the site of the former British Ironwoorsk). A selection of statutory designated sites was also assessed within a secondary study area comprising a 1km radius centred on the same NGR, in order to assess the impact of the proposed development on their settings.
- 2.1.4 Important or historic hedgerows will be assessed according to current legislation that details the following criteria:
 - The hedgerow marks the boundary, or part of the boundary, of at least one historic parish or township; and for this purpose, "historic" means existing before 1850.
 - The hedgerow incorporates an archaeological feature which is (a) included in the schedule of monuments compiled by the Secretary of State under Section 1 (schedule of monuments) of the Ancient Monuments and Archaeological Areas Act 1979(7); or (b) recorded at the relevant date in a Historic Environment Record.

- The hedgerow (a) is situated wholly or partly within an archaeological site included or recorded as mentioned in paragraph 2 or on land adjacent to and associated with such a site; and (b) is associated with any monument or feature on that site.
- The hedgerow (a) marks the boundary of a pre-1600 AD estate or manor recorded at the relevant date in a Historic Environment Record or in a document held at that date at a Record Office; or (b) is visibly related to any building or other feature of such an estate or manor.
- The hedgerow (a) is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Enclosure Acts; or (b) is part of, or visibly related to, any building or other feature associated with such a system, and that system (i)is substantially complete; or (ii)is of a pattern which is recorded in a document prepared before the relevant date by a local planning authority, within the meaning of the 1990 Act, for the purposes of development control within the authority's area, as a key landscape characteristic.
- There are other criteria relating to rights of way and ecology.

2.2 Assessing the Value of Heritage Assets

- 2.2.1 Cultural heritage assets are categorised according to the only values that are nationally agreed in the Department of Transport/Welsh Office/Scottish Office Design Manual for Roads and Bridges. Formerly Vol. 11 Section 3 Part 2 (HA 208/07 Cultural Heritage) 2007, amended 2009 (DMRB 2007), as amended January 2020 LA 106 Revision 1. A cultural heritage asset is an individual archaeological site or building, a monument or group of monuments, an historic building or group of buildings, an historic landscape etc., which, together with its setting, can be considered as a unit for assessment.
- 2.2.2 Understanding value is subjective beyond any statutory or registered designation and is based on the professional experience and knowledge of the assessor. Other factors do contribute to the overall assessment of value (and significance) of heritage assets and the assessment criteria below contributes to an overall robust assessment framework.

	Va	alue	Criteria					
A*	Very High	International/National	World Heritage Sites (including nominated sites). Assets of acknowledged international importance. Assets that can contribute significantly to acknowledged international research objectives.					
А	High	National	Scheduled Monuments (including proposed sites). Undesignated assets of schedulable quality and importance. Assets that can contribute significantly to acknowledged national research objectives.					
В	Medium	Regional	Designated or undesignated assets that contribute to regional research objectives.					

	Vá	alue	Criteria			
С	Low	Local	Designated and undesignated assets of local importance. Assets compromised by poor preservation and/or poor survival of contextual associations. Assets of limited value, but with potential to contribute to local research			
			objectives.			
D	Negligible	Local	Assets with very little or no surviving archaeological interest.			
U	Unknown	Unknown	The importance of the resource has not been ascertained.			

Table 1. Factors for assessing the value of heritage assets (after Table 5.1 DMRB 2009)

- 2.2.3 The criteria below are adapted from notes made in Annex 2 of the DMRB Vol. 11 Section 3 Part 2 (HA 208/07 Cultural Heritage) 2007, amended 2009 (DMRB 2007), as amended January 2020 LA 106 Revision 1. These notes refer to the Scheduling Criteria as set out by the Ancient Monument and Archaeological Areas Act 1979 and The Historic Environment (Wales) Act 2016 and finally Stage 4 Evaluating Relative Importance as set out in ASIDOHL2, Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process (2nd Edition 2007).
- 2.2.4 While comprehensive, the criteria should not be regarded as definitive, rather they are indicators which contribute to a wider judgement based on the professional experience of the assessor and the circumstance and context of the assessment and heritage asset.
- 2.2.5 **Rarity**: there are some monument categories, which in certain periods are so scarce that all surviving examples which still retain some archaeological potential should be preserved. This should be assessed in relation to what survives today, since elements of a once common type may now be rare. The criteria for assessment are:
 - Very High: sole survivor of its type.
 - High: very few sites of this type are known.
 - Medium: the site is not unusual but cannot be considered common.
 - Low: the site is quite common.
- 2.2.6 **Documentation and Association**: the significance of a heritage asset may be enhanced by the existence of records of previous investigations or, in the case of more recent monuments, by the supporting evidence of contemporary written records. Furthermore, any important historical associations relating to the heritage asset, such as institutions, cultural figures, movements or events, will enhance value. The survival of documentation and/or historic association that increases our understanding of a heritage asset will raise its importance, though this is difficult to quantify owing to the extremely varied nature of documentary and historical material. Therefore, a professional judgment is given based on the actual amount or importance of evidence and its academic value. The criteria for assessment are:
 - Very High: a highly significant, authentic and nationally well-known association(s) and/or complete documentary record, or exceptionally important sources available.

- High: a significant, authentic and regionally well-known association(s) and/or considerable quantity of relevant material, or highly important sources available.
- Moderate: an authentic, but less significant, perhaps locally well-known association(s) and/or some relevant material, or moderately important sources available.
- Low: unauthenticated or a little-known association(s) and/or little relevant material, or only modestly important sources available.
- None: no known associations and/or relevant material available.
- 2.2.7 **Group Value**: relates to the diversity (or similarity) of elements including their structural and functional coherence. The value of a single monument (such as a field system) may be greatly enhanced by its association with related contemporary monuments (such as a settlement and cemetery) or with monuments of different periods. The criteria for assessment are:
 - Very High: largely complete interconnected complex of heritage assets or landscapes (e.g UNESCO World Heritage Site).
 - High: significant survival of an interconnected complex of heritage assets.
 - Moderate: some surviving elements of an interconnected complex of heritage assets; some disintegration has occurred.
 - Low: single or unconnected/unrelated groups of heritage assets.
- 2.2.8 **Survival/Condition**: the survival of a monument's archaeological potential both above and below ground is a particularly important consideration and should be assessed in relation to its present condition and surviving features. The Historic Environment Records (HERs) of the four Welsh Archaeological Trusts note the condition of sites according to the following criteria:
 - Intact: the site is intact.
 - Near intact: the site is nearly intact.
 - Damaged: the site has been moderately damaged.
 - Near Destroyed: the site has nearly been destroyed.
 - Destroyed: the site has been destroyed.
 - Restored: the site has been restored.
 - Moved: the site has been moved (usually finds).
 - Not Known: the condition of the site is not known.
 - To these criteria, we can add the following assessment:
 - Very Good: elements surviving in very good condition for their class.
 - Good: elements surviving in good or above average condition for their class.

- Moderate: elements surviving in moderate or average condition for their class.
- Fair: elements surviving in fair or below average condition for their class.
- Poor: elements surviving in poor condition for their class.

2.3 Assessing Direct Impacts

- 2.3.1 Direct Impacts are outcomes resulting from an assessment of the impact of the proposed development on the heritage asset or landscape. The direct impact of a course of action (e.g. development) can only be assessed once the assessment criteria above has been completed and potential outcomes fully understood (as far as any development proposal or construction design is reasonably understood). The direct impact of the Proposed Scheme on heritage assets has been assessed using the following criteria:
 - Very High: total loss of the integrity of the heritage asset(s).
 - High: significant loss of integrity to the heritage asset(s), significant reduction of group and rarity values.
 - Moderate: some loss of integrity to heritage asset(s) and reduction in value.
 - Low: slight loss of integrity to heritage asset(s) and value.
 - None: no perceived or identified effect, or loss in value.
 - Beneficial: Development will protect, preserve or enhance the heritage asset resulting in an increase in value.

	Category							
Effect	A*	Α	В	С	D	U		
Very High	Very Significant	Very Significant	Very Significant	Significant	Significant	Unknown		
High	Very Significant	Very Significant	Very Significant	Significant	Significant	Unknown		
Moderate	Very Significant	Very Significant	Significant	Significant	Slight Significance	Unknown		
Low	Very Significant	Significant	Significant	Slight Significance	Slight Significance	Unknown		
None	None	None	None	None	None	None		

Table 2. Significance of effect to heritage assets (matrix)

2.4 Assessing Indirect (Visual) Impacts

2.4.1 Assessing the Indirect (Visual) Impacts to heritage assets is intrinsically linked to setting and significance (see Section 1.6). The criteria below are adapted from standard EIA evaluation criteria and Stage 3 Assessment of Indirect Impacts of Development as set out in ASIDOHL2, Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process (2nd Edition 2007). Assessment is confined to sites of International, National and in some cases regional value.

- Very Severe: the key views and/or essential lines of sight to and from the heritage asset are dominated or obscured by the Development resulting in severance of cultural heritage links.
- Severe: the key views and/or essential lines of sight to and from the heritage asset are interrupted by the Development resulting in partial severance of cultural heritage links.
- Considerable: the key views and/or essential lines of sight to and from the heritage asset are significantly visible resulting in limited severance of cultural heritage links.
- Moderate: the key views and/or essential lines of sight to and from the heritage asset are visible resulting in some severance of cultural heritage links.
- Slight: the key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in diminished cultural heritage links.
- Very Slight: the key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in little discernible severance of cultural heritage links.
- None: the key views and/or essential lines of sight to and from the heritage asset are not noticeable resulting in no severance of cultural heritage links.

2.5 Assessing Impact to Setting and Significance

- 2.5.1 The Setting of Historic Assets in Wales 2017 (The Historic Environment (Wales) Act 2016, Annex 6) explains what setting is, how it contributes to the significance of a historic asset and why it is important. It also outlines the principles used to assess the potential impact of development or land management proposals on the settings of World Heritage Sites, Ancient Monuments (scheduled and unscheduled), Listed Buildings, Registered Historic Landscapes, Parks and Gardens, and Conservation Areas. These principles, however, are equally applicable to all individual historic assets, irrespective of their designation.
- 2.5.2 Certain major developments require pre-application consultation with the local planning authority and, where specialist advice is required, the Welsh Ministers through Cadw. Any development likely to directly or indirectly (visual) effect a statutory designated heritage asset or high value undesignated heritage asset and its setting will likely require 'consultation before grant of permission' under the *Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016, schedule 4 (I)(i) and (ii)* if the proposed Development meets any of the following criteria:
 - Development likely to affect the site of a registered historic park or garden or its setting.
 - Development is within a registered historic landscape that requires an Environmental Impact Assessment and ASIDOHL2.
 - Development likely to have an impact on the outstanding universal value of a World Heritage Site.

- Development is within a distance of 0.5 kilometres from any point of the perimeter of a scheduled monument.
- Development is within a distance of 1 kilometre from the perimeter of a scheduled monument and is 15 metres or more in height, or has an Area of 0.2 hectares or more.
- Development is within a distance of 2 kilometres from the perimeter of a scheduled monument and is 50 metres or more in height, or has an Area of 0.5 hectares or more.
- Development is within a distance of 3 kilometres from the perimeter of a scheduled monument and is 75 metres or more in height, or has an Area of 1 hectare or more.
- Development is within a distance of 5 kilometres from the perimeter of a scheduled monument and is 100 metres or more in height, or has an Area of 1 hectare or more.
- 2.5.3 An assessment of the impact of the proposed development on the setting of the statutory designated heritage asset or high value undesignated heritage asset will be required if any of the criteria above are met. The assessment of the setting of heritage assets follows the four-stage approach detailed in the Setting of Historic Assets in Wales 2017 (The Historic Environment (Wales) Act 2016, Annex 6):
 - Stage 1: Identify the historic assets that might be affected by a proposed change or development and their significance.
 - Stage 2: Define and analyse the settings to understand how they contribute to the ways in which the historic assets are understood, appreciated and experienced.
 - Stage 3: Evaluate the potential impact of a proposed change or Development on those settings.
 - Stage 4: Consider options to mitigate the potential impact of a proposed change or Development on those settings. The assessment of significance is intrinsically linked to the setting (see paragraphs above) and value (see criteria above) of a heritage asset/registered landscape, park and garden.
- 2.5.4 The significance of an historic asset embraces all of the cultural heritage values that people associate with it, or which prompt them to respond to it. These values tend to grow in strength and complexity over time, as understanding deepens and people's perceptions evolve (*Conservation Principles for the Sustainable Management of the Historic Environment in Wales* 2011, p10).
- 2.5.5 There are **four values** that need to be considered when assessing significance and these are set out in *Cadw's Conservation Principles for the Sustainable Management of the Historic Environment in Wales*:
 - Evidential Value: relates to those elements of a heritage asset that can provide evidence about past human activity, including its physical remains or historic fabric. These may be visible and relatively easy to assess, or they may be buried below ground, under water or be hidden by later fabric. These remains provide the primary

evidence for when and how a heritage asset was made or built, what it was used for and how it has changed over time. The unrecorded loss of historic fabric represents the destruction of the primary evidence. Additional evidential values can be gained from documentary sources, pictorial records and archaeological archives or museum collections. To assess the significance of this aspect of an asset, all this evidence needs to be gathered in a systematic way and any gaps in the evidence identified.

- Historical Value: a heritage asset might illustrate a particular aspect of past life or it might be associated with a notable family, person, event or movement. These illustrative or associative values of a heritage asset may be less tangible than its evidential value but will often connect past people, events and aspects of life with the present. Of course, the functions of a heritage asset are likely to change over time and so the full range of changing historical values might not become clear until all the evidential values have been gathered together. Historical values are not so easily diminished by change as evidential values and are harmed only to the extent that adaptation has obliterated them or concealed them.
- Aesthetic Value: relates to the way in which people draw sensory and intellectual stimulation from a heritage asset. This might include the form of a heritage asset, its external appearance and how it lies within its setting. It can be the result of conscious design or it might be a seemingly fortuitous outcome of the way in which a heritage asset has evolved and been used over time, or it may be a combination of both. The form of an asset normally changes over time. Sometimes earlier pictorial records and written descriptions will be more powerful in many people's minds than what survives today. Some important viewpoints may be lost or screened, or access to them may be temporarily denied.
- Communal Value: relates to the meanings that a heritage asset has for the people who relate to it, or for whom it figures in their collective experience or memory. It is closely linked to historical and aesthetic values but tends to have additional or specific aspects. Communal value might be commemorative or symbolic. For example, people might draw part of their identity or collective memory from a heritage asset, or have emotional links to it. Such values often change over time and they may be important for remembering both positive and uncomfortable events, attitudes or periods in Wales's history. Heritage assets can also have social value, acting as a source of social interaction, distinctiveness or coherence; economic value, providing a valuable source of income or employment; or they may have spiritual value, emanating from religious beliefs or modern perceptions of the spirit of a place.
- 2.5.6 The first stage of assessing significance is by understanding the value of the heritage asset by carefully considering its history, fabric and character and then comparing these values with other similarly designated or types of heritage asset locally, regionally or if necessary, nationally. The outcome of this process is a Statement of Significance, which is partly a subjective exercise based on the assessor's experience and knowledge.

3 Baseline

3.1 Location, Topography and Geology

- The development area is centred on NGR SO 25828 03882 and comprises the site of the former British Ironworks in Talywain on the west end of Aberyschan, Torfaen. At present, the site is occupied by a pair of large spoil tips surrounded by trees and scrub, which derived from operations conducted by the Lower Navigation Colliery in the 20th century. These spoil tips are broadly positioned towards the south and north of the site and each has been trimmed at the top for stability purposes. As was demonstrated during a walkover survey conducted on the 25th April 2022 (see below), large parts of the site are inaccessible or at least non-navigable by foot, due to the presence of thick vegetation and precipitous falls in ground level. Along its western edge, the site is bounded by British Road, which leads from Elizabeth Row in the south to Farm Road in the north. Farm Road defines the northern limit of the site, before leading into a public footpath, via the B4246, which bounds the site along its eastern edge. The southern limits of the site are defined by another public footpath, towards the southern edge of which are the remains of the old office block and foundry quadrangle of the British Ironworks. In form, the development area is irregularly shaped and covers a total of 0.28km².
- 3.1.2 In terms of topography, the development area is situated on the western edge of the Llwyd Valley, which extends from Blaenavon in the north towards Pontymoile in the south. Along the base of this valley runs the River Lwyd. More specifically, the development area is situated within an E/W aligned branch of the Middle Llwyd Valley known as Cwm Sychan. The development area is also situated near the western foothills Llanhilleth Mountain, which forms part of a range of hills extending northward towards Coity Mountain and Cefn Coch in the north. In being situated between areas of upland and lowland, the development area is positioned on a mild slope, the elevation of which ranges from approximately 265mOD on its western edge to approximately 234mOD on its eastern. Another mild slope runs from N/S through the development area, which results in the elevation of the site ranging from approximately 254mOD in the north to approximately 232mOD in the south.
- 3.1.3 The superficial geology defining the development area comprises head deposits of clay, silt, sand and gravel, which formed up to 3 million years ago during the Quaternary period in an environment dominated by subaerial slopes. The underlying bedrock deposits comprise mudstone, siltstone and sandstone of the South Wales Middle Coal Measures Formation, which formed approximately 310–318 million years ago during the Carboniferous period in an environment dominated by swamps, estuaries and deltas (BGS 2022).

3.2 Registered Landscapes, Parks and Gardens (Figure 2)

3.2.1 World Heritage Sites

3.2.2 The development area is situated 1.7km southwest of the southern boundary of the Blaenavon Industrial Landscape, which comprises a World Heritage Site (WHS984). This landscape is situated towards the upper end of the Llwyd Valley and comprises the Blaenavon Ironworks and other related industrial sites that cover the area.

3.2.3 Registered Historic Landscapes

3.2.4 The development area is not situated within a Registered Historic Landscape. The nearest Registered Historic Landscape to the development area is Blaenavon (HLW(Gt)1), the southern boundary of which is located 2.5km to the north.

3.2.5 Registered Parks and Gardens

3.2.6 No Registered Parks and Gardens are situated within the immediate vicinity of the development area. The nearest Registered Park and Garden to the study is Pontypool Park (PGW(Gt)26(TOR), the northeast boundary of which is located 3.2km to the southeast.

3.2.7 Conservation Area

3.2.8 No Conservation areas are situated within the immediate vicinity of the development area. The nearest Conservation Area to the development area is Cwmavon (CA81), the southwest boundary of which is located 1.9km to the northeast.

3.3 Scheduled Monuments and Listed Buildings (Figure 2)

3.3.1 Scheduled Monuments

- 3.3.2 One Scheduled Monument is situated directly within the confines of the development area, which comprises the British Colliery Pumping Engine House (SMMm216). More specifically, this monument is located towards the southern end of the development area. The pumping engine held within this monument was installed in 1845 (see Colebrook 1983) for the purposes of assisting in the drainage of the British Colliery. The engine house was constructed of sandstone masonry, which incorporated a round arched flue in its roof. The roof itself was constructed using slate tiles. The bob wall (which supported the beam of the engine) is situated on the south side of the building, which facilitated the placement of the beam via a large archway. The interior of the engine house is defined by timber beams and stairs supported by cast iron brackets and plates.
- 3.3.3 One Scheduled Monument is situated within 250m of the development area, which comprises the Air Furnace at British Ironworks (SMMm221). More specifically, this monument is located beyond the southern limit of the development area. This monument consists of a rare air furnace of 19th century date which is, in effect, a type of reverberatory furnace used for re-melting cast iron prior to being decarburised into wrought iron. The rarity of this furnace type is due mainly to the fact that it was in use for only a short period of time, before being replaced by the more efficient cupola

- furnace. Indeed, this particular furnace is the only known example of its kind discovered in Wales.
- 3.3.4 One Scheduled Monument is situated within 1km of the development area, which comprises Cwmbyrgwm Colliery (SMMm163) (Figure 5). More specifically, this monument is located marginally over 350m to the southwest of the development area. The colliery was in operation between the early 19th and early 20th centuries and was sunk for the purposes of extracting both coal and iron ore. By 1827, the colliery had expanded to serve the British Ironworks to the northeast. Today, the monument includes the remains of the water balance gear, a brick chimney, watercourses, a pair of reservoir dams, three mine shafts and an incline tramroad.
- 3.3.5 Finally, it should be mentioned that while the surviving remains of the Abersychan Limestone Tramroad (SMGm597) is situated beyond 1km of the development area to the east, its original course ran directly towards the site of the British Ironworks, before terminating within 250m of the development area (western extent GGAT07226g).

3.3.6 Listed Buildings

- 3.3.7 Two Listed Buildings are situated directly within the confines of the development area, which comprise the Grade II Listed British Colliery Pumping Engine House (LB18595), which is also a Scheduled Monument, and the Grade II Listed Big Arch (LB14871). The former building is located towards the southern edge of the development area, while the latter is positioned within the southeast corner of the development area. The Big Arch, which provided structural support to the Blaenavon Branch of the Monmouthshire Railway, was constructed in 1879. This branch line also served the British Ironworks between 1827 and 1883. The British Colliery Pumping Engine House has already been detailed above.
- 3.3.8 Four Listed Buildings are situated within 250m of the development area, including:
 - The Grade II* Listed Former British Ironworks Office and Foundry Quadrangle (LB14870) to the south (Plate 5 and 6), which comprises a series of buildings that were constructed from sandstone masonry walls and roofs comprising slate tiles. The precise date during which these buildings were erected in unknown, although in consideration of the architectural design of the right-hand pavilion, a construction date between the 1820s and 1830s may be suggested.
 - The Grade II Listed Former Colliery Engine House at ETM Steel Fabrication (LB14869) to the west, which was constructed in around 1900 and housed a Waddle fan in conjunction with air compressors and generators.
 - The Grade II Listed Church of St Thomas (LB18582) to the northeast, which was constructed in 1831–2 for the purposes of providing a place of worship for the workers of the British Ironworks and the nearby collieries.
 - And finally, the Grade II Listed Former Goods Shed of the Abersychan and Talywain Station (LB18585) to the east, likely constructed in 1878, which comprises a single

bayed building of yellow Ebbw Vale or Blaendare bricks with red brick window arches and a roof built from slate tiles.

- 3.3.9 Seven Listed Buildings are situated within 1km of the development area, including:
 - The Grade II Listed Waterloo Cottage (LB83195) to the east, which may have initially served as a farmstead. The building was erected during the late 16th century, although during the 20th century it was amalgamated with neighbouring house, constructed in the late 19th century.
 - Th Grade II Listed High Street Baptist Church (LB18581) to the east, which was constructed in 1827 before undergoing significant refurbishment in 1868. In form, the church incorporated a rectangular gable front with extensions to the right- and left-hand sides of the building as well as to the rear.
 - The Grade II Listed Cwmbyrgwm Chimney (LB18591) to the west, situated approximately 500m from the site of the former British Ironworks. The chimney, which is of yellow Ebbw Vale or Blaendare brick construction, likely dates between 1870–9, and was built over the upcast ventilation shaft of the Cwmbyrgwm Colliery.
 - The Grade II Listed Garndiffaith Railway Viaduct (LB3151) to the northeast, which was built in 1877 for the purposes of carrying the southern end of the Blaenavon Branch of the Monmouthshire Railway.
 - And finally, The Bungalows Nos 1–4 (LB18583; LB18592; LB18593 and LB18594) to the northwest, which form an E/W aligned row. These cottages were converted from a 19th century building attached to the Lower Varteg Colliery, which may have been an old carpenter's workshop. In its present form, the row comprises painted rubble stone walls and a roof built from concrete tiles.

3.4 Archaeological and Historical Background

3.4.1 Prehistoric

The prehistoric archaeology within the county of Torfaen is sparse and poorly 3.4.2 understood. No prehistoric sites are known within the vicinity of the development area, and it seems that the majority of the Middle Llwyd Valley is also devoid of known prehistoric activity. The most notable prehistoric remains within Torfaen exist towards the northern edge of the county, on the hills surrounding Blaenavon, where a series of Bronze Age round barrows have been recorded. This series includes those barrows on Carn-y-Defaid (SMMm209) and Mynydd Y Garn-Fawr (GGAT08406g; GGAT08407g) immediately east of Middle Coedcae, as well as the Blorenge (SMMm219) to the southeast of Abergavenny. Furthermore, the possible remains of a barrow cemetery were recorded on the northern hills of Blaenavon, which have long since been destroyed by opencast mining during the 20th century. Within this broad area, some Neolithic activity has also been recorded. Most notably, a recumbent standing stone is positioned on Twyn Carn-Canddo (GGAT08431g), which overlooks Blaenavon from the northeast. The overall impression given by the prehistoric archaeology within Torfaen is that the northern hills remained an important ritual landscape throughout both the

Neolithic and Bronze Age periods, at the expense of those landscapes to the south. Very little is known of the Iron Age in Torfaen due to an apparent sparsity in archaeological remains dating to this period. Although unpublished, the Aberystruth History and Archaeology Society has recently conducted surveys of the Cwmcelyn Valley region. The Society has suggested that these surveys indicate the presence of significant prehistoric archaeology within the area, including Neolithic tombs and Bronze Age huts.

3.4.3 Roman

3.4.4 The nearest Roman site to the development area is a road possibly pertaining to this period (RR43ii; GGAT08667g) that crosses Mynydd Llanhilleth to the southwest. The remains of this possible road comprise an earthen causeway (possibly an agger) flanked by a pair of ditches. It is thought that these remains constitute a section of the Roman road that ran from Llanhilleth to Mamhilad via Abersychan, as suggested by Bradney (1906, 463). However, Sherman and Evans (2004, 74) have more recently rejected this idea, due to the angular and meandering course of the road. Other than this, no other Roman sites, possible or otherwise, exist within vicinity of the development area, and very little Roman archaeology has been uncovered across the wider county of Torfaen. This may be due to the likelihood that, during the Roman period, the area of Torfaen merely represented a natural corridor situated between, and not within, major administrative and military sites. Beyond the Upper Llwyd Valley, towards the eastern edge of the Ebbw Fach Valley, are the potential remains of a Roman military site, possibly a fortlet. This is also the site of the medieval castle of Castell Taliorum (GGAT02103g). However, it is possible that the castle was built on the former site of a Roman fortlet as, firstly, the earthworks surrounding the castle site are notably 'playing card' shaped (characteristic of Roman forts) and, secondly, sizeable quantities of Roman pottery were uncovered during excavations of the site in the 1920s (Wheeler 1925; 1926; Eyre-Morgan pers comm, 2022). It was also noted during these excavations that part of the Llanhilleth to Mamhilad via Abersychan Roman Road was excavated and it appeared that it ran directly to the site of the proposed fortlet. Yet as mentioned above, the identification of this road as Roman has more recently been refuted. The identification of the site of Castell Taliorum as Roman is also suggested by its name, which translates from Latin to 'fort of the Italians'. In terms of small find within the Upper Llwyd Valley area, some significant Roman artefacts have been recovered by metal detectorists. These artefacts include, most notably, broaches and coins (PAS 2022).

3.4.5 Medieval

3.4.6 Very little is known of the periods following the Roman occupation in Torfaen and archaeological remains relating the Early-medieval period more broadly are exceedingly rare. Our knowledge of Medieval Torfaen derives almost exclusively from sites that post-date the Norman Conquest of Wales. During this period, the area of Torfaen comprised an agricultural landscape punctuated by ecclesiastical centres and small-scale industry. Agricultural field systems and farmsteads from this period are

known across the county, particularly in and around Cwmbran, towards the base of the Lower Llwyd Valley. These were situated primarily along the western flanks of Cwmbran, on the foothills of Mynydd Maen, which would have offered more clement living conditions than those of the valley bottom. Across these foothills, several areas of managed woodland were also established, which are clearly visible today. These include, for example, Tranch Wood (GGAT12279g), Coed-waun-fyr Wood (GGAT12219g), Maes-y-rhiw Wood (GGAT12237g) and Craig Fawr Wood (GGAT12221g). However, additional areas of managed woodland are also known in the south and north of Cwmbran. Again, ecclesiastical sites were concentrated mainly towards the Lower Llwyd Valley. The most numerous of these comprise churches and chapels, such as St Michael's Church at Llantarnam (LB3121; GGAT00622g) or St Dial's Chapel (GGAT00111g) towards the centre of Cwmbran. Llantarnam Abbey (LB85246) represented the most significant religious centre in the lower valley region, the influence of which extended across much of the landscape as a result of its sizeable grange (GGAT00110g). Llantarnam Abbey was founded in 1179 by Hywel ap Iorwerth, lord of Caerleon, although the Cistercian community that later defined it may not have settled there until the late 13th century (Newman 2000, 336). Several industrial sites dating to the Medieval period are known across the county and their distribution is far more even than those of agricultural and ecclesiastical sites. In the lower valley region was Llantarnam Mill (GGAT00633g), which was potentially attached to the grange of Llantarnam Abbey, while the remains of another water mill have been recorded at Henllys (GGAT00144g). In Blaenavon, the presence of a fulling mill has been recorded (GGAT02087g), while to the southeast of the development area are the remains of Abersychan Mill (GGAT05286g) which, despite being mostly 19th century in form, possesses Medieval origins. The southern areas of Torfaen were also characterised by small-scale coal mining, as demonstrated by the bell pits at, for example, Llanderfel (GGAT10745g).

3.4.7 Beyond the Llwyd Valley to the west, furthermore, are the sites of two Medieval castles, both of which are in St Illtyd. The first castle survives as an earthen motte and is known as St Illtyd Castle Mound (SMMm141). The surviving motte measures approximately 35m in diameter at its base and has a level summit measuring approximately 1m in diameter. The second castle is known as Castell Taliorum, which is situated directly within the vicinity of the first. As detailed above, this castle may have been built on the former site of a Roman fortlet. The castle survives as a series of footings originally associated with two large, stone-built towers. One of these towers was cruciform in footprint, while the other was round and comprised a drum tower. The combination of towers and fortifications at Castell Taliorum appears rather unique. The drum tower is significantly larger than others of its kind across Southeast Wales and has drawn comparisons with those found at Pembroke and Morlais Castles (Renn 1961, 142). Excavations of Castell Taliorum in the 1920s revealed that the footprint of the castle was broadly cruciform (Lewis 1925). Overall, little is currently known of the history of Castell Taliorum.

3.4.8 Post-medieval

3.4.9 The Post-medieval period in Torfaen, akin to the remainder of South Wales, witnessed an explosion in industrial activity as well as the establishment expansive transport networks. Those aspects that are of most significance to the development area is detailed individually below, which include transport systems, collieries and ironworks.

3.4.10 Transport

- 3.4.11 The establishment of the Monmouthshire Canal was of major significance, as it allowed the transportation of materials produced by the various industries of the region to the ports in the south and elsewhere. The canal extended from the Pontymoile Basin in the north to Newport in the south, with a north-westward extending branch leading towards Crumlin. The canal primarily served the collieries and ironworks of Monmouthshire and the surrounding areas. The Monmouthshire Canal Navigation Company was responsible for the building and maintenance of the canal. Construction of the canal began as a result of the Monmouthshire Canal Act 1792. By 1794, the Crumlin Arm of the canal had been opened as a result of the Brecknock and Abergavenny Canal Act 1793, which specified that an extension was to be established running from Crindau to Crumlin Bridge. Later, the Monmouthshire Canal Navigation Act 1802 authorised the construction of tramroads that connected the canal to specific industrial sites, as well as the raising of funds to accomplish this (Priestly 1831, 453–5). It was this act that led to the construction of the Blaenavon Tramroad in 1815, which ran along the Upper and Middle Llwyd Valley, establishing a direct transport route from the Blaenavon Ironworks to Pontymoile. The Abersychan Limestone Tramroad was later constructed, which connected the quarries of Cwm Lasgarn to the British Ironworks via the Blaenavon Tramroad. Although the precise date at which this tramroad was constructed is not known, it was in operation by 1830 and may have been built as early as 1827 (van Laun 2001, 40). This tramroad originally extended from the southeast corner of the British Ironworks site and crossed the Monmouthshire Canal via a bridge before continuing to the quarries on the east end of Abersychan. Today, a NW/SE running road known as The Promenade respects the easternmost extent of the tramroad. Part of the western extent of the tramroad also survives today, which was recently designated as a Scheduled Monument (SMGm597). With its fishbelly rails, this tramroad was highly unusual when compared to other tramroads across South Wales, which were of either plateway or edgeway design. Furthermore, in around 1819 the Cwm Ffrwd Tramroad was constructed, which linked the coal mines and furnaces on Varteg Hill to the Blaenavon Tramroad and therefore the Monmouthshire Canal. Although the precise course that this tramroad took is unknown, it likely extended beyond the eastern edge of the development area (Barrie 1994, 49).
- 3.4.12 In 1845, the Monmouthshire Canal Navigation Company, in the recognition that steam locomotives were both faster and more efficient than canals and tramroads in the transport of freight, became the Monmouthshire Railway and Canal Company. Shortly afterwards, as a result of the passing of the Newport and Pontypool Railway Act 1845,

the company constructed its first stretch of railway, which led from Newport in the south to Pontypool in the north. This stretch of rail became known as the Eastern Valley Railway in order to differentiate it from another line, also constructed by the same company, which was adapted from the older Crumlin Tramroad, established in 1826. This latter line was known as the Western Valley Railway. By at least the 1850s, an extension to the Newport-Pontypool railway (GGAT03195g) was constructed, which extended northward towards the Blaenavon Ironworks. This railway line ran in a broadly N/S direction beyond the eastern edge of the development area and was instrumental in transporting pig iron directly from Blaenavon to markets elsewhere (Hughes 2008, 28). In 1866, the Brynmawr and Blaenavon Railway was constructed, which was leased immediately to the London and North Western Railway, who used it to transport raw materials, particularly coal, from South Wales to the Midlands via the Heads of the Valleys line. By 1878, the Brynmawr and Blaenavon Railway had been extended southwards. As a result, the Abersychan and Talywain railway station was constructed in the same year, which was later absorbed into the Great Western Railway. Also attached to this railway was the Varteg Hill Colliery Branch which, like its predecessor (the Cwm Ffrwd Tramroad) connected the coal mines and furnaces of Varteg Hill to Blaenavon. Within the southeast corner of the development area, a railway tunnel known locally as 'the Big Arch' (GGAT04597g; GGAT03191g) is a dominated feature within the local area, which almost forms a gateway into the present development area. The tunnel was constructed between 1879-9 for the purposes of establishing a high-level line between Blaenavon and Abersychan while simultaneously allowing a low-level line to pass underneath, which fed directly into the British Ironworks.

3.4.13 Collieries

3.4.14 Several collieries were established throughout the Post-medieval period across the areas in an around the Cwm Sychan Valley. Cwmbyrgwm Colliery, situated to the southwest, was the most notable, the pithead of which today constitutes a Scheduled Monument (SMMm163). The colliery was sunk at some point prior to 1820. By 1827, the colliery had expanded significantly in response to the growing need for coal at the British Ironworks. Today, the pithead of the colliery comprises the remains of at least three shafts, one to the east (GGAT13319g) and north (GGAT13254g), and one to the west. The latter shaft was demonstrably used for upcast ventilation, as indicated by the presence of a chimney (LB18591) directly above it. This chimney would have presumably allowed hot gases derived from a subterranean furnace to escape the mine, the purpose of which was to draw hot air towards the base of the upcast shaft. Near the easternmost shaft are the remains of a water balance headgear (NPRN85072), which was constructed towards the middle of the 19th century. Newman (2000, 110) indicates the presence of a sizeable timber beam within the shaft itself, indicating that the shaft was initially ventilated via brattices. In turn, the presence of this beam suggests that the shaft to which it belonged was the first to be sunk, as brattices were routinely implemented for the purposes of ventilating singular, stand-alone shafts. The water balance headgear associated with this shaft was composed of low cast iron and

- timber frames (Hughes *et al* 1994, 53). Furthermore, the remains of some pithead buildings (GGAT13255g; GGAT13257g) are situated within the curtilage of the Scheduled Monument.
- 3.4.15 Beyond the western edge of the development area, towards Blaengaefog Brook, is the site of the former Cwmsychan Colliery, which was also known as the Upper Talywaun Colliery. The colliery comprised a total of four shafts, sunk for the purposes of extracting both coal and ironstone, which supplied the British Ironworks nearby. These shafts were sunk in approximately 1860 in order to exploit the Two-Feet-Nine, Four-Feet, Upper-Six-Feet, Nine-Feet and Seven-Feet Seams. The two main shafts were sunk to depths of 183m and 156m, which were drained via the use of a Cornish steam engine with a seven-foot stroke.
- 3.4.16 To the north and west of Abersychan the Varteg Hill Colliery was established in 1860 by John Vipond, who had been extracting coal within the area since the early 1840s. Furthermore, the establishment of the Cwm Ffrwd Tramroad in 1819, which linked Varteg Hill to Blaenavon and the Monmouthshire Canal, suggests that coal mining had defined this area since the early 19th century. The colliery comprised a small collection of coal mines dispersed across the eastern hills of the Cwm Sychan Valley. By 1869, this collection of mines became known as the Victoria Works. As mentioned above, coal was transported from here directly to Blaenavon (and beyond) via the Varteg Hill Colliery Branch railway line.
- 3.4.17 Within the development area itself is the former site of the Abersychan Big Pits which, from the beginning of the 20th century onwards, was known by the more recognisable name of Lower Navigation Colliery (GGAT11532g). The colliery was sunk in the 1880s to depths of 119.5m and 140.7m for the purposes of extracting coal from the Nine-Feet and Five-Feet Seams respectively. Also situated within the development area are the remains of a pumping engine house (SMMm216), which was used to drain several coal mines within the area, including those attached to the Cwmbyrgwm Colliery and Abersychan Big Pits. This engine house was erected in 1845 and was constructed of sandstone masonry supported with cast iron plates and brackets, as well as slate roofing. In form, the engine house is rather peculiar, as it fails to incorporate an opening within its bob wall for condenser pipes to pass through, and neither did it incorporate iron straps to hold down the beam bearings. This may suggest that the engine house was at some point modified to include a different type of engine to the original (Bick 1989, 89).

3.4.18 Ironworks

3.4.19 The area of northern Torfaen within which the development area is situated has, throughout the Post-medieval period, witnessed the establishment of several ironworks. Within the Cwm Sychan Valley are three such sites, including the British, Pentwyn and Golynos Ironworks, as detailed below. Slightly beyond the valley to the north is the former site of the Varteg Ironworks, also detailed below, while beyond here is the Blaenavon Ironworks which, throughout the Post-medieval period, became the largest and most productive site of its kind in the area. Production at Blaenavon began

in 1789, during which time the ironworks comprised three blast furnaces. The small area of Blaenavon was perfect for the placement of an ironworks due to the natural resources it contained including, most notably, rich veins of iron ore that could produce nearly 20kg of pig iron per 45kg (Lloyd 1906, 162). The ironworks were owned by the firm Hill & Co, whose leading partner was Thomas Hill. The establishment of the ironworks represented a risky financial venture, as the initial investments necessary for its opening amounted to £40,000 - the equivalent of over £3,000,0000 today. Moreover, Blaenavon was the first ironworks in South Wales intended as a multifurnace site, which only heightened its financial risk. However, by the beginning of the 19th century the ironworks had swiftly established itself as one of the most significant iron producing sites in South Wales. In terms of overall production, Blaenavon was second only to the Cyfarthfa Ironworks in Merthyr Tydfil, which at this time was owned by Richard Crawshay. By 1805, a fourth blast furnace had been installed at Blaenavon, while shortly afterwards in 1810 a fifth was added. From 1860 onwards, production at the site increased significantly, as at this time the ironworks comprised six blast furnaces, all of which were in blast. In 1868, a seventh blast furnace had been installed. Two more blast furnaces were added in 1869, before the installation of a tenth in 1871. After this period, the ironworks sustained a protracted decline in productivity and significance and by 1921 only three blast furnaces remained, none of which were in blast (Riden and Owen 1995, 4). When comparing the productivity of Blaenavon to the British Ironworks, the location of which covers the entirety of the development area, it is evident that the latter consistently fell behind and therefore struggled to compete with the former.

3.4.20 In addition to the British Ironworks, two other ironworks were constructed within the Cwm Sychan region, at Pentwyn (GGAT05289g) and Golynos (GGAT09041), in 1825 and 1837 respectively. The Pentwyn Ironworks were notably smaller in scale than the British Ironworks, as even during its period of highest productivity it had only two furnaces in blast (Riden and Owen 1995, 20). Although the Golynos Ironworks began production at a similar capacity to the Pentwyn Ironworks, by 1849 a total of seven furnaces were in blast (Riden and Owen 1995, 16), meaning that it represented, during the middle of the 19th century at least, the largest ironworks in the Cwm Sychan area. By 1838, both the Pentwyn and Golynos Ironworks had merged and fell under the proprietorship of the Pentwyn and Golynos Iron Company, which, by 1850, had ceased operations (Roberts 2010, 42). In addition, the Varteg Ironworks (GGAT0904g) had also been constructed further north by the early 19th century, although these works were financially unsuccessful and relatively short lived. Eventually, the ironworks at Varteg were taken over by the firm Williams & Co, who were also the proprietors of the Golynos Ironworks (Roberts 2005, 33). The precise time period during which this transfer of proprietorship occurred is not known as little documentary evidence relating to the Varteg Ironworks survives. However, it has been indicated elsewhere (Riden and Owen 1995, 16 and 29) that Williams & Co had control over the operations of both the Golynos and Varteg Ironworks by at least 1847.

3.4.21 The British Ironworks

- 3.4.22 The historical and archaeological background to the British Ironworks (GGAT02515g; NPRN85082), also known as the Abersychan Ironworks, has already been outlined in detail by Roberts (2017, 14–17) during a survey of the site undertaken by the Glamorgan-Gwent Archaeological Trust (GGAT). Therefore, the information provided below will comprise a summary of his survey and will include augmentation where necessary. It should, furthermore, be mentioned that Roberts, in his survey, drew on an already rich historical inventory of the British Ironworks as laid out by such authors as Colebrook (1983), Takel (1999) and Foster (2001).
- 3.4.23 Construction of the British Ironworks began in 1826 on a parcel of land in Abersychan purchased by the British Iron Company on a 60-year lease. This parcel of land comprised the Bryngwyn and Wentsland manorial estates. The initial construction works took roughly a year to complete and as a result the ironworks had been opened for business by 1827. The British Iron Company was established around two years prior to the construction of the ironworks, in 1824. In total, the funds raised by the British Iron Company for the construction of the ironworks amounted to £1,600,000 - the equivalent of just under £92,000,000 today. These funds were raised in light of the 1825 repeal of the Bubble Act 1720, which made the process of raising corporate funds in the manner of a chartered company without royal approval illegal. The repeal of this act freed up the acquiring of more funds than would otherwise have been available and, in effect, allowed the establishment of the British Iron Company (Atkinson and Barber 1987,59). Moreover, the operations of the British Iron Company represented the first joint-speculation in the iron industry following the Bubble Act repeal (Evans 1993, 59). In its original formation, the British Iron Company comprised nine amalgamated enterprises (Fleischman and Parker 1992, 154). The founding of the company, therefore, constituted a large corporate undertaking. During the 1820s, the total funds allotted to the establishment of ironworks across Wales amounted to approximately £4,000,000 (Atkinson and Barber 1987, 61), meaning that the British Ironworks fund was roughly 40% of this total. An 1826 letter written by Richard Cort to the shareholders of the ironworks demonstrates that, in terms of its initial productive output, the works were making a profit of around £30,000 per year. This same letter also indicates that there existed an expectation that the income of the ironworks would more than double once construction works across the site had been completed (Cort 1826, Appendix V). Three company directors were responsible for the management of the ironworks in the early years of its operations, including John Taylor, Robert Small and James Henry Shears. In addition, the renowned Scottish metallurgist David Mushet was a member of the management committee.
- 3.4.24 The architect Decimus Burton was responsible for designing the many of the buildings of the British Ironworks. However, it appears that the designs of Burton were restricted to the façades of the works, rather than the industrial elements of its architecture, which were likely supplied by the Neath Abbey Ironworks. According to present understanding the ironworks, in its initial form, centred on the main office building

(LB14870), with six blast furnaces (NPRN85063) being situated slightly to the north of here. In its original form, the office comprised a single rectangular building (as indicated by the cartographic evidence detailed below). The surviving elements of the office building form a single storeyed quadrangle composed of Pennant sandstone walls. Although little of the roof survives, it was originally built from slate. The extension of the office into its present quadrangular form occurred sometime during the mid-late 19th century and involved the construction of an additional foundry, which was also incorporated into the quadrangle. Newman (2000, 110) has suggested that the conversion of the offices occurred during the 1840s. In considering the evidence provided by the Tithe map (see below), and assuming that Newman is correct, the conversion must have taken place in the late 1840s. Perhaps the most visually striking part of the offices are the pavilions incorporated into the front range, which are of classic Burton design. These pavilions were built using ashlar quoins. By 1830, the ironworks had reached full production, which amounted to the equivalent of 10,640 tons of smelted iron per year. During this time, only four of the six furnaces were in blast along with a series of refineries, puddling furnaces, annealing furnaces, rolling mills, engine houses, worker housing, collieries and tramroads, as well as a fitting shop and brick yard. The air for the blast furnaces was supplied by a pair of coupled blowing engines, each with a $45^{1}/_{2}$ -inch beam, which were both supplied and installed by the Neath Abbey Iron Company. After 1830, the productivity of the ironworks further increased to the equivalent of 12,000 tons per year. This increase was due in part to the fact that by this time five of the six existing blast furnaces were in blast.

3.4.25 During the 1830s, the British Ironworks concentrated primarily on producing forge pig. At this time, the ironworks did not have the means of converting this pig into wrought iron itself and instead it was used to supply the local forges and foundries. In addition, the ironworks was producing sizeable quantities of merchant bars, which were transported to the Monmouthshire Canal via tramroad. However, this venture was in the long run unsuccessful. In response to this failure, the British Iron Company concentrated on producing iron rails. These were significantly more lucrative and were in much higher demand due to the burgeoning locomotive industry of the mid-19th century. By 1840, the British Ironworks were producing iron rails by shaping cast iron within its rolling mills. Prior to this, in 1838, the ironworks had recorded its first profits, which finally allowed all six of the blast furnaces to be in operation. As suggested above, the conversion of the office building into quadrangular form and the construction of an attached forge may have occurred towards the end of the 1840s. Situated within the southwest range of the quadrangle are the remains of an air furnace (SMMm221), which likely date to this period as well. The air furnace was, in effect, a type of reverberatory furnace used for the purposes of remelting cast iron before being transferred to the foundry. Within Britain, this type of furnace is exceedingly rare, since it was in use for only a short period, before being superseded by the more efficient cupola furnace (Stratton and Trinder 1997, 76). The furnace at the British Ironworks is the only one of its kind to survive in Wales.

- 3.4.26 Over the course of the 1840s the ironworks had gained a reputation as a specialist rail producer. So strong was this reputation that, by the 1850s, sales from the production of rails had become its main source of revenue. The rails produced by the British Ironworks at this time were highly sought after and were sold within both domestic and foreign markets. The design of the rails was the product of a fairly long period of experimentation conducted at the ironworks itself during the 1840s, which were led by the engineer Eaton Hodgkins, as detailed in his correspondence with fellow engineer William Fairnbairn (1849, 13–14). The success of its rail production, however, could do little to remedy the financial issues that plagued the ironworks throughout the 1830s and 1840s. These issues were caused in large part by ongoing legal disputes concerning the Corngreaves Ironworks near Birmingham, which was also owned by the British Iron Company. In summary, these ironworks were established on freehold land worth £550,000 (the equivalent of over £31,500,000 today), which ultimately could not be paid due to a collapse in the iron market during the 1820s. Legal proceedings were therefore begun in order to nullify the contract, which were unsuccessful. The British Iron Company, in consequence, was burdened with significant debt, which culminated in the company declaring bankruptcy in 1843. During that same year, the company was reorganised and became the New British Ironworks, which led to a new influx in investment. With this new investment, hot blast was introduced to the British Ironworks in 1848, with the aim of increasing both the efficiency and yield of the blast furnaces. Initially, the hot blast stoves were heated by coal alone (Barber 1999, 29) – it was only later that the stoves were connected to an economiser. Yet much like its predecessor, the New British Iron Company was also plagued by financial mismanagement, leading to its declaration of bankruptcy in 1851. Over the course of the 1850s, the ironworks witnessed a resurgence in prosperity after the works were purchased by the Ebbw Vale Company. Under its proprietorship, all six blast furnaces on site were in continual operation. The levels of productivity initiated by the takeover of the ironworks by the Ebbw Vale Company were sustained until 1860, after which time a renewed financial downturn affected the ironworks.
- 3.4.27 Due to a decrease in the demand for iron, only two of the six blast furnaces at the British Ironworks were in blast by 1861, which had increased to four by 1864. From the middle of the 1860s, demand for iron rails once again increased, the revenue from which led to the construction of a new puddling mill (GGAT11510g) powered by a 6ft stroke condensing beam engine fed by six boilers connected to an economiser system, which recycled waste gas from the nearby blast furnaces. This new puddling mill was both designed and constructed by Josiah Richards the principal manager of the ironworks. In addition, a roughing mill was erected at this time. By 1869, five of the six blast furnaces at the ironworks were in operation. From this time onwards, the ironworks underwent a financial boom, caused in large part by its reputation as a producer of high-quality rails at a time when they were in renewed demand. In turn, the uptake in revenue witnessed by the works allowed reinvestment. By the 1870s, the British Ironworks had grown significantly and contained 52 puddling furnaces housed within three forges and 24 balling furnaces serving five rolling mills. Moreover,

specialist machinery had also been installed, which allowed ironworking operations specific to the manufacture of rails to be conducted. These included a pair of steam powered punches used for incorporating notches into rails, which were powered by a newly installed inverted engine. By the end of the 1870s, demand for wrought iron rails had decreased as a result of the proliferation of steel rails at this time. This downturn in demand led to the ironworks closing in 1876. In the following year, however, the ironworks, now under the proprietorship of the Ebbw Vale Steel Iron & Coal Company, reopened in an attempt to profit from the booming steel market. Two of the six blast furnaces were put into operation, which had increased to four by 1880. During this period, the ironworks had shifted its specialisation from rails to *spiegeleisen* — a form of pig iron, containing a high manganese component, used in the manufacture of steel. Again, this venture proved unsuccessful, and all production had ceased at the ironworks by 1881 (Ince 1993, 111–12). In 1890, the site of the former ironworks was sold, yet coal mining operations were still being conducted within the Abersychan Big Pits and Lower Navigation Colliery.

3.4.28 Modern

- 3.4.29 During the 20th century, the development area was mainly being used for coal mining. In around 1900, or at least shortly afterwards, the site of the former British Ironworks was leased to the Powell Dyffryn Steam Coal Company, who established the Lower Navigation Colliery (GGAT11532g). It will be recalled (see above) that the Abersychan Big Pits previously occupied this area, which by at least 1900 had been abandoned. The establishment of the Lower Navigation Colliery involved the sinking of a new pit – those shafts associated with the Abersychan Big Pits remained in a state of disuse. The Lower Navigation Colliery was attached to a mineral railway network that had previously been established to serve the British Ironworks. This indicates that much of the railways attached to ironworks were sold directly to the Powell Dyffryn Steam Coal Company, as opposed to being demolished. Over the course of the early 20th century the excavation operations conducted within the Lower Navigation Colliery resulted in the formation of two sizeable spoil tips, which still survive today. These spoil tips occupy a very large area within the centre of the development area. Drainage issues have historically affected the spoil tips and in order to remedy these the Cwmsychan Brook was established, which allowed water accumulated by the tips to drain southwards towards the exterior of the site. By 1947, the Lower Navigation Colliery had been nationalised and incorporated into the National Coal Board. This occurred at a time when the colliery was struggling financially, and nationalisation did little to alleviate these issues. By 1954, the colliery was closed, and its pithead buildings were mostly demolished. However, the engine house (LB14869) remained and was bought by the firm ETM Steel Fabrication. The details concerning the operations of this firm and its use of the former engine house are limited. The gates currently leading into the curtilage of the engine house bear the symbol 'ETM'.
- 3.4.30 Beyond the development area, the Cwmbrygwm Colliery, which was sunk during the early 19th century, continued in operation towards the beginning of the 20th century,

but was abandoned at some point prior to 1901. To the north, the mines attached to the Varteg Hill Colliery, sometimes known collectively as the Victoria Works, which were mostly sunk towards the end of the 19th century, remained in operation until 1957. In 1908, coal extraction operations began on a previously unexplored slope of Varteg Hill, known as slope No 10. By 1915, the pit at slope No 10 was the only extraction area of the colliery that was still in operation and all other pits attached to the colliery had been closed. During this time, the pit on slope No 10 employed 553 men and boys. To the west of the development area, Cwmsychan Colliery also remained in operation throughout much of the 20th century, although these operations were comparatively limited, being based on a diminutive workforce. Between 1924 and 1928, the colliery employed at most 33 men and boys. During this time, the colliery was known as the Talywaun Level. Little is known of the colliery during the early 1930s, and the colliery as a whole had been abandoned by at least 1932.

3.5 Cartographic Evidence

3.5.1 Tithe Map Evidence

The 1841-3 Tithe map of the local area (Figure 7) indicates the positions of several 3.5.2 buildings associated with the British Ironworks. The offices on the southern end of the ironworks (LB14870) are shown as being markedly different when compared their present form, which comprise a quadrangular arrangement of buildings. On the Tithe map, only a single rectangular shaped building is shown, which today constitutes the northern range of the quadrangle. This serves as an indication that the offices of the ironworks were extended to form a quadrangular footprint sometime after 1841. To the north of the office building, towards the southern end of the development area, the Tithe map indicates the position of the blast furnaces (NPRN85063) and casting house (GGAT11497g). At this time the furnaces numbered six in total, of which only two or three were in blast (Riden and Owen 1995, 2). The illustration of the blast furnaces and casting house comprises a homogenous rectangular block and fails to delineate the individual footprints of each structure. Abutting the northern edge of the furnaces and casting house is what appears to be an elongated charging bank (GGAT10899g), indicating that the furnaces were charged from the north. Abutting the eastern edge of the furnaces and casting house is a small, elongated building of unknown function. Immediately east of here is the engine house (GGAT11503g), within which the blowing engine that supplied air to the blast furnaces was situated. It seems that the bob wall formed the western edge of the engine house, which lines directly with the unknown structure on the east of the casting house and furnaces. This may suggest that the latter structure contained, or was at least associated with, the bellows. To the north of the engine house are two other buildings. The westernmost of these is unidentified, while the easternmost potentially constitutes an additional engine house, although this idea is tentative. To the east of here is another elongated building, which comprised a forge with attached workshops (GGAT11500g). Finally, to the northwest of the furnaces and casting house is a single rectangular building, which either constitutes a coke oven or lime kiln, most likely the latter.

- Beyond the area described above, which represents the core of the British Ironworks, 3.5.3 the Tithe map illustrates three other discrete areas. These areas include a row of worker housing (GGAT11519g) on the east end of the development area, the reservoirs to the north (GGAT11521g; GGAT11522g) and the Abersychan Big Pits to the west. The area of worker housing comprises two rows, both of which are aligned N/S. The porches of the houses are also shown as facing inwards towards the street between the two rows. The two reservoirs on the north end of the development area are depicted as irregular in form, with the northernmost being larger than the southernmost. The two reservoirs are shown as being connected by a narrow leat, while another watercourse is shown as flowing outwards from the northernmost reservoir. This leat runs in a NW/SE direction before forming a fork, which then encompasses the Abersychan Big Pits, which at this time comprises at least thirteen buildings. None of these buildings can be positively identified. However, the rectangular building situated towards the end of the eastern fork of the watercourse that extends south-westward from the northern reservoir may have housed a waterwheel. Certainly, the form and position of this building are entirely consistent with this hypothesis. Towards the northern end of the development area, the Tithe map faintly demarcates the position of Old Castle Farm, the farmhouse of which still survives today (GGAT04013g). The connection between this farm and the ironworks and collieries that occupied the remainder of the development area is unknown. There does exist the possibility that the farm pre-dates both the establishment of the British Ironworks in 1827 and may therefore have originally belonged to the Bryngwyn and Wentsland manorial estates.
- 3.5.4 Although relatively scant, the Tithe map also provides some information on the transportation networks that fed into the development area during the early–mid-19th century. In particular, the western terminus of the Abersychan Limestone Tramroad can be observed, which connected the British Ironworks to the limestone quarries of Abersychan to the east. This tramroad is shown as terminating towards the southwest corner of the development area, immediately south of an artificial watercourse that enters the ironworks from the east. The Cwm Ffrwd Tramroad, which extended from the collieries and furnaces of Varteg Hill to the Blaenavon Tramroad in Abersychan, is also shown on the Tithe map. This tramroad is depicted as running in a broadly NW/SE direction beyond the eastern edge of the British Ironworks reservoirs.

3.5.5 1st Edition Ordnance Survey (OS) Map

3.5.6 The 1880 1st Edition OS map(Figure 8) demonstrates that the development area had altered considerably between this time and 1841. Beyond the southern limit of the development area, the offices attached to the British Ironworks are now depicted in quadrangular form. Aside from the addition of a new engine house to the south (GGAT11503g), the furnace and casting house area of the ironworks is illustrated as being largely unchanged. This new engine house was constructed in order to supply additional air to the blast furnaces. The OS map demonstrates the positions of these blast furnaces significantly more clearly that did the previous Tithe map. On the OS map, the throats of the furnaces are demarcated as circular cavities set in front of a

large charging bank. To the north and west of this bank, three new coke ovens (GGAT11508g) and one lime kiln (GGAT11507g) have been constructed respectively. The new lime kiln has been constructed to the south of the one that previously inhabited this area, which is also shown as having been extended eastward. On the east end of the development area only the western row of worker housing remains - it appears that the eastern row had by this time been demolished and replaced with a brickworks and attached brickyard to the south and a lime kiln to the north (GGAT11516g). Bounding the surviving housing row to the south, a new forge, engine house and chimney stack has been constructed (GGAT11511g). This indicates that two separate forges occupied the southeast corner of the development area from at least 1880 onwards. However, both forges were connected via a system of narrow-gauge rails. The new forge is shown as being broadly L-shaped, with three protrusions incorporated into its western wall. In form and size, these protrusions appear similar to reverberatory furnaces. Indeed, the small square shaped appendages shown attached to the western end of these features are markedly similar in form to chimney bases, which also supports their identification as reverberatory furnaces.

3.5.7 Aside from the addition of a sluice on the south side of the southernmost reservoir (GGAT12893g), the water management system on the northern end of the development area has remained largely unchanged since 1841. On the eastern edge of the development area, beyond the southernmost reservoir, the OS map shows that by this time the Abersychan and Talywain railway station (NPRN308317) had been constructed, in conjunction with a water crane and pump on its southern side and a signal box to its southwest. On the western end of the development area, the collection of buildings shown on the Tithe map remain, aside from the possible water mill. Moreover, the watercourse originally attached to its western side has now gone and in its place the map shows a NE/SW running series of rails. These rails are attached to a newly constructed locomotive and truck shed, which is demarcated as a broadly square shaped structure.

3.5.8 2nd and 3rd Edition Ordnance Survey (OS) Maps

3.5.9 By the time of the publication of the 1901 2nd Edition OS map (Figure 9), the British Ironworks had closed down and the only businesses operating within the development area at this time were the Lower Navigation Colliery and, by virtue of the Abersychan and Talywain railway station on the eastern edge of the study, the Brynmawr and Blaenavon Railway. The pithead buildings of the Lower Navigation Colliery are the same as those of the previous Abersychan Big Pits, which in form appear unchanged. On the southern end of the development area the map demonstrates that by this time significant portions of the British Ironworks had been demolished. The only structures that are shown in complete condition are the office and foundry quadrangle, another building to its east and the chimney originally attached to the new forge. The positions of the six blast furnaces are also illustrated on the map, however it is clear that they are no longer in use. The two reservoirs towards the northern half of the development area have also been drained. Within the footprint of the former northern reservoir a

watercourse has been established, labelled on the map as 'Cwmsychan Brook'. This watercourse also has a sluice attached to it, which appears to have allowed water to flow into a lower section of the watercourse, which is shown as occupying the footprint of the former southern reservoir. Another sluice has been incorporated into this lower section. On the east of the development area, the surviving row of worker housing still stands, which is shown as facing onto the Abersychan and Talywain railway station. Finally, the map demonstrates the position of two sizeable spoil tips, which the Cwmsychan Brook snakes its way around on their eastern edges. These tips would have derived from sinking operations being conducted by the Lower Navigation Colliery. The Cwmsychan Brook was likely established for the purposes of draining water collected by the spoil tips.

3.5.10 The 1920 3rd Edition OS map (Figure 10) shows little in the way of change; however, some important developments are apparent. The pithead of the Lower Navigation Colliery, situated on the west end of the development area, has a new building on its eastern side, situated marginally northeast of the locomotive and truck shed. The purpose of this building is unknown. The former site of the British Ironworks is shown as being in the same state of dilapidation as it was in the previous 2nd Edition OS map. Yet a new building has been erected immediately west of the office and foundry quadrangle, which has been labelled as 'swimming baths'. In considering their position, it appears that these baths may have been attached to the Lower Navigation Colliery. The pair of sizeable spoil tips occupying the centre of the development area are still present and on the map are demarcated more clearly, with pronounced hashers. This may serve as an indication that the tips had grown in size since 1901.

3.6 Aerial Photographic Evidence

The 1984 aerial photograph of the local region (Plate 7) demonstrates that by this time 3.6.1 the development area was void of industry. The British Ironworks to the south had long fallen out of use and the pithead buildings of the Lower Navigation Colliery to the west had almost wholly been demolished. Moreover, the Abersychan and Taylwain railway station is shown in a state of disrepair and the railway line running along its western edge appears in a demolished state. To the south of here, the row of worker housing and brickyard originally attached to the British Ironworks has now been abandoned and is visibly in a dilapidated state. The office and foundry quadrangle of the former British Ironworks is still standing, as well as the original forge to the east of here. The Cwmsychan Brook is clearly visible on the photograph and so too are the spoil tips first noted on the 1901 2nd Edition OS map. The northernmost tip, however, appears less distinct, perhaps indicating that unlike its southern counterpart it had been flattened or trimmed at its summit. Towards the southern edge of the spoil tips the photograph indicates the presence of an additional series of mounds, highly irregular in form. These mounds likely comprise demolition material from the British Ironworks as well as the Lower Navigation Colliery. Towards the northwest corner of the development area, the Old Castle Farmhouse is visible, which was first noted on the Tithe map.

3.6.2 The 1991 aerial photograph of the local area (Plate 8) reveals the development area to be largely unchanged, with the exception of the former site of the worker housing and brickyard, which is now being used as a car scrap yard. The 1995 aerial photograph appears to indicate that the development area is in much the same condition as it is today, with the two spoil tips having been flattened off. The car scrap yard is, however, still visible, which is no longer present today.

3.7 Previous Studies

- 3.7.1 1992 An archaeological report was prepared by the Ironbridge Institute, which studied the history and archaeology of the former site of the British Ironworks.
- 3.7.2 1993 An archaeological desk-based assessment was commissioned by Torfaen County Council, which formed an analysis of the former site of the British Ironworks in advance of the British Reclamation Scheme.
- 3.7.3 1994 A historical, topographical and archaeological assessment was compiled by Philip Riden in advance of the British Reclamation Scheme.
- 3.7.4 1996 An archaeological desk-based assessment was compiled by GGAT, which analysed the former site of the British Ironworks in advance of a regeneration project.
- 3.7.5 1997 An archaeological evaluation was commissioned by the Babtie Group Ltd of the former site of the British Ironworks.
- 3.7.6 2017 An archaeological survey and assessment was undertaken by GGAT with grant aid from Cadw, which evaluated the history and surviving remains of the British Ironworks.

3.8 Site Visit

3.8.1 A walkover survey was conducted on the 25th April 2022 by Dr Rhys Morgan. During this survey, the development area as well as the surviving heritage assets it contained were visually analysed and photographed from key views in order to establish more thoroughly the effects, both direct and indirect, of the proposed coal tip remediation on both. Furthermore, heritage assets within a primary 250m radius and designated sites within a secondary 1km radius were visited and assessed for indirect and setting effects and key views to and from the development area were photographed. The survey was undertaken in clear weather and strong sunlight.

4 Identified Heritage Assets

4.1 Sites of Archaeological and Historical Interest

- 4.1.1 In total, 78 known heritage assets were identified within the confines of the development area. Within the primary study area, which comprises a 250m radius surrounding the development area, a further known 127 heritage assets were identified. Finally, for the purposes of assessing the setting and significance of statutory designated (Value A) heritage assets, a secondary study area, which comprises a 1km radius surrounding the development area, was applied, within which a single heritage asset was identified. Therefore, in total, 205 heritage assets were assessed. All heritage assets identified during the assessment are included in Table 3 below.
- Of those 78 known heritage assets identified within the development area, 30 were considered for impact assessment and 48 were discarded. The reason that these were discarded was because they are situated beyond the boundary of proposed groundworks and remediation works, therefore limiting the potential of them being directly encountered during the development. Of those 127 known heritage assets identified within the primary (250m radius) study area, 23 were considered for impact assessment, meaning that 104 were discarded. The reason that these heritage assets were discarded was as follows. Firstly, these heritage assets were deemed to be situated beyond the limits of potential direct (physical) impacts. Secondly, these heritage assets were recorded as being in a poor state of preservation, therefore limiting the potential lines of sight to and from the proposed development. This, in turn, would limit the potential indirect (visual) affects that the proposed development would potentially have on these heritage assets. Finally, the single heritage asset identified within the secondary (1km radius) study area was considered for impact assessment. In summary, of those 205 known heritage assets identified during the assessment, 72 were considered for direct and indirect impact assessment.

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
Within	Development Area	1						
ID1	SMMm216; LB18595; GGAT04699g; NPRN85065	British Colliery Pumping Engine House	SO2584403644	Post-medieval	Engine House	Scheduled Monument; Grade II Listed Building	SMMm216; LB18595	А
ID2	LB14871; GGAT04597g; GGAT03191g; NPRN34968	The Big Arch	SO2599903495	Post-medieval	Arch	Grade II Listed Building	LB14871	В
ID3	GGAT04013g; NPRN20505	Old Castle, The British	SO25840421	Post-medieval	House	None	n/a	D
ID4	GGAT10899g	British Ironworks Charging Bank I British Ironworks	SO2573203713	Post-medieval	Charging Bank	None	n/a	С
ID5	GGAT11497g	Casting House British Ironworks	SO2572303693	Post-medieval	Casting House	None	n/a	D
ID6	GGAT11498g	Calcining/Lime Kilns I	SO2578903730	Post-medieval	Kilns	None	n/a	С
ID7	GGAT11499g	British Ironworks Engine House for Blowing Engines	SO2578203667	Post-medieval	Engine House	None	n/a	D
ID8	GGAT11500g	British Ironworks Old Forge and Mill	SO2584303632	Post-medieval	Forge/Mill	None	n/a	D
ID9	GGAT11501g; NPRN85066	British Ironworks Chimney Base	SO2586003678	Post-medieval	Chimney	None	n/a	С
ID10	GGAT11502g; GGAT11504g	Possible Enginge House for Blowing Engine	SO2581603672	Post-medieval	Engine House	None	n/a	D
ID11	GGAT11503g	Engine House near British Ironworks Casting House	SO2568703656	Post-medieval	Engine House	None	n/a	С
ID12	GGAT11505g	Structure East of British Ironworks Casting House	SO2576503691	Post-medieval	Structure	None	n/a	D

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
		Engine House for						
		Blowing Engine						
		Southwest of						
ID13	GGAT11506g	Furnace Bank	SO2567103693	Post-medieval	Engine House	None	n/a	С
		British Ironworks						
		Calcining/Lime						
ID14	GGAT11507g	Kilns II	SO2566703784	Post-medieval	Calcining/Lime Kilns	None	n/a	С
		British Ironworks						
ID15	GGAT11508g	Coke Ovens I	SO2565603768	Post-medieval	Coke Ovens	None	n/a	С
		British Ironworks						
ID16	GGAT11509g	Coke Ovens II	SO2574303758	Post-medieval	Coke Ovens	None	n/a	D
		British Ironworks						
ID17	GGAT11510g	New Forge and Mill	SO2591203687	Post-medieval	Mill/Forge	None	n/a	D
		Engine House for						
		British Ironworks						
ID18	GGAT11511g	New Forge and Mill	SO2589503704	Post-medieval	Engine House	None	n/a	С
		Chimney Stack and						
		Boilers for British						
		Ironworks New					,	_
ID19	GGAT11512g	Forge and Mill	SO2593603705	Post-medieval	Chimney/Boliers	None	n/a	С
		British Ironworks					,	_
ID20	GGAT11513g	Building I	SO2584403587	Post-medieval	Structure	None	n/a	С
		British Ironworks					,	
ID21	GGAT11514g	Building II	SO2587103581	Post-medieval	Structure	None	n/a	С
ID22	CCAT11515-	British Ironworks	CO2F00202770	Doot woodings	Duialussaulsa	Nama	- /-	
ID22	GGAT11515g	Brickworks Lime Kilns near	SO2590203770	Post-medieval	Brickworks	None	n/a	С
ID23	CC AT11516~	British Ironworks Brickworks	SO2588803790	Doct modicus	Lime Kilns	None	n/a	С
1023	GGAT11516g	British Ironworks	302388803790	Post-medieval	Lime Kiins	None	II/ d	C
		Workers' Dwellings						
ID24	GGAT11519g	and Brickyard Row	SO2592403775	Post-medieval	House Row	None	n/a	С
1024	GOVIII	British Ironworks	302332403773	1 03t-medieval	TIOUSE NOW	NOTIC	ii/ a	
		Water						
		Management						
ID25	GGAT11520g	System	SO2590803952	Post-medieval	Leat System	None	n/a	С

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
		British Ironworks						
ID26	GGAT11521g	Reservoir I	SO2585904094	Post-medieval	Reservoir	None	n/a	D
		British Ironworks						
ID27	GGAT11522g	Reservoir II	SO2592804010	Post-medieval	Reservoir	None	n/a	D
		British Ironworks						
		Locomotive Shed						
ID28	GGAT11527g	and Truck Shed	SO2565803838	Post-medieval	Shed	None	n/a	С
		Level Southwest of						
		British Ironworks					,	_
ID29	GGAT11528g	Furnaces	SO2566203715	Post-medieval	Level	None	n/a	С
		British Ironworks						
IDOO	004744500	Balance Pit and	602574502040	D	D D': /A: Cl (:		,	
ID30	GGAT11529g	Airshaft	SO2574503910	Post-medieval	Balance Pit/Air Shaft	None	n/a	D
1024	CCAT11520-	British Ironworks	SO2580103715	Dook woodieel	NA: Chaft	Nama	/-	5
ID31	GGAT11530g	Old Ironstone Shaft	302580103715	Post-medieval	Mine Shaft	None	n/a	D
		British Ironworks						
ID32	GGAT11531g	Old Forge Pumping Pit	SO2584803650	Post-medieval	Pumping Pit	None	n/a	С
1032	GGATIISSIg	British Ironworks	302364603030	Post-medievai	Pullipilig Pit	None	II/ d	C
		Lower Navigation						
ID33	GGAT11532g	Colliery	SO2569603875	Modern	Colliery	None	n/a	С
1033	GGA111332g	British Ironworks	302303003873	Wiodeiii	Colliery	None	11/ a	-
		Railway Wagon						
ID34	GGAT11535g	Repair Works	SO2583603637	Modern	Repair Works	None	n/a	С
1554	00/111333g	British Ironworks	302303003037	Wiodein	Repuli Works	TTOTIC	11/ 4	
ID35	GGAT11536g	Weigh Machine	SO2594503531	Modern	Weigh Machine	None	n/a	С
	00/1122308	British Ironworks	00200100001		110.8.1110011110		,	
ID36	GGAT11538g	Furnace Slag Blocks	SO2594603533	Post-medieval	Slag Blocks	None	n/a	D
		British Ironworks			0.000		.,,	
ID37	GGAT11539g	Charging Bank II	SO2573203713	Post-medieval	Charging Bank	None	n/a	D
	,	British Ironworks			0 0		,	
ID38	GGAT12881g	Leat I	SO2591104013	Post-medieval	Leat	None	n/a	D
	j	British Ironworks						
ID39	GGAT12882g	Reservoir III	SO2564903985	Post-medieval	Reservoir	None	n/a	D
	_	British Ironworks						
ID40	GGAT12892g	Reservoir Sluice I	SO2589604063	Post-medieval	Sluice	None	n/a	D

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
		British Ironworks						
ID41	GGAT12893g	Reservoir Sluice II	SO2590403937	Post-medieval	Sluice	None	n/a	С
		British Ironworks						
ID42	GGAT12894g	Reservoir Sluice III	SO2584903911	Post-medieval	Sluice	None	n/a	D
		British Ironworks						
ID43	GGAT12895g	Reservoir Sluice IV	SO2592903937	Post-medieval	Sluice	None	n/a	D
		Cwm-sychan Place						
ID44	GGAT13216g	Small Pond	SO2570304118	Post-medieval	Pond	None	n/a	D
		British Ironworks					,	_
ID45	NPRN85064	Coke Ovens III	SO25710372	Post-medieval	Coke Ovens	None	n/a	С
		Caslte						
		Cottage/Castle					,	
ID46	NPRN12932	Farm Cottage	SO25840420	Post-medieval	Cottage	None	n/a	D
		Abersychan and						
15.47	NDDN1200247	Talywain Railway	500500004		5 11 61 11		,	
ID47	NPRN308317	Station	SO26030394	Post-medieval	Railway Station	None	n/a	D
10.40	GGAT02515g; NPRN85082	British Ironworks	SO25750365	Dook woodie	lua monta ulta	None	/-	
ID48	INPRIN65082	British Ironworks	3025750305	Post-medieval	Ironworks	None	n/a	Α
ID49	NPRN85070	Wagon Repair Shed	SO25830364	Post-medieval	Shed	None	n/a	D
1043	NF KN85070	British Ironworks	3023830304	r Ost-illedieval	Siled	None	11/ a	<i>D</i>
ID50	NPRN85063	Blast Furnaces	SO25710372	Post-medieval	Blast Furnaces	None	n/a	В
1030	141 141405005	British Ironworks	3023/103/2	1 03t ilicale val	blast i diffaces	None	11/ 0	В
ID51	None	Mineshaft	SO2591003812	Post-medieval	Shaft	None	n/a	С
		British Ironworks	00100100011		0.1.0.1		, ۵	
ID127	None	Possible Culvert I	SO2589504072	Post-medieval	Culvert?	None	n/a	D
		British Ironworks	00100000.071		Carrett		, ۵	
ID128	None	Shaft I	SO2598503555	Post-medieval	Shaft	None	n/a	D
		British Ironworks					,	
ID129	None	Shaft II	SO2600103519	Post-medieval	Shaft	None	n/a	D
		British Ironworks					,	
		Possible Ironstone						
ID130	None	Shaft	SO2579303718	Post-medieval	Shaft	None	n/a	D
		British Ironworks						
ID131	None	Possible Adit I	SO2577003683	Post-medieval	Adit?	None	n/a	D
		British Ironworks						
ID132	None	Possible Culvert II	SO2570503661	Post-medieval	Culvert?	None	n/a	D

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
		British Ironworks						
ID133	None	Possible Culvert III	SO2565403666	Post-medieval	Culvert?	None	n/a	D
		British Ironworks						
ID134	None	Possible Culvert IV	SO2564703672	Post-medieval	Culvert?	None	n/a	D
		British Ironworks						
ID135	None	Possible Culvert V	SO2556403710	Post-medieval	Culvert?	None	n/a	D
		British Ironworks						
ID136	None	Possible Culvert VI	SO2595604078	Post-medieval	Culvert?	None	n/a	D
		British Ironworks						
ID137	None	Possible Culvert VII	SO2594303962	Post-medieval	Culvert?	None	n/a	D
		British Ironworks						
ID138	None	Possible Adit II	SO2591803881	Post-medieval	Adit?	None	n/a	D
		British Ironworks						
		Possible Culvert						
ID139	None	VIII	SO2589303877	Post-medieval	Culvert?	None	n/a	D
		British Ironworks						
ID140	None	Possible Adit III	SO2590303817	Post-medieval	Adit?	None	n/a	D
		British Ironworks					,	_
ID142	None	Shaft III	SO2590203808	Post-medieval	Shaft	None	n/a	D
		British Ironworks					,	_
ID143	None	Shaft IV	SO2593903768	Post-medieval	Shaft	None	n/a	D
ID444		British Ironworks	60250020252	D	CI C		,	
ID144	None	Shaft V	SO2590303752	Post-medieval	Shaft	None	n/a	D
15445		British Ironworks	602502222	D	A 1212		,	
ID145	None	Possible Adit IV	SO2592303742	Post-medieval	Adit?	None	n/a	D
10446	Name	British Ironworks	603500303500	Doot word!	Ch - Ch	News	- 1-	
ID146	None	Shaft VI	SO2598303509	Post-medieval	Shaft	None	n/a	D
10147	None	British Ironworks Possible Culvert IX	SO2584903928	Post-medieval	Culvert?	None	2/2	D
ID147	None		302584903928	Post-medievai	Culvertr	None	n/a	U
10140	Nama	British Ironworks Shaft XI	CO3E0C303007	Dook woodings	Shaft	Nama	- /-	D
ID148	None	British Ironworks	SO2586303897	Post-medieval	Shart	None	n/a	D
ID149	None	Shaft VII	SO2598403888	Post-medieval	Shaft	None	n/a	D
10149	NOTE	British Ironworks	302330403088	rust-illeuleval	Silait	NOTIE	11/ d	D
ID1E0	None	Shaft VIII	SO2587503660	Post-medieval	Shaft	None	n/2	D
ID150	None	British Ironworks	302387303000	rust-medieval	Siidit	None	n/a	ט
ID151	None	Shaft IX	SO2598203495	Post-medieval	Shaft	None	n/a	D
IDT2T	None	SHALLIN	302330203493	rust-illeuleval	Juall	NOTIE	n/a	U

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
		Lower Navigation						
ID152	None	Colliery Shaft I	SO2554903856	Post-medieval	Shaft	None	n/a	D
		Lower Navigation						
ID153	None	Colliery Shaft II	SO2554103851	Post-medieval	Shaft	None	n/a	D
		British Ironworks						
ID154	None	Shaft X	SO2595603555	Post-medieval	Shaft	None	n/a	D
Within	Primary (250m rad	ius) Study Area (All He	ritage Assets)					
	SMMm221;							
	GGAT04698g;	Air Furnace at				Scheduled		
ID52	NPRN85068	British Ironworks	SO2571503603	Post-medieval	Furnace	Monument	SMMm221	Α
		Former Colliery						
	LB14869;	Engine House at				Grade II		
	GGAT04595g;	ETM Steel		Post-		Listed		
ID53	NPRN85071	Fabrication	SO2537403966	medieval/Modern	Engine House	Building	LB14869	В
	LB14870;	British Ironworks				Grade II*		
	GGAT04596g;	Office and Foundry				Listed		
ID54	NPRN85067	Quadrangle	SO2573103620	Post-medieval	Office/Foundry	Building	LB14870	Α
		Former Goods						
		Shed of				Grade II		
		Abersychan and				Listed		
ID55	LB18585	Talywain Station	SO2602903804	Post-medieval	Shed	Building	LB18585	В
	LB18582;					Grade II		
	NPRN12928;	Church of St				Listed		
ID56	NPRN421328	Thomas	SO2619304044	Post-medieval	Church	Building	LB18582	В
	GGAT03190g;							
ID58	NPRN36832	Elizabeth Row	SO25420345	Post-medieval	House Row	None	n/a	С
		Abersychan				Within	,	
		Limestone				Scheduled		
ID63	GGAT07226g	Tramroad	SO2697903446	Post-medieval	Tramroad	Monument	SMGm597	С
		British Ironworks				Grade II*		
	LB14879;	Smiths' Shop or			Smiths'	Listed		
ID65	GGAT11517g	Foundry	SO2571003597	Post-medieval	Shop/Foundry	Building	LB14870	В
						Grade II*		
		British Ironworks				Listed		
ID66	GGAT11518g	Fitting Shop	SO2570403616	Post-medieval	Fitting Shop	Building	LB14870	В

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
		British Ironworks						
		Feeder Pond and						
		Open Air			Pond/Swimming		,	
ID68	GGAT11524g	Swimming Baths	SO2566003634	Post-medieval	Baths	None	n/a	С
		British Ironworks						
ID69	GGAT11525g	Internal Tramroad	SO2580003578	Post-medieval	Tramroad	None	n/a	С
		Locomotive Shed						
		near British						
ID70	CCAT11526~	Ironworks Old Mill	SO2580903592	Post-medieval	Shed	None	2/2	
1070	GGAT11526g	and Forge British Ironworks	302360905392	Post-medievai	Sileu	None	n/a	С
		Chaff Cutting						
ID72	GGAT11534g	House	SO2575703585	Modern	Cutting House	None	n/a	С
	GGAT11537g;	British Ironworks						
ID73	NPRN85069	Electrical House	SO2574303571	Modern	Electrical House	None	n/a	С
	GGAT11883g;	Pisgah Baptist						
ID74	NPRN12927	Chapel	SO2607004360	Modern	Chapel	None	n/a	С
ID75	GGAT12880g	Cwmsychan Leat	SO2534704019	Post-medieval	Leat	None	n/a	С
		·						
ID99	GGAT13343g	Cwm-sychan Place Trackway Network	SO2563504147	Post-medieval	Trackway	None	n/a	С
1033	GGAT13343g	Tramroad Branch	302303304147	rost-illedieval	Hackway	None	11/ a	<u>C</u>
		in British Ironworks						
ID101	GGAT13347g	Extractive Area	SO2567503592	Post-medieval	Tramroad	None	n/a	С
	_	Tramroad serving						
		Old Shaft in British						
		Ironworks						
ID102	GGAT13348g	Extractive Area	SO2552103399	Post-medieval	Tramroad	None	n/a	С
		Tramroad Branch						
		serving Old Shaft in British Ironworks						
ID103	GGAT13349g	Extractive Area	SO2554303456	Post-medieval	Tramroad	None	n/a	С
15103	20/11200-06	Tramroad Branch	33233 1303-30	. ost medievai		110110	,	
		in British Ironworks						
ID101	GGAT13347g	Extractive Area	SO2567503592	Post-medieval	Tramroad	None	n/a	С

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
ID111	NPRN307535	Pisgah Road Baptist Chapel	SO25990430	Post-medieval	Chapel	None	n/a	С
ID121	NPRN286250	2 and 4 Manor Road	SO26210368	Post-medieval	Houses	None	n/a	С
ID155	GGAT02119g	Ironworks, Abersychan	SO26250415	Post-medieval	Ironworks	None	n/a	D
ID112	GGAT04017g	Cwmbyrgwm Air Shaft	SO258036	Post- medieval/Modern	Air Shaft	None	n/a	D
ID156	GGAT04017g	Cwmbyrgwm Air Shaft	SO258036	Post- medieval/Modern	Air Shaft	None	n/a	D
ID157	GGAT05290g; GGAT05292g	British Ironworks– Monmouthshire Railway Tramroad	SO26200340	Post-medieval	Tramroad	None	n/a	D
ID158	GGAT05293.0g	Turnpike Road	SO26100410	Post-medieval	Road	None	n/a	D
ID159	GGAT05294g	8–13 Foundry Road	SO26200340	Post-medieval	House Row	None	n/a	D
ID160	GGAT10967g	Talywain Conservative Club	SO26200400	Post-medieval	Club	None	n/a	D
ID161	GGAT11523g	British Ironworks Reservoir III	SO2574803500	Post-medieval	Reservoir	None	n/a	D
ID162	GGAT11533g	British Ironworks Truck Shed	SO2573703632	Modern	Shed	None	n/a	D
ID163	GGAT12883g	British Ironworks Leat II	SO2559503484	Post-medieval	Leat	None	n/a	D
ID164	GGAT12884g	Pentwyn Foundry Leat	SO2609703426	Post-medieval	Leat	None	n/a	D
ID165	GGAT12896g	British Ironworks Reservoir Sluice V	SO2611503304	Post-medieval	Sluice	None	n/a	D
ID166	GGAT12901g	Reservoir near Pentwyn Foundry	SO2610703291	Post-medieval	Reservoir	None	n/a	D

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
		Cwm-sychan Place						
1		Rectangular					,	
ID167	GGAT13206g	Feature I	SO2561004015	Post-medieval	Structure	None	n/a	D
		Cwm-sychan Place Rectangular						
ID168	GGAT13207g	Feature II	SO2558704010	Post-medieval	Structure	None	n/a	D
		Cwm-sychan Place						
ID169	GGAT13208g	Pond/Holding Tank	SO2553303948	Post-medieval	Pond/Tank	None	n/a	D
		Cwm-sychan Place						
ID170	GGAT13209g	Square Feature I	SO2550503912	Post-medieval	Monument/Structure	None	n/a	D
		Cwm-sychan Place						
ID171	GGAT13210g	Square Feature II	SO2551003885	Post-medieval	Monument/Structure	None	n/a	D
		Cwm-sychan Place						
ID172	GGAT13212g	Old Shaft Structure	SO2541003936	Post-medieval	Structure	None	n/a	D
		Cwm-sychan Place						
ID173	GGAT13213g	Structure	SO2540003921	Post-medieval	Structure	None	n/a	D
		Small Sqaure Structure, Cwm-						
ID174	GGAT13214g	sychan Place	SO2539603936	Post-medieval	Shaft/Structure	None	n/a	D
		Monmouth Row,			·		•	
ID175	GGAT13218g	Cwm-sychan	SO2529703878	Post-medieval	House Row	None	n/a	D
		Twelve Celled					·	
		Structure in British						
ID176	GGAT13264g	Ironworks Extractive Area	SO2560303550	Post-medieval	Structure	None	n/a	D
10170	UUA113204g	Small Feature in	302300303330	r ost-illedieval	Structure	None	11/ a	
		British Ironworks						
ID177	GGAT13265g	Extractive Area	SO2556003505	Post-medieval	Structure	None	n/a	D
		Loading Bay in						
ID178	GGAT13266g	British Ironworks Extractive Area	SO2551303477	Post-medieval	Loading Bay	None	n/a	D
	2 27.1.202008	Conveyor in British					, ~	_
		Ironworks						
ID179	GGAT13267g	Extractive Area	SO2555203516	Post-medieval	Conveyor	None	n/a	D

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
		Rectangular					ID .	
		Building I in British						
		Ironworks						
ID180	GGAT13268g	Extractive Area	SO2595003398	Post-medieval	Structure	None	n/a	D
	Ŭ	Rectangular					•	
		Building II in British						
		Ironworks						
ID181	GGAT13269g	Extractive Area	SO2594803394	Post-medieval	Structure	None	n/a	D
		Rectangular						
		Feature in British						
		Ironworks						
ID182	GGAT13270g	Extractive Area	SO2592303396	Post-medieval	Feature	None	n/a	D
		Pit Head Building						
		Complex at Old						
		Coal and Ironstone						
		Shaft, British						
ID183	GGAT13272g	Extractive Area	SO2550503421	Post-medieval	Structures	None	n/a	D
		Old Coal and						
		Ironstone Shaft						
ID184	CCAT12274a	West of British Ironworks	SO2550303407	Post-medieval	Shaft	None	2/2	D
10184	GGAT13274g	Possible Incline	302550303407	Post-medievai	Stidit	None	n/a	U
		Tramroad, Cwm-						
ID185	GGAT13342g	sychan	SO2538204069	Post-medieval	Tramroad	None	n/a	D
10103	00A113342g	Tramroad network	302338204003	r Ost-Medievai	Haimoau	None	11/ a	В
		in British Ironworks						
ID186	GGAT13346g	Extractive Area	SO2552103528	Post-medieval	Tramroad	None	n/a	D
	0 0711 200 108	Tramroad forming	001331103310	. oot medicial			, =	
		part of British						
ID187	GGAT13350g	Ironworks Network	SO2594003371	Post-medieval	Tramroad	None	n/a	D
	, , ,	Tramroad System					-	
		serving the British						
ID188	GGAT13351g	Ironworks	SO2595603492	Post-medieval	Tramroad	None	n/a	D
		Trackway Network						
		in British Ironworks						
ID189	GGAT13352g	Extractive Area	SO2578603363	Post-medieval	Trackway	None	n/a	D

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
		Lower Navigation Colliery Railway						
ID190	NPRN85078	Bridge	SO25420403	Post-medieval	Bridge	None	n/a	D
ID191	NPRN12936	Chapel of St Francis of Assisi	SO26110388	Post-medieval	Chapel	None	n/a	D
ID192	NPRN266005	The Hawthorns Garden	SO2619803600	Post-medieval	Garden	None	n/a	D
ID193	NPRN85105	Norfolk Row	SO25350355	Post-medieval	House Row	None	n/a	D
ID194	NPRN286242	Commercial Road Nos 18–19	SO26090414	Post-medieval	Houses	None	n/a	D
ID195	NPRN286243	Green Meadow Cottages	SO26110379	Post-medieval	Cottages	None	n/a	D
ID196	NPRN286245	1–2 Bluetts Road	SO26170407	Post-medieval	House Row	None	n/a	D
ID197	NPRN286272	2–4 Woodlands Row	SO26250417	Post-medieval	House Row	None	n/a	D
ID198	NPRN286368	6 and 9 Commercial Road	SO26030421	Post-medieval	Houses	None	n/a	D
ID199	NPRN286367	3–4 Commercial Road	SO26010424	Post-medieval	House Row	None	n/a	D
ID200	NPRN286366	18–19 Albert Road	SO25960434	Post-medieval	House Row	None	n/a	D
ID201	NPRN286240	7–8 Commercial Road	SO26030421	Post-medieval	House Row	None	n/a	D
ID202	NPRN286241	15–17 Commercial Road	SO26080415	Post-medieval	House Row	None	n/a	D
ID203	NPRN415361	Talywain Open-air Swimming Baths	SO2567203636	Modern	Baths	None	n/a	D
ID204	NPRN85076	British Ironworks Quarry Incline Railway Bridge	SO25370364	Post-medieval	Bridge	None	n/a	D

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
ID205	NPRN85079	Abersychan House Road Bridge	SO25500395	Post-medieval	Bridge	None	n/a	D
ID206	NPRN85077	British Road Bridge	SO25530390	Post-medieval	Bridge	None	n/a	D
ID206	None	Possible Mineshaft I	SO2536404307	Post- medieval/Modern	Shaft	None	n/a	D
ID207	None	Possible Mineshaft II	SO2534904292	Post- medieval/Modern	Shaft	None	n/a	D
ID208	None	Possible Air Shaft	SO2535304278	Post- medieval/Modern	Shaft	None	n/a	D
ID209	None	Possible Mineshaft	SO2536304276	Post- medieval/Modern	Shaft	None	n/a	D
ID210	None	Possible Mineshaft IV	SO2540304249	Post- medieval/Modern	Shaft	None	n/a	D
ID211	None	Old Level	SO2535504221	Post- medieval/Modern	Shaft	None	n/a	D
ID212	None	Possible Mineshaft V	SO2547204332	Post- medieval/Modern	Shaft	None	n/a	D
ID213	None	Possible Mineshaft VI	SO25471 04320	Post- medieval/Modern	Shaft	None	n/a	D
ID214	None	Possible Adit I	SO2561804294	Post- medieval/Modern	Shaft	None	n/a	D
ID215	None	Possible Mineshaft VII	SO2562704291	Post- medieval/Modern	Shaft	None	n/a	D
ID216	None	Possible Mineshaft VIII	SO2560004261	Post- medieval/Modern	Shaft	None	n/a	D
ID217	None	Possible Mineshaft IX	SO2558804251	Post- medieval/Modern	Shaft	None	n/a	D
ID218	None	Possible Mineshaft X	SO2557704254	Post- medieval/Modern	Shaft	None	n/a	D

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
ID219	None	Possible Adit II	SO2543804210	Post- medieval/Modern	Shaft	None	n/a	D
ID220	None	Possible Mineshaft XI	SO2543104170	Post- medieval/Modern	Shaft	None	n/a	D
ID221	None	Possible Mineshaft XII	SO2544404177	Post- medieval/Modern	Shaft	None	n/a	D
ID222	None	Possible Mineshaft XIII	SO2545404163	Post- medieval/Modern	Shaft	None	n/a	D
ID223	None	Possible Mineshaft XIV	SO2547704178	Post- medieval/Modern	Shaft	None	n/a	D
ID224	None	Possible Mineshaft XVI	SO2546904184	Post- medieval/Modern	Shaft	None	n/a	D
ID225	None	Possible Mineshaft XVII	SO2547404199	Post- medieval/Modern	Shaft	None	n/a	D
ID226	None	Soap Vein Level	SO2548504215	Post- medieval/Modern	Shaft	None	n/a	D
ID227	None	Possible Mineshaft XVIII	SO2536904113	Post- medieval/Modern	Shaft	None	n/a	D
ID228	None	Possible Mineshaft XIX	SO2556804133	Post- medieval/Modern	Shaft	None	n/a	D
ID229	None	Possible Mineshaft XX	SO2557404145	Post- medieval/Modern	Shaft	None	n/a	D
ID230	None	Possible Mineshaft XXI	SO2558504147	Post- medieval/Modern	Shaft	None	n/a	D
ID231	None	Possible Mineshaft XXII	SO2563404084	Post- medieval/Modern	Shaft	None	n/a	D
ID232	None	Possible Mineshaft XXIII	SO2564704086	Post- medieval/Modern	Shaft	None	n/a	D
ID233	None	Possible Mineshaft XXIV	SO2565004096	Post- medieval/Modern	Shaft	None	n/a	D

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
ID234	None	Possible Mineshaft XXV	SO2564004102	Post- medieval/Modern	Shaft	None	n/a	D
ID235	None	Castle Level	SO2569504143	Post- medieval/Modern	Shaft	None	n/a	D
ID236	None	Possible Mineshaft XXVI	SO2536304036	Post- medieval/Modern	Shaft	None	n/a	D
ID237	None	Possible Adit III	SO25361 04005	Post- medieval/Modern	Shaft	None	n/a	D
ID238	None	Possible Adit IV	SO2546003938	Post- medieval/Modern	Shaft	None	n/a	D
ID239	None	Possible Adit V	SO2544803931	Post- medieval/Modern	Shaft	None	n/a	D
ID240	None	Possible Adit VI	SO2543203913	Post- medieval/Modern	Shaft	None	n/a	D
ID241	None	Possible Mineshaft XXVII	SO2544603908	Post- medieval/Modern	Shaft	None	n/a	D
ID242	None	Engine Pit I	SO2551003897	Post- medieval/Modern	Shaft	None	n/a	D
ID243	None	Engine Pit II	SO2551703888	Post- medieval/Modern	Shaft	None	n/a	D
ID244	None	Possible Mineshaft XXVIII	SO2550703881	Post- medieval/Modern	Shaft	None	n/a	D
ID245	None	Possible Mineshaft XXIX	SO2551303871	Post- medieval/Modern	Shaft	None	n/a	D
ID246	None	Possible Mineshaft XXX	SO2554203815	Post- medieval/Modern	Shaft	None	n/a	D
ID247	None	Possible Mineshaft XXXI	SO555703802	Post- medieval/Modern	Shaft	None	n/a	D
ID248	None	Possible Adit VII	SO2554703549	Post- medieval/Modern	Shaft	None	n/a	D

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value
				Post-				
ID249	None	Big Vein Pit	SO2558303489	medieval/Modern	Shaft	None	n/a	D
		Possible Mineshaft		Post-				
ID250	None	XXXII	SO2571003490	medieval/Modern	Shaft	None	n/a	D
				Post-				
ID251	None	Unknown Shaft/Pit	SO2573703571	medieval/Modern	Shaft	None	n/a	D
		Possible Mineshaft		Post-				
ID252	None	XXXIII	SO2601303498	medieval/Modern	Shaft	None	n/a	D
		Possible Mineshaft		Post-				
ID253	None	XXXIV	SO2605803506	medieval/Modern	Shaft	None	n/a	D
		Possible Mineshaft		Post-				
ID254	None	XXXV	SO2612503485	medieval/Modern	Shaft	None	n/a	D
		Possible Mineshaft		Post-				
ID255	None	XXXVI	SO2611703545	medieval/Modern	Shaft	None	n/a	D
		Possible Mineshaft		Post-				
ID256	None	XXXVII	SO2607303576	medieval/Modern	Shaft	None	n/a	D
Within	Secondary (1km ra	dius) Study Area (Value	A Sites only)					
	SMMm163;							
	GGAT02156g;	Cwmbyrgwm				Scheduled		
ID142	NPRN85072	Colliery	SO2511103317	Post-medieval	Colliery	Monument	SMMm163	Α

Table 3. Identified heritage assets

5 Assessment of Heritage Assets

5.1 Potential Direct Impacts of the Development on Heritage Assets

- 5.1.1 The assessment has considered the potential direct impacts of the proposed works on heritage assets situated directly within the development area. These heritage assets can be broadly separated into two types those that will potentially be subject to direct physical encounter during the proposed works and those that may be physically encountered due to their close proximity to the proposed works. Belonging to the first type, we may consider those heritage assets that sit directly within the proposed footprint of the pond and drain system, as well as those planned for shaft and adit remediation. Belonging to the second type, we may consider those heritage assets situated within and near to the proposed drainage site that may be directly affected by groundworks.
- 5.1.2 In total, the assessment has identified 78 known heritage assets within the development area, of which 30 have been considered suitable for direct (physical) impact assessment (see above). Of these 30 heritage assets, a total of nineteen have been determined to have the potential of being directly encountered during shaft and adit remediation works. Further to these heritage assets, a total of four are situated within the footprint of the proposed pond and drain system (yet beyond the shaft and adit remediation works). Finally, a total of eight heritage assets are situated near to the footprint of the proposed pond and drain system.
- 5.1.3 In considering that there exists the potential of physical encounter during the proposed shaft and adit remediation works, the level of direct impact on the following nineteen heritage assets has been determined to be **moderate** (implying some loss of integrity and a reduction in value):
 - British Ironworks Mineshaft (ID51)
 - British Ironworks Possible Culvert I (ID127)
 - British Ironworks Balance Pit and Air Shaft (ID130)
 - British Ironworks Possible Culvert VI (ID136)
 - British Ironworks Possible Culvert VII (ID137)
 - British Ironworks Possible Adit II (ID138)
 - British Ironworks Possible Adit III (ID140)
 - British Ironworks Reservoir Sluice III (ID142)
 - British Ironworks Shaft IV (ID143)
 - British Ironworks Possible Adit IV (ID145)
 - British Ironworks Shaft VI (ID146)
 - British Ironworks Possible Culvert IX (ID147)

- British Ironworks Shaft XI (ID148)
- British Ironworks Shaft VII (ID149)
- British Ironworks Shaft VIII (ID150)
- British Ironworks Shaft IX (ID151)
- Lower Navigation Colliery Shaft I (ID152)
- Lower Navigation Colliery Shaft II (ID153)
- British Ironworks Shaft X (ID154)
- 5.1.4 While remediation works imply physical disturbance and therefore a potential loss of integrity, it does not imply the physical removal of heritage assets.
- 5.1.5 In considering that they are situated within the footprint of the proposed pond and drain system, yet will not be subject to direct remediation works, the level of direct impact on the following four heritage assets has also been determined to be **moderate** (implying some loss of integrity and a reduction in value):
 - Chimney Stack and Boilers for British Ironworks New Forge and Mill (ID19)
 - British Ironworks Reservoir I (ID26)
 - British Ironworks Reservoir II (ID27)
 - British Ironworks Reservoir Sluice IV (ID43)
- 5.1.6 These heritage assets are situated within the footprint of the proposed pond and drain system, yet they are located beyond the footprints of the ponds and various drainage channels, therefore reducing the potential impact of physical disturbance.
- 5.1.7 Further to these, the level of direct impact on the heritage asset British Ironworks Leat I (ID38) has also been determined to be **moderate** (implying some loss of integrity and a reduction in value), as although it is situated beyond the footprint of the proposed works, it is nonetheless situated within very close proximity to it.
- 5.1.8 Finally, in considering that they are situated near to the footprint of the proposed pond and drain system, the level of direct impact on the following six heritage assets has been determined to be **slight** (implying a slight loss of integrity and value):
 - British Ironworks Brickworks (ID22)
 - Lime Kilns near British Ironworks Brickworks (ID23)
 - British Ironworker's Dwellings and Brickyard Row (ID24)
 - British Ironworks Water Management System (ID25)
 - British Ironworks Possible Culvert VIII (ID139)
 - British Ironworks Shaft V (ID144)

5.1.9 In being situated near to the proposed groundworks, there exists the potential that the above heritage assets will be affected by, for example, the movement of plant machinery, implying slight loss of integrity and value.

5.2 Potential Indirect (Visual) Impacts of the Development on Heritage Assets

- 5.2.1 The indirect effect of the proposed development on heritage assets were assessed via, on the one hand, field observations derived from walkover survey and, on the other, ZTV (Figure 6), cartographic regression and topographic analysis. ZTV analysis implements LiDAR data to determine lines of sight to and from a set of pre-determined viewpoints within the landscape using a GIS intervisibility algorithm. These viewpoints were set up along the boundary of the proposed development.
- 5.2.2 It has been determined that, within the development area itself, a total of fifteen heritage assets will potentially be subject to indirect impacts. These fifteen heritage assets do not include those that survive only as subterranean features, which are not visible within the landscape.
- 5.2.3 Four heritage assets were situated beneath thick tree cover, the extent of which was so great that it completely obscured all lines of sight to and from the heritage assets. As a result, these four heritage assets were not included in the fifteen suitable for indirect (visual) impact assessment. These heritage assets include:
 - British Ironworks Brickworks (ID22)
 - Lime Kilns near British Ironworks (ID23)
 - British Ironworks Workers' Dwellings and Brickyard Row (ID24)
 - British Ironworks Locomotive Shed and Truck Shed (ID28)
 - British Ironworks Railway Wagon Repair Works (ID34)
- 5.2.4 During the walkover survey of the site, it was determined that a further of seven heritage assets within the development area were not visibility within the wider landscape (due to their poor preservation) and therefore the lines of sight to and from them were negligible. As a result, these five heritage assets were not included in the fifteen suitable for indirect (visual) impact assessment. These heritage assets are as follows:
 - Engine House near British Ironworks Casting House (ID11)
 - Engine House for Blowing Engine Southwest of Furnace Bank (ID13)
 - British Ironworks Calcining/Lime Kilns II (ID14)
 - British Ironworks Coke Ovens I (ID15)
 - British Ironworks Building I (ID20)
 - British Ironworks Building II (ID21)
 - British Ironworks Weigh Machine (ID35)

- 5.2.5 The assessment has concluded that, of those heritage assets fifteen situated within the development area (that were considered suitable for assessment), a total of two will potentially be subject to a **slight** indirect impact (implying key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in diminished cultural heritage links). These heritage assets include:
 - British Ironworks Water Management System (ID25)
 - British Ironworks Mineshaft (ID51)
- 5.2.6 Firstly, these two heritage assets are situated within relatively close proximity to the footprint of the pond and drain system, meaning that lines of sight to and from them and the proposed development are heightened. Secondly, however, both heritage assets are partially hidden from view due to the presence of vegetation coverage on the one hand and the position of the spoil tips on the other. The British Ironworks Mineshaft (ID51) is, in particular, partially concealed along its northern and western edges by the southernmost spoil tip. Thirdly, the most significant cultural links defining these heritage assets exist to the south, within the core of the former British Ironworks, and the proposed development fails to obscure the (albeit partial) lines of site that exist between them and this area.
- 5.2.7 Further to this determination, it has been concluded that another three heritage assets will potentially be subject to a **slight** indirect impact (implying key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in diminished cultural heritage links). These heritage assets include:
 - British Colliery Pumping Engine House (ID1)
 - British Ironworks Chimney Base (ID9)
 - British Ironworks Old Forge Pumping Pit (ID32)
- 5.2.8 Firstly, although these heritage assets are further from the proposed development than the previous two, the lines and sight to and from them and the proposed development are clearer. The relative clarity in these lines of sight is due to the position of these heritage assets within an open area of the sight with little vegetation coverage. However, the most significant cultural links defining these heritage assets again exist to the south, and the proposed development fails to obscure these.
- 5.2.9 The assessment has also concluded that, of those heritage assets situated within the development area, a total of ten will potentially be subject to a **very slight** indirect impact (implying key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in little discernible severance of cultural heritage links). These heritage assets include:
 - The Big Arch (ID2)
 - British Ironworks Charging Bank (ID4)
 - British Ironworks Calcining/Lime Kilns I (ID6)

- Engine House for British Ironworks New Forge and Mill (ID18)
- Level Southwest of British Ironworks Furnaces (ID29)
- British Ironworks Lower Navigation Colliery (ID33)
- British Ironworks Reservoir Sluice II (ID41)
- British Ironworks Coke Ovens III (ID45)
- British Ironworks (ID48)
- British Ironworks Blast Furnaces (ID50)
- 5.2.10 The lines of site between each of these heritage assets and the proposed development are obscured by a combination of vegetation coverage and the presence of spoil tips. Furthermore, these heritage assets are positioned at a greater distance from the proposed development tan those detailed above.
- 5.2.11 For the purposes of assessing indirect (visual) impacts, a primary study area comprising a 250m radius around the development area was also applied. Within this primary study area, fifteen known heritage assets were identified that were deemed suitable for assessment
- 5.2.12 Of these fifteen heritage assets, a total of five were situated beyond the lines of sight of the proposed pond and drain system and were therefore not included for assessment. These five heritage assets include:
 - Former Colliery Engine House at ETM Steel Fabrication (ID53)
 - Cwmsychan Leat (ID75)
 - Abersychan Limestone Tramroad (ID63)
 - Church of St Thomas (ID56)
 - St Thomas' Hall (ID112)
- 5.2.13 During the walkover survey of the site, it was determined that the following heritage assets were situated beneath thick tree cover, the extent of which was so great that it completely obscured all lines of sight to and from the heritage assets. As a result, these two heritage assets were not included in the fifteen suitable for assessment. These heritage assets include:
 - Tramroad serving Old Shaft in British Ironworks Extractive Area (ID102)
 - Tramroad Branch serving Old Shaft in British Ironworks Extractive Area (ID103)
- 5.2.14 During the walkover survey of the site, it was determined that a total of two heritage assets within the primary study area were in a poor state of survival, meaning that their visibility within the landscape and therefore the lines of sight to and from them were negligible. As a result, these heritage assets were not included in the fifteen suitable. These heritage assets include:
 - British Ironworks Feeder Pond and Open Air Swimming Baths (ID68)

- British Ironworks Electrical House (ID73)
- 5.2.15 The assessment has concluded that, of those fifteen heritage assets considered for assessment within the primary study area, which comprises a 250m radius around the site, a total of four will potentially be subject to a **slight** indirect impact (implying key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in diminished cultural heritage links). These heritage assets include:
 - Air Furnace at British Ironworks (ID52)
 - British Ironworks Office and Foundry Quadrangle (ID54)
 - British Ironworks Smiths' Shop or Foundry (ID65)
 - British Ironworks Fitting Shop (ID66)
- 5.2.16 These four heritage assets, which form part of a small, intrinsically linked group, are situated within a relatively open area of the site. As a result, the lines and sight to and from the proposed development are clearer than affecting most other heritage assets across the site. Nevertheless, these lines of sight are still partly obscured by vegetation coverage to the north and east as well as the southernmost spoil tip that dominates the centre of the site.
- 5.2.17 It has also been concluded that, of those fifteen heritage assets considered for assessment within the primary study area, eleven will potentially be subject to a **very slight** indirect impact (implying key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in little discernible severance of cultural heritage links). These heritage assets include:
 - Former Goods Shed of Abersychan and Talywain Station (ID55)
 - Church of St Thomas (ID56)
 - Elizabeth Row (ID58)
 - British Ironworks Smiths' Shop or Foundry (ID65)
 - British Ironworks Internal Tramroad (ID69)
 - Locomotive Shed near British Ironworks Old Mill and Forge (ID70)
 - British Ironworks Chaff Cutting House (ID72)
 - Pisgah Baptist Chapel (ID74)
 - Cwm-sychan Place Trackway Network (ID99)
 - Tramroad Branch in British Ironworks Extractive Area (ID101)
 - Pisgah Road Baptist Chapel (ID111)
 - 2 and 4 Manor Road (ID121)

- 5.2.18 As indicated by the ZTV analysis results (Figure 6), the lines of sight that exist between the above heritage assets and the proposed development are very partial, primarily due to vegetation and tree coverage but also due to the dominating presence of the spoil tips.
- 5.2.19 For the purposes of assessing indirect (visual) impacts, a secondary study area comprising a 1km radius around the development area was also applied. Within this secondary study area, one Value A heritage assets was identified that was deemed suitable for assessment Cwmbyrgwm Colliery (ID142)
- 5.2.20 Within the secondary study area, which comprises a 1km radius around the site, the assessment has determined that one heritage asset will be indirectly impacted Cwmbyrgwm Colliery (ID142), which is a Scheduled Monument. It has been concluded that the level of this potential indirect impact will be slight (implying key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in diminished cultural heritage links). Although this heritage asset is situated a relatively large distance from the proposed development, it is nonetheless positioned on an area of elevated ground bounding the northern edge of the Nant Ddu Valley. Furthermore, this heritage asset covers a relatively large portion of this area. As a result, the site of the former Cwmbyrgwm Colliery possesses a rather dominating view of the development area. However, the development area is obscured by vegetation and thick tree cover. Therefore, despite its prominent topographic position, the lines of sight to and from the site of this heritage asset and the development area are mostly partial.

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5.2.21 The last column "Setting Effects Y/N" identifies those heritage assets that may have indirect visual impacts to the setting of the monument (Stage 1 as set out in Setting of Historic Assets in Wales 2017 (The Historic Environment (Wales) Act 2016, Annex 6).

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value	Rarity	Documentation/ Association	Group Value	Survival/ Condition	Direct Effect	Significance of Direct Effect	Indirect Effect	Setting Effect
Within	Development Are	<u> </u> a										<u> </u>				Yes/No
	SMMm216; LB18595; GGAT04699g;	British Colliery Pumping Engine		Post-		Scheduled Monument; Grade II Listed	SMMm216;									
ID1	NPRN85065	House	SO2584403644	medieval	Engine House	Building	LB18595	Α	Medium	High	High	Damaged/Moderate	None	n/a	Yes	Yes
	LB14871; GGAT04597g; GGAT03191g;			Post-		Grade II Listed										
ID2	NPRN34968	The Big Arch British Ironworks	SO2599903495	medieval Post-	Arch	Building	LB14871	В	Low	Moderate	High	Intact/Good	None	n/a	Yes	No
ID4	GGAT10899g	Charging Bank I	SO2573203713	medieval	Charging Bank	None	n/a	С	Low	Moderate	High	Damaged/Poor	None	n/a	Yes	No
ID6	GGAT11498g	British Ironworks Calcining/Lime Kilns I	SO2578903730	Post- medieval	Kilns	None	n/a	С	Low	Moderate	High	Damaged/Poor	None	n/a	Yes	No
IDO	GGAT11501g;	British Ironworks	502505002570	Post-	Chinana	Name	-/-			Madayata	l link	Intest/Fair	Nama	-/-	Vaa	N-
ID9	NPRN85066 GGAT11511g	Chimney Base Engine House for British Ironworks New Forge and Mill	SO2586003678 SO2589503704	medieval Post- medieval	Chimney Engine House	None None	n/a n/a	С	Low	Moderate Moderate	High High	Intact/Fair Damaged/Poor	None None	n/a n/a	Yes	No No
		British Ironworks														}
ID25	GGAT11520g	Water Management System	SO2590803952	Post- medieval	Leat System	None	n/a	c	Low	Low	 High	Damaged/Fair	None	n/a	Yes	No
	00///220208	Level Southwest of British Ironworks	0020000000	Post-	20000,000	- TOTAL	1,72					Jamagea, ran		.,,	1.00	
ID29	GGAT11528g	Furnaces	SO2566203715	medieval	Level	None	n/a	С	Low	Low	High	Damaged/Fair	None	n/a	Yes	No
ID32	GGAT11531g	British Ironworks Old Forge Pumping Pit	SO2584803650	Post- medieval	Pumping Pit	None	n/a	С	Medium	Moderate	High	Intact/Fair	None	n/a	Yes	No
1032	30///11331g	British Ironworks Lower Navigation	SO2569603875	medieval	r uniping ric	None	11,0		Wiedidiii	Moderate	111511	Treacy Fair	None	11,4	163	140
ID33	GGAT11532g	Colliery		Modern	Colliery	None	n/a	С	Low	High	High	Damaged/Fair	None	n/a	Yes	No
ID41	GGAT12893g	British Ironworks Reservoir Sluice II	SO2590403937	Post- medieval	Sluice	None	n/a	С	Low	Low	High	Damaged/Fair	None	n/a	Yes	No
1041	GGA112033g	British Ironworks Coke	302330403337	Post-	Sidice	None	11/4		LOW	LOW	111611	Damagea/Tail	None	11/4	103	110
ID45	NPRN85064	Ovens III	SO25710372	medieval	Coke Ovens	None	n/a	С	Low	Moderate	High	Damaged/Poor	None	n/a	Yes	No
ID48	GGAT02515g; NPRN85082	British Ironworks	SO25750365	Post- medieval	Ironworks	None	n/a	A	Medium	High	High	Damaged/Moderate	None	n/a	Yes	Yes
		British Ironworks Blast	002070000	Post-	i i i i i i i i i i i i i i i i i i i		, 0			8	6	Jamagea, mederate		.,,		1.00
ID50	NPRN85063	Furnaces	SO25710372	medieval	Blast Furnaces	None	n/a	В	Medium	High	High	Damaged/Fair	None	n/a	Yes	No
ID51	None	British Ironworks Mineshaft	SO2591003812	Post- medieval	Shaft	None	n/a	С	Low	Low	High	Damaged/Moderate	None	n/a	Yes	No
	Primary (250m Ra		1				1			1	1					
	SMMm221;						I	T								
	GGAT04698g;	Air Furnace at British		Post-	_	Scheduled					l			,]'
ID52	NPRN85068 LB14870;	Ironworks British Ironworks	SO2571503603	medieval	Furnace	Monument Grade II*	SMMm221	Α	High	Moderate	High	Damaged/Fair	None	n/a	Yes	Yes
	GGAT04596g;	Office and Foundry		Post-	Office/Foundr	Listed										
ID54	NPRN85067	Quadrangle	SO2573103620	medieval	у	Building	LB14870	Α	High	High	High	Damaged/Good	None	n/a	Yes	Yes
		Former Goods Shed of Abersychan and		Post-		Grade II Listed										
ID55	LB18585	Talywain Station	SO2602903804	medieval	Shed	Building	LB18585	В	Medium	Moderate	High	Intact/Good	None	n/a	Yes	No
	LB18582;	-				Grade II					_					
IDEC	NPRN12928;	Church of Ct Thamas	SO2619304044	Post-	Church	Listed Building	LB18582	В	lo:::	Madarata	Madium	Intact/Man/Caad	None	n/2	Voc	No.
ID56	NPRN421328 GGAT03190g;	Church of St Thomas	302019304044	medieval Post-	CHUICH	Duiiuliig	LD16382	D	Low	Moderate	Medium	Intact/Very Good	None	n/a	Yes	No
ID58	NPRN36832	Elizabeth Row	SO25420345	medieval	House Row	None	n/a	С	Low	Low	Medium	Intact/Good	None	n/a	Yes	No

Fig ID	ID	Name	NGR	Period	Туре	Designation	Designation ID	Value	Rarity	Documentation/ Association	Group Value	Survival/ Condition	Direct Effect	Significance of Direct Effect	Indirect Effect	Setting Effect
		British Ironworks				Grade II*										Yes/No
	LB14879;	Smiths' Shop or		Post-	Smiths'	Listed										
ID65	GGAT11517g	Foundry	SO2571003597	medieval	Shop/Foundry	Building	LB14870	B	Medium	Moderate	High	Damaged/Fair	None	n/a	Yes	Yes
	0011122218				- Chicpy Comery	Grade II*		†			16.1	2		.,, .	100	1
		British Ironworks		Post-		Listed										
ID66	GGAT11518g	Fitting Shop	SO2570403616	medieval	Fitting Shop	Building	LB14870	В	Medium	Moderate	High	Damaged/Moderate	None	n/a	Yes	No
		British Ironworks		Post-												
ID69	GGAT11525g	Internal Tramroad	SO2580003578	medieval	Tramroad	None	n/a	С	Low	Low	High	Intact/Fair	None	n/a	Yes	No
		Locomotive Shed near														
		British Ironworks Old		Post-												
ID70	GGAT11526g	Mill and Forge	SO2580903592	medieval	Shed	None	n/a	С	Low	Low	High	Damaged/Fair	None	n/a	Yes	No
		British Ironworks														
ID72	GGAT11534g	Chaff Cutting House	SO2575703585	Modern	Cutting House	None	n/a	С	Medium	Low	High	Damaged/Poor	None	n/a	Yes	No
	GGAT11883g;					l	,		l .					,		
ID74	NPRN12927	Pisgah Baptist Chapel	SO2607004360	Modern	Chapel	None	n/a	C	Low	Moderate	Medium	Intact/Very Good	None	n/a	Yes	No
1000	CC 4 T422 42 -	Cwm-sychan Place	602562504447	Post-	T	Name	- 1-				LIC-L	Danis and /Mandanata	News		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	N-
ID99	GGAT13343g	Trackway Network Tramroad Branch in	SO2563504147	medieval	Trackway	None	n/a	ι .	Low	Low	High	Damaged/Moderate	None	n/a	Yes	No
		British Ironworks		Post-												
ID101	GGAT13347g	Extractive Area	SO2567503592	medieval	Tramroad	None	n/a	C	Low	Low	High	Intact/Fair	None	n/a	Yes	No
10101	00/1113547g	Pisgah Road Baptist	302307303332	Post-	Trainioda	TVOTIC	11/4	+	1000	LOW	111611	intucty i un	IVOIIC	11/ 0	103	110
ID111	NPRN307535	Chapel	SO25990430	medieval	Chapel	None	n/a	c	Low	Moderate	Medium	Intact/Very Good	None	n/a	Yes	No
				Post-	- Chapter		1.72	†				interest to the contract of th		.,,.	100	+
ID121	NPRN286250	2 and 4 Manor Road	SO26210368	medieval	Houses	None	n/a	С	Low	Low	Medium	Intact/Very Good	None	n/a	Yes	No
Within	Secondary (1km	Radius) Study Area			•		•				•					
	SMMm163;							T							I	T
	GGAT02156g;			Post-		Scheduled										
ID142	NPRN85072	Cwmbyrgwm Colliery	SO2511103317	medieval	Colliery	Monument	SMMm163	Α	Medium	High	High	Damaged/Good	None	n/a	Yes	Yes

Table 4. Assessment of direct and indirect impacts on heritage assets

5.3 Potential Impacts on Setting and Significance - Stage 1

- 5.3.1 Potential indirect impacts of the proposed development on heritage assets are confined to the impacts upon the setting of International and National value heritage assets (A* and A class); these include Scheduled Monuments, Registered Landscapes, Parks and Gardens and sometimes Grade I Listed Buildings. Grade II and II* buildings are considered if their setting includes or is included with a Registered Landscape or Park and Garden.
- 5.3.2 In total, it has been concluded that the proposed development will potentially have an effect on the setting of six heritage assets, as detailed in Table 5 below.

5.4 Defining and Evaluating the Setting and Significance of Heritage Assets – Stage 2 and 3

5.4.1 Section 1.5 above set out the context and extent of the identified heritage assets, which contribute to the Stage 1 and 2 assessment of setting and significance. Section 4 sets out the value and Section 5.1 and 5.2 the direct and indirect effects, which also contribute to the overall understanding of heritage assets and their setting (Stage 2 assessment of setting and significance).

ID	PR	Name	Value	Evidential Value	Historical Value	Aesthetic Value	Communal Value	Type of visual effect/change	Magnitude of Effect	Significance of Effect	Cumulative Visual Effect
ID1	SMMm216; LB18595; GGAT04699g; NPRN85065	British Colliery Pumping Engine House	А	High	High	Moderate	Moderate	Slight interruption	Low	Significant	Slight
ID48	GGAT02515g; NPRN85082	British Ironworks	А	Very High	High	Moderate	Moderate	Slight interruption	Low	Significant	Slight
ID52	SMMm221; GGAT04698g; NPRN85068	Air Furnace at British Ironworks	А	Moderate	High	Low	Low	Very Slight interruption	Low	Significant	Very Slight
ID54	LB14870; GGAT04596g; NPRN85067	British Ironworks Office and Foundry Quadrangle	А	Very High	High	High	Moderate	Very Slight interruption	Low	Significant	Very Slight
ID65	LB14879; GGAT11517g	British Ironworks Smiths' Shop or Foundry	В	Moderate	High	Low	Moderate	Very Slight interruption	Low	Significant	Very Slight
ID142	SMMm163; GGAT02156g; NPRN85072	Cwmbyrgwm Colliery	А	High	High	Moderate	High	Very Slight interruption	Low	Significant	Very Slight

Table 5. Assessing value and significance of indirect visual effects on the setting of heritage assets

5.4.2 The assessment of the Cumulative Visual Effect is the culmination of the assessment of value, degree of change and corresponding effects.

This is partly a subjective exercise based on the assessor's experience and knowledge.

5.5 Summary of Significance and Setting

- 5.5.1 The assessment has determined that the impact of the proposed development on the setting and significance of the British Colliery Pumping Engine House (ID1) will be **slight**. The proposed western boundary of the pond and drain system will encroach within approximately 60m of this monument. In consideration of the large size and close proximity of the pond and drain system, it is likely that the setting of the monument will be adversely affected. However, it must be remembered that the main cultural links that define the setting of the monument are situated to the south, within the core of the British Ironworks, and not the east. This factor, therefore, reduces the effect that the proposed development will have on the setting and significance of the monument.
- 5.5.2 For the same reasons, the assessment has concluded that the impact of the proposed development on the setting and significance of the British Ironworks (ID48) will also be slight. The pond and drain system will overlook the surviving remains of the ironworks from the east, which will likely lead to a detrimental effect on its setting. However, it is unlikely that significant cultural links will be severed, as the proposed development will likely fail to impede any essential views between the surviving structures of the ironworks.
- 5.5.3 The assessment has concluded that the impact of the proposed development on the setting and significance of the following three heritage assets will be **very slight**:
 - Air Furnace at British Ironworks (ID52)
 - British Ironworks Office and Foundry Quadrangle (ID54)
 - British Ironworks Smiths' Shop or Foundry (ID65)
- 5.5.4 All three of these heritage assets belong to the same complex of buildings and can therefore be assessed as a single group. Although the proposed pond and drain system will overlook these heritage assets from the east, the construction of the former will unlikely lead to the severance of essential views that define their setting and significance. In addition, these heritage assets are situated beyond the boundary of the development area, leading to a marginal decrease in the effect of the proposed development on their setting and significance.
- 5.5.5 Finally, the assessment has concluded that the potential impact of the proposed development on the setting and significance of Cwmbyrgwm Colliery (ID142) will be very slight. As detailed above, there will likely be direct lines of sight between this heritage asset and the proposed development. However, the distance between the former colliery and the proposed development will reduce the detrimental effects that the latter will have on the former.

6 Mitigation Recommendations

- 6.1.1 The assessment has identified the potential direct and indirect impacts of the Proposed Scheme on heritage assets. It has also considered the potential impact to the setting and significance of statutory designated (Value A) sites.
- 6.1.2 During the shaft and adit mediation phase of the proposed works, it has been determined that at least nineteen heritage assets will potentially be encountered (IDs 51, 127, 130, 136, 137–8, 140, 142, 143, 145–54), meaning there exists the possibility that they will be physically disturbed. In order to mitigate such disturbance, it is recommended here that a programme of archaeological monitoring in the form of a watching brief be applied to all ground intrusions associated with the shaft and adit mediation phase.
- 6.1.3 During the construction of the pond and drain system, it has been determined that at least four heritage assets may be disturbed during groundworks (IDs19, 26-7 and 43). However, none of these heritage assets are positioned within the footprints of the proposed ponds or drainage channels, which likely represent the areas of most extensive ground disturbance. Moreover, it must also be taken into consideration that the proposed works covers a rather large area, meaning there also exists the potential that previously unrecorded or unknown heritage assets will be encountered during groundworks. In particular, it is known that the northern end of the proposed pond and drain system was, during the Post-medieval period, occupied by water management systems attached to the British Ironworks. It is also known that the southern end was previously occupied (at the very least) by such industrial features as worker housing, brickworks and mineshafts, as well as forges attached to the British Ironworks. For these reasons, it is recommended here that all groundworks associated with the construction of the pond and drain system are also subject to a programme of archaeological monitoring in the form of a watching brief.

6.2 Assessment of Residual Impacts

- 6.2.1 Providing that the mitigations recommendations above are followed, the potential direct impact to heritage assets will be reduced to none.
- 6.2.2 The minimal indirect (visual) impacts will remain for the lifespan of the proposed water management system, which includes the two ponds, associated drainage channels and remediated shafts and adits.

7 Bibliography

- Atkinson, M. and Barber, C. 1987. *The Growth and Decline of the South Wales Iron Industry* 1760–1880. Cardiff: University of Wales Press.
- Barber, C. 1999. Eastern Valley: The Story of Torfaen. Llanfoist: Blorenge Books.
- Barrie, DSM. 1994. *A Regional History of the Railways in Great Britain: South Wales*. Nairn: David and Charles.
- Bick, DE. 1989. 'The Beam-Engine House in Wales'. *Industrial Archaeology Review* **121 (1)**, pp. 84–93.
- Bradney, J. 1906. A History of Monmouthshire from the Coming of the Normans into Wales down to the Present Time: Volume I Part 2. London: Mitchell, Hughes and Clarke.
- Colebrook, K. 1983. 'A History of the British Ironworks, Abersychan'. *Gwent Local History* **54**, pp. 6–29.
- Cort, R. 1826. A Letter to the Shareholders of the British Iron Company, showing the Past and Present Losses of the Speculation; with Suggestions to Realize the Future Profit of the Concern. London: Compton and Ritchie.
- Evans, C. 1993. The Labyrinth of Flames: Work and Social Conflict in Early Industrial Merthyr Tydfil. Cardiff: University of Wales Press.
- Fairbairn, W. 1849. An Account of the Construction of the Britannia and Conway Tubular Bridges, with a Complete History of their Progress. London: John Weale.
- Fleischman, RK. and Parker, LD. 1992. 'The Cost-accounting Environment in the British Industrial Revolution Iron Industry'. *Accounting, Business and Financial History* **2 (2)**, pp. 141–60.
- Foster, B. 2001. 'Abersychan Ironworks 1827–1884'. Gwent Local History 91, pp. 19–53.
- Hughes, S. 2008. 'The Characteristics of Extractive and Smelting Landscapes of the Industrial Revolution at Swansea and Blaenavon'. *Landscape History* **30 (1)**, pp. 21–47.
- Hughes, S. Malaws, B. Parry, M. and Wakelin, P. 1994. *Collieries of Wales: Engineering and Architecture*. Pontypool: RCAHMW.
- Ince, L. 1993. The South Wales Iron Industry, 1750–1885. Birmingham: Ferric.
- Lewis, T. 1925. 'Excavations at Castell Taliorum, St Illtyd, Llanhilleth, Mon'. *Archaeologia Cambrensis* **5 (7)**, pp. 372–80.
- Lloyd, J. 1901. *The Early History of the Old South Wales Ironworks, 1760 to 1840*. London: Bedford Press.
- Newman, J. 2000. *The Buildings of Wales: Gwent/Monmouthshire*. New Haven: Yale University Press.

- Priestley, J. 1831. *Historical Account of the Navigable Rivers, Canals and Railways of Great Britain*. London: Longman, Rees, Orme, Brown and Green.
- Renn, DF. 1961. 'The Round Keeps of the Brecon Region'. *Archaeologia Cambrensis* **110**, pp. 129–43.
- Riden, P. and Owen, JG. 1995. *British Blast Furnace Statistics 1790–1980*. Cardiff: Merton Priory Press.
- Roberts, R. 2005. *Southeast Wales Industrial Ironworks Landscapes Year 1: The Core Ironworks Areas*. GGAT Report No **2005/56**.
- Roberts, R. 2010. Southeast Wales Industrial Ironworks Landscapes Year 6: The Aberdare-Hirwaun-Penderyn Corridor and Eastern Valley. GGAT Report No **2010/026**.
- Roberts, R. 2017. *The British (Abersychan) Ironworks, Talywain, Torfaen*. GGAT Report No **2017/059**.
- Sherman, A. and Evans, E. 2004. *Roman Roads in Southeast Wales: Desk-based Assessment with Recommendations for Fieldwork*. GGAT Report No **2004/073**.
- Stratton, M. and Trinder, BS. 1997. Industrial England. London: Batsford.
- Takel, RE. 2001. 'The British Ironworks, Abersychan'. Gwent Local History 87, pp. 32–7.
- van Laun, J. 2001. Early Limestone Railways: How Railways Developed to Feed the Furnaces of the Industrial Revolution in South East Wales. London: Newcomen Society.
- Wheeler, REM. 1924. 'Castell Taliorum, Llahilleth'. *Bulletin of the Board of Celtic Studies* **2** (3), pp. 263 –64.
- Wheeler, REM. 1926. 'Castell Taliorum, Monmouthshire'. *Bulletin of the Board of Celtic Studies* **3 (2)**, p. 76.

Other Sources

- British Geological Survey (BGS), 2022, https://www.bgs.ac.uk/map-viewers/geology-of-britain-viewer, Accessed 12/04/2022.
- Portable Antiquities Scheme (PAS), 2022. https://finds.org.uk/database, Accessed 09/06/2022.

8 Appendices

8.1 Appendix I – Figures

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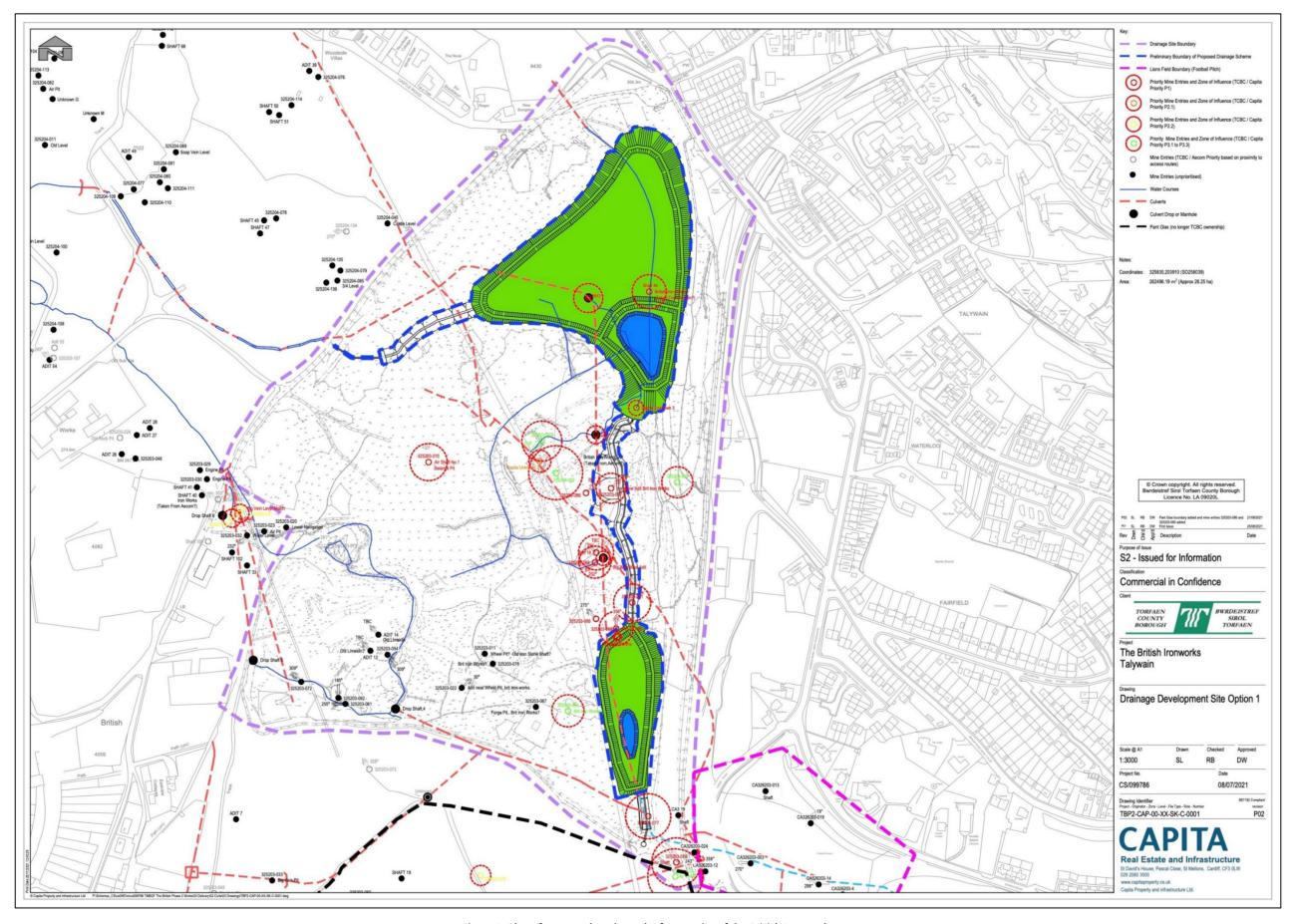


Figure 1. Plan of proposed works at the former site of the British Ironworks

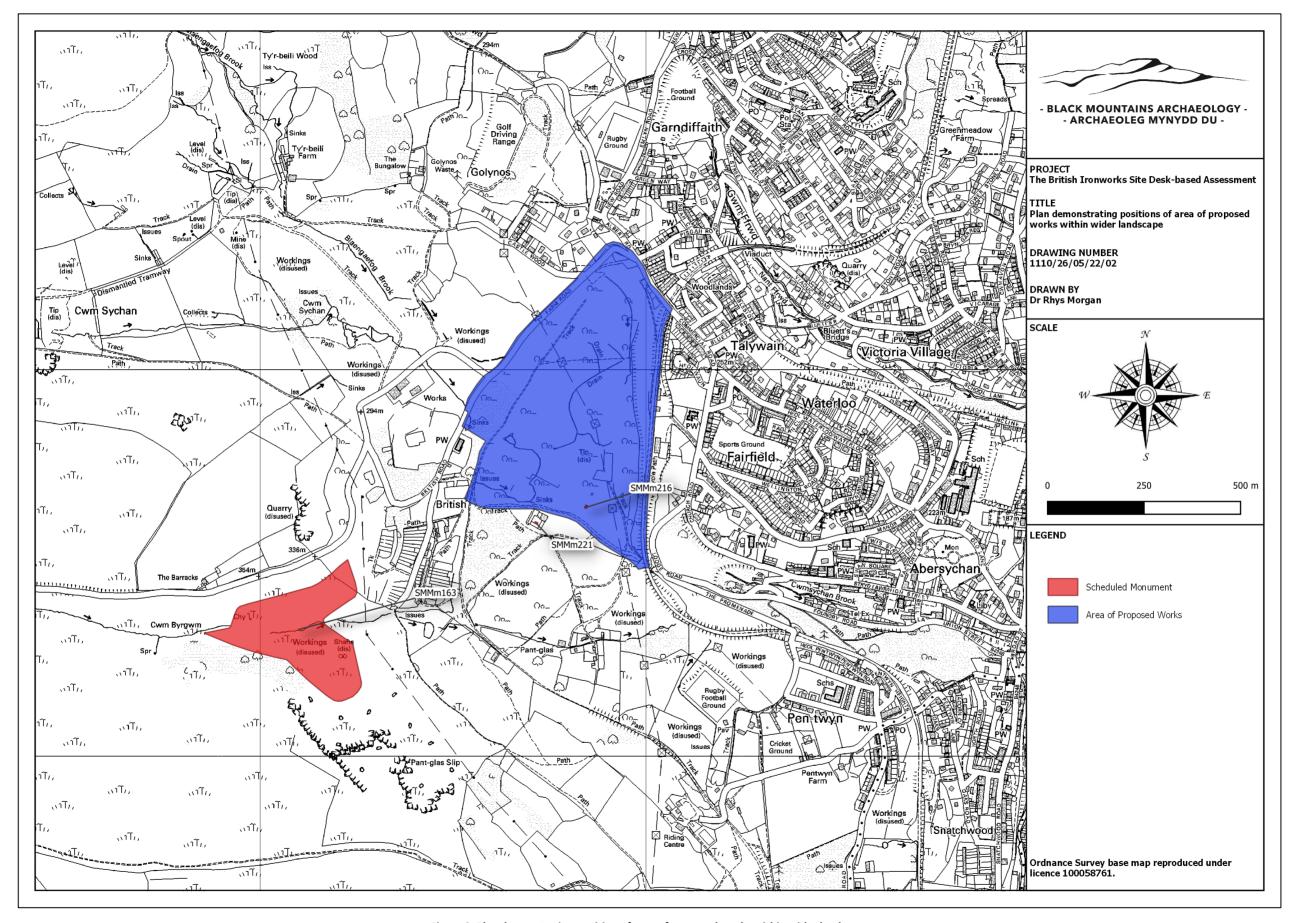


Figure 2. Plan demonstrating position of area of proposed works within wider landscape

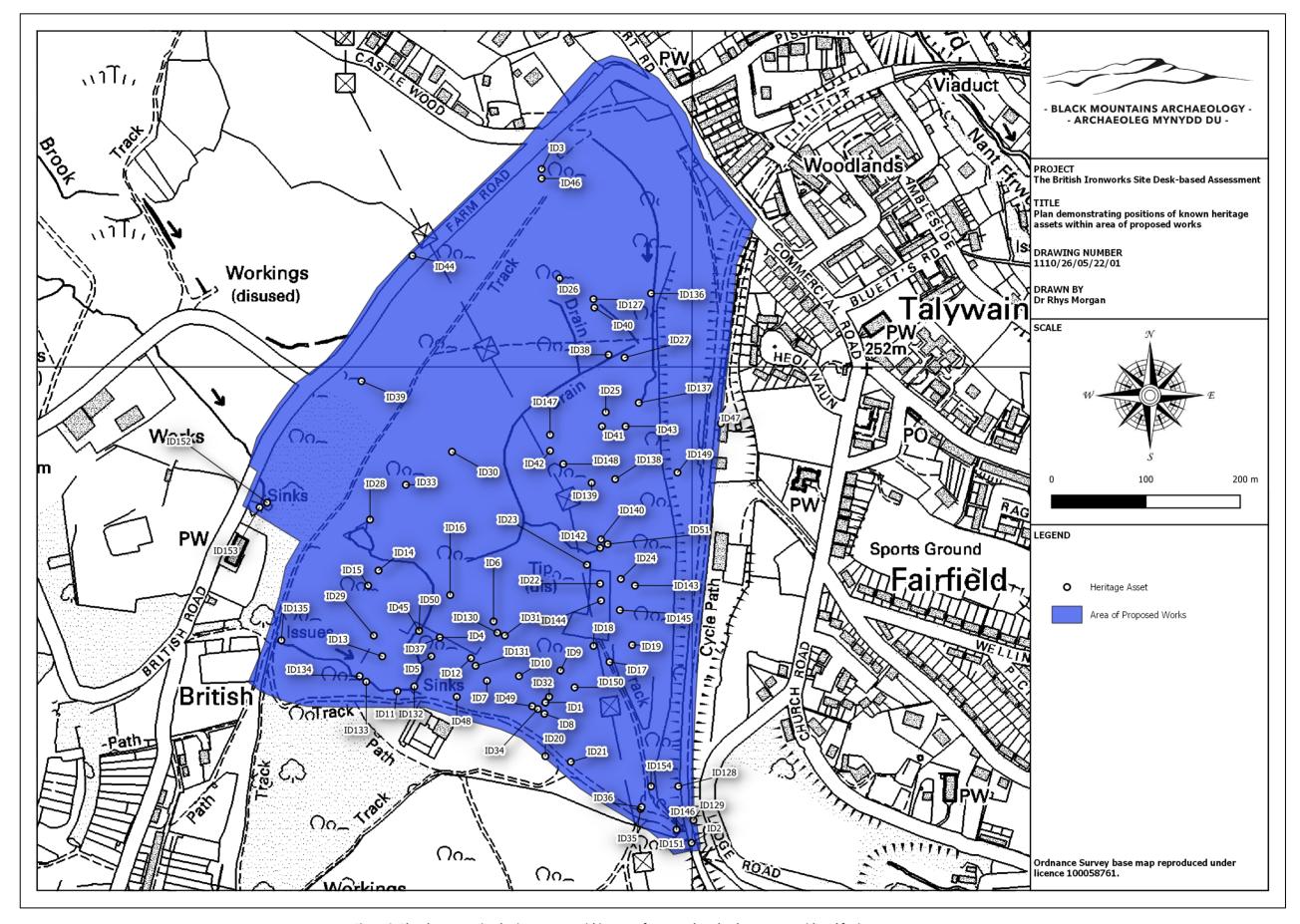


Figure 3. Plan demonstrating heritage assets within area of proposed works that were considered for impact assessment

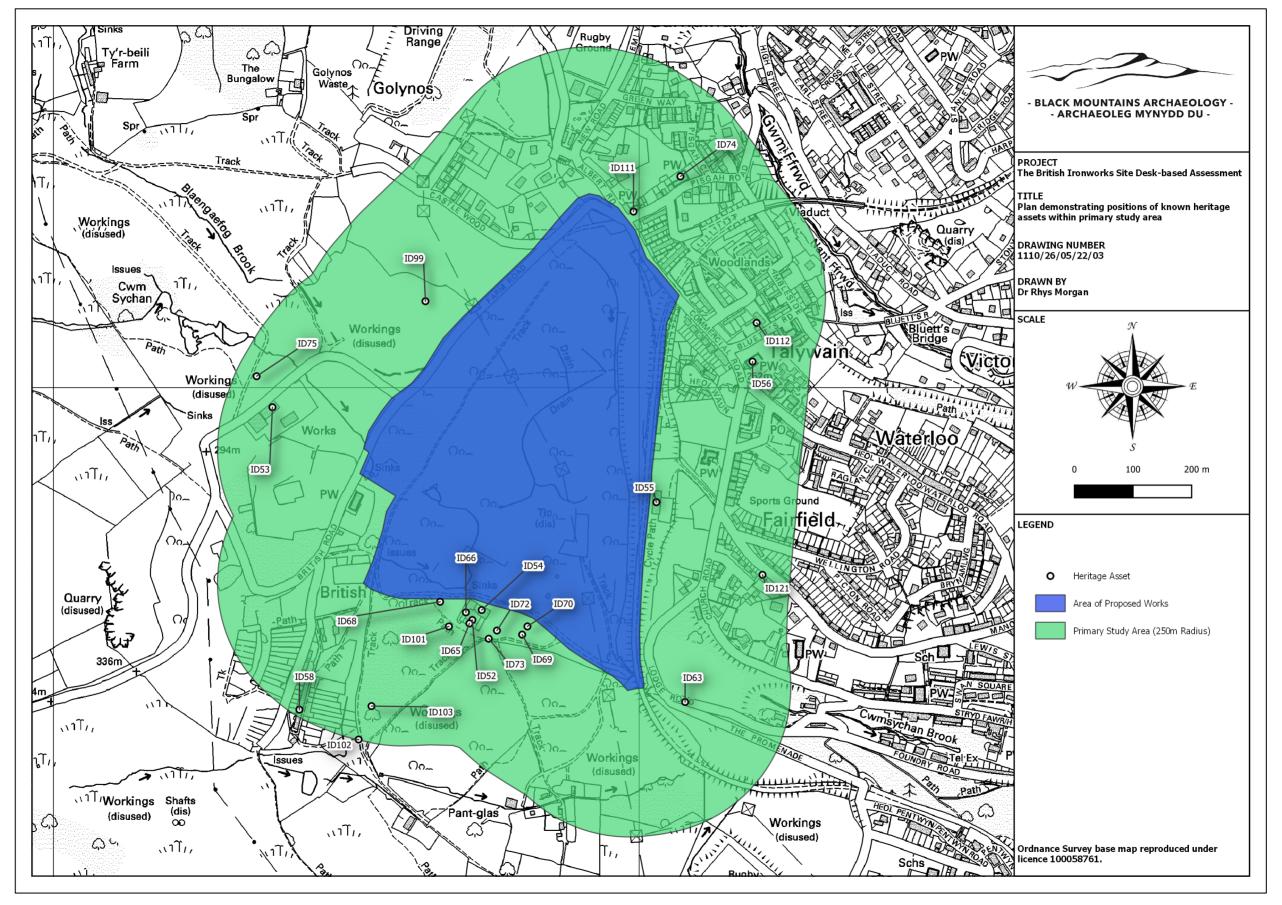


Figure 4. Plan demonstrating heritage assets within primary study area that were considered for impact assessment

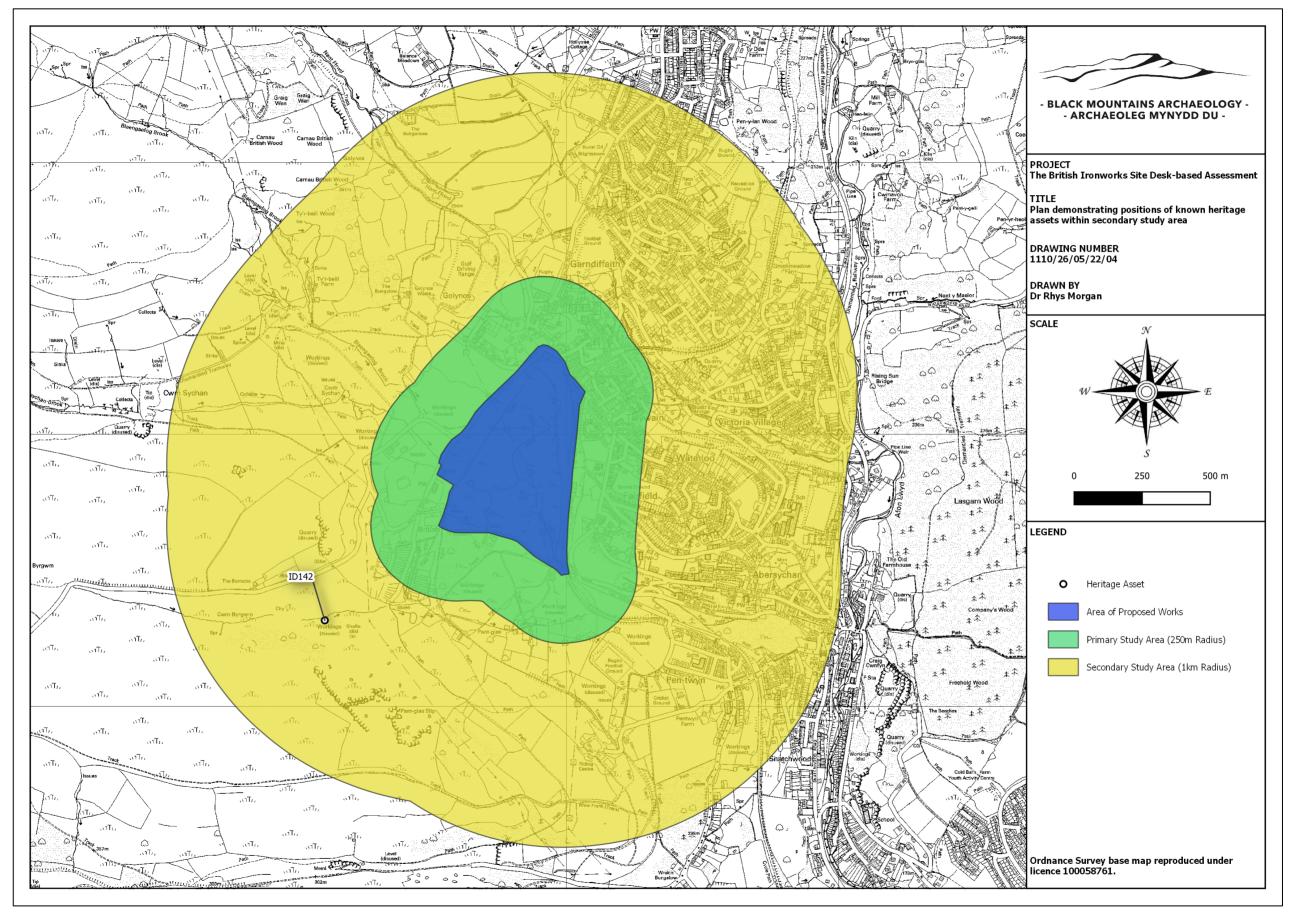


Figure 5. Plan demonstrating heritage assets within secondary study area that were considered for impact assessment

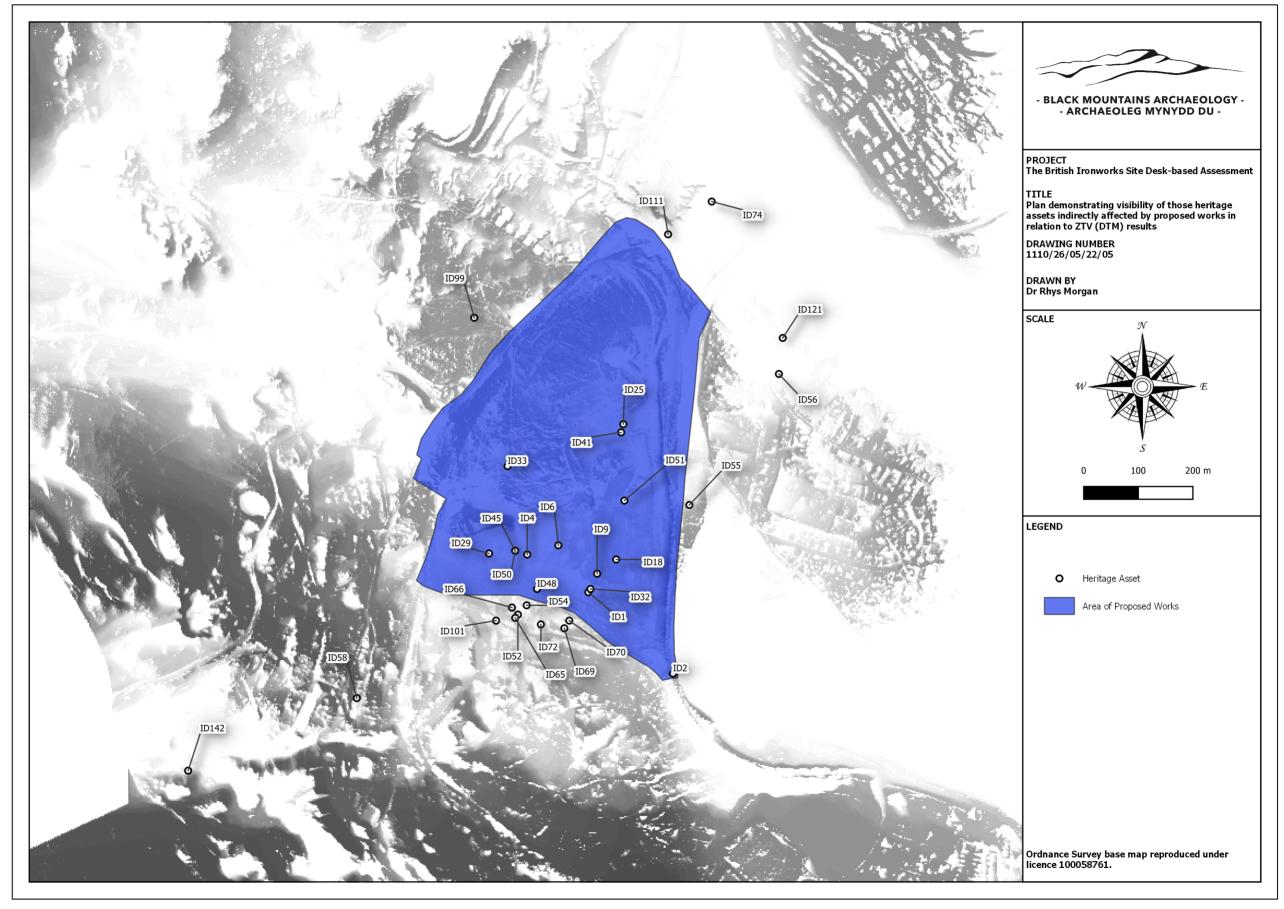


Figure 6. Plan demonstrating positions of heritage assets assessed for indirect (visual) impact in relation to ZTV (DTM) analysis results

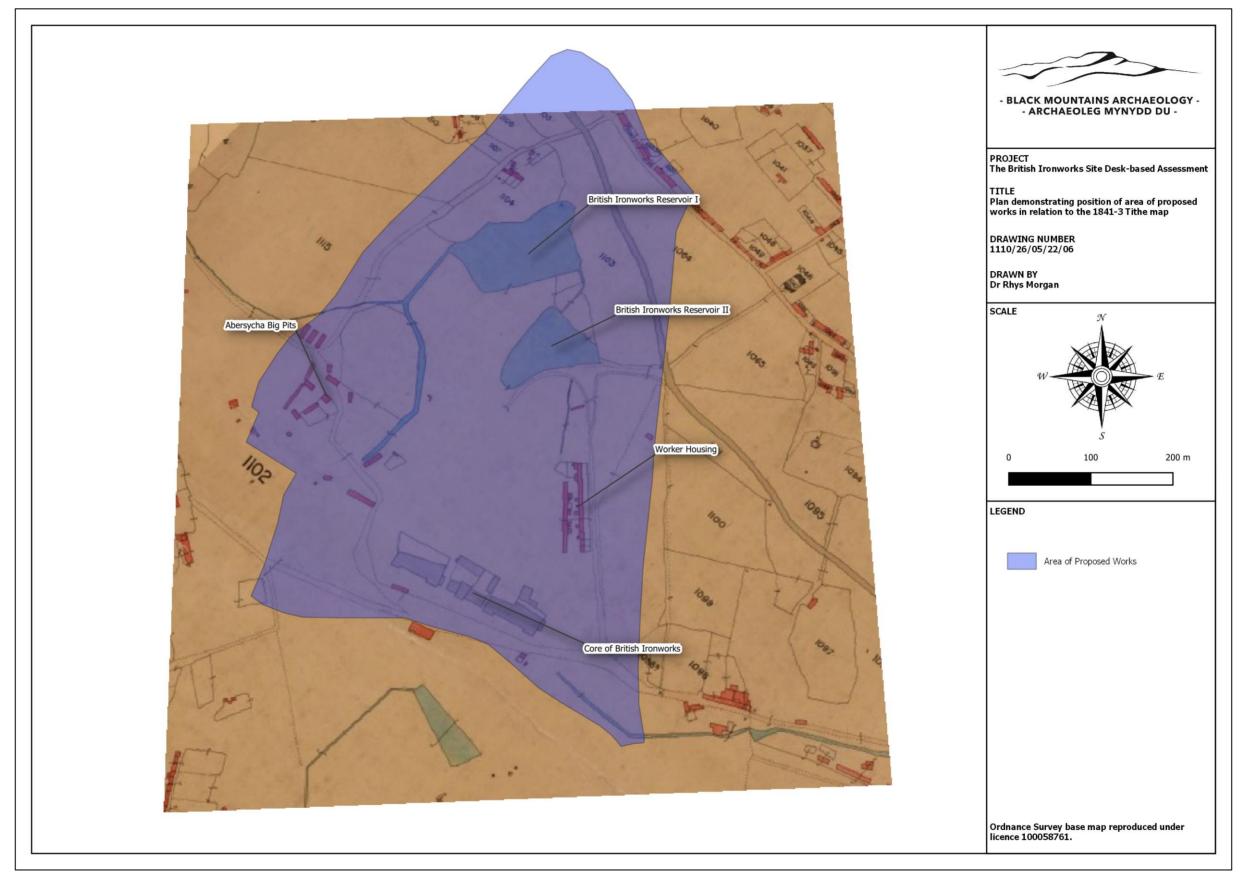


Figure 7. Plan demonstrating area of proposed works in relation to the 1841–3 Tithe map (No 2, Part of the Parish of Trevethin in the County of Monmouth) (copyright National Library of Wales)

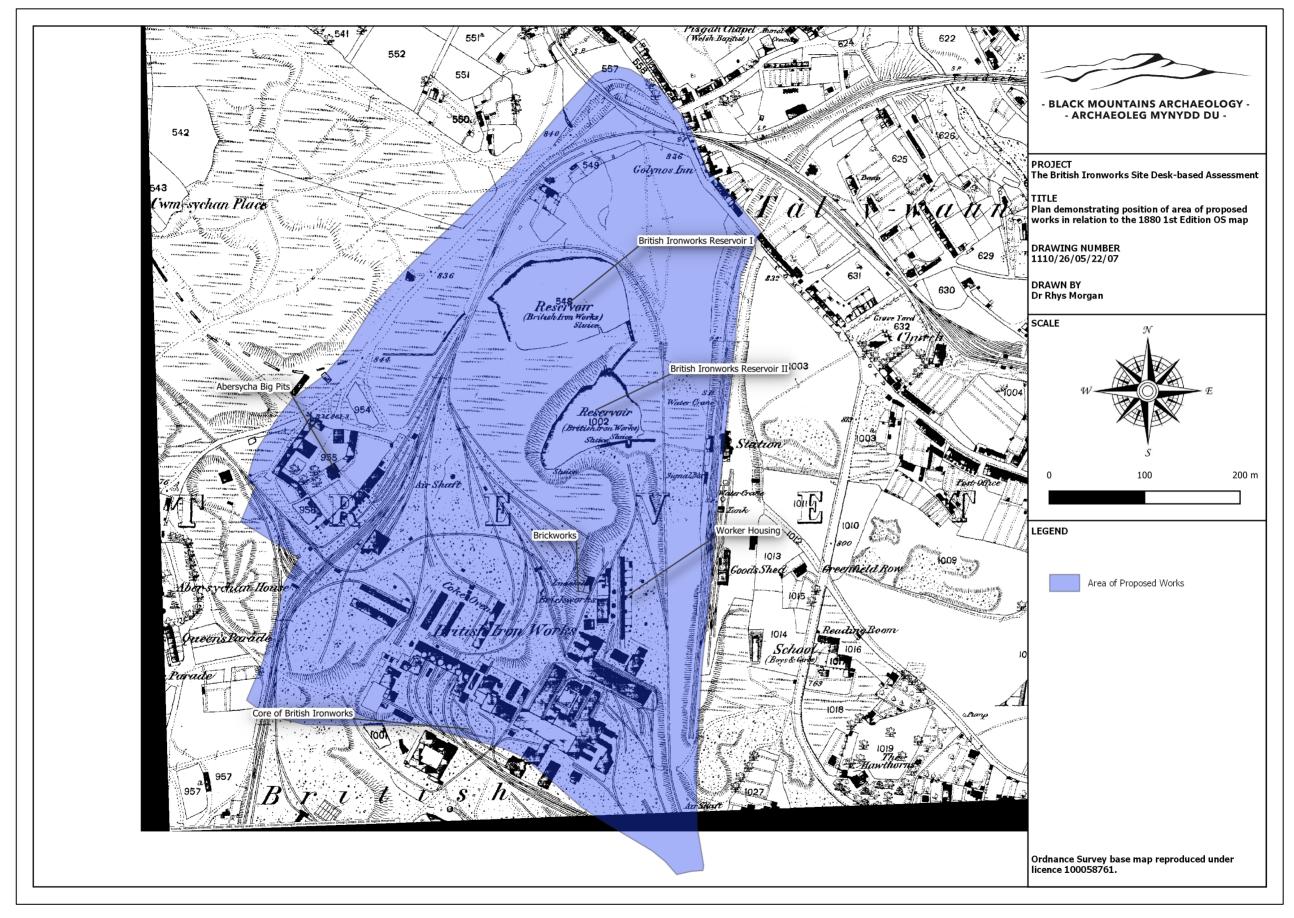


Figure 8. Plan demonstrating area of proposed works in relation to the 1880 1st Edition OS Map (Monmouthshire Sheet XVIII) (copyright Landmark Information Group Ltd)

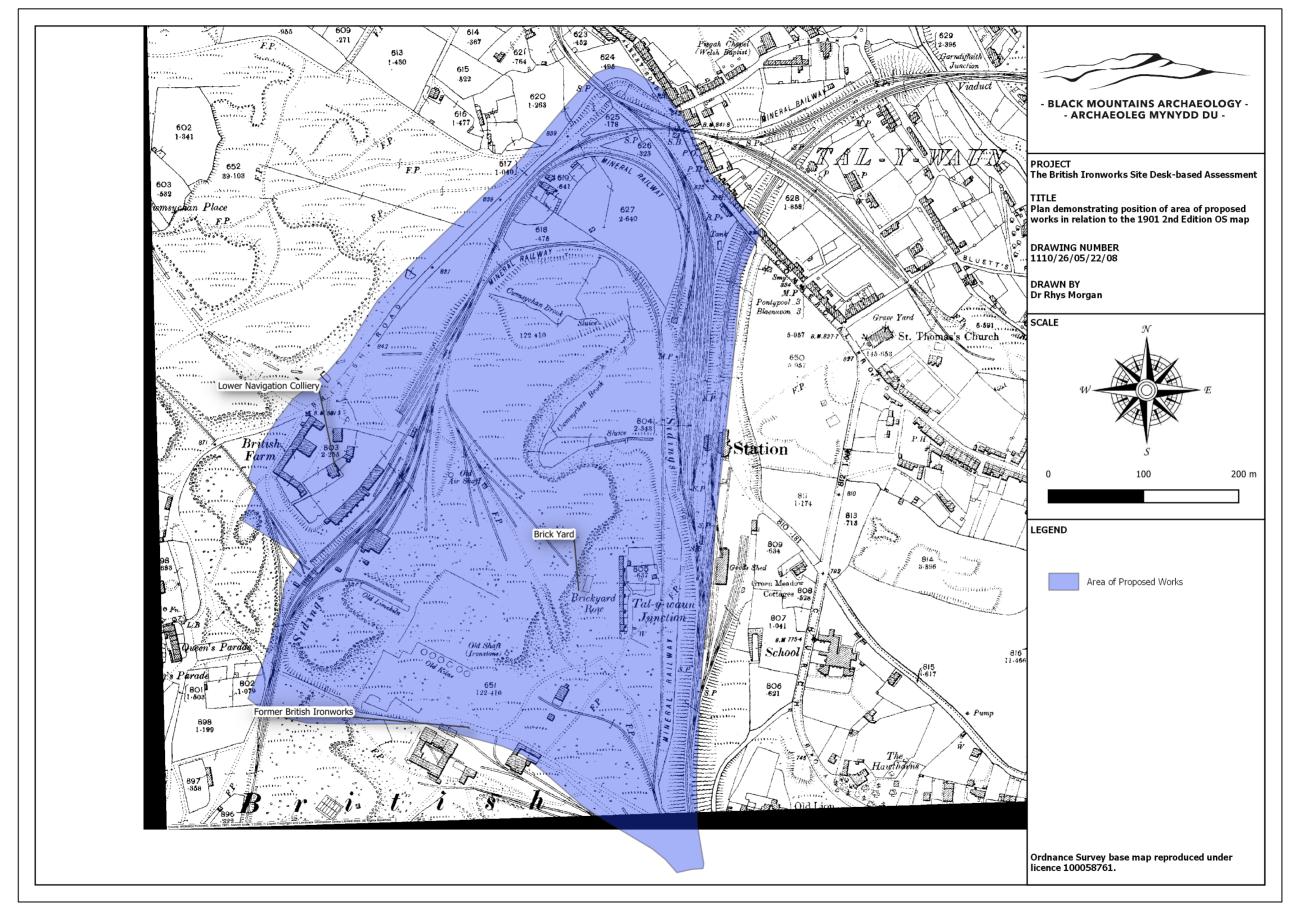


Figure 9. Plan demonstrating area of proposed works in relation to the 1901 2nd Edition OS Map (Monmouthshire Sheet XVIII) (copyright Landmark Information Group Ltd)

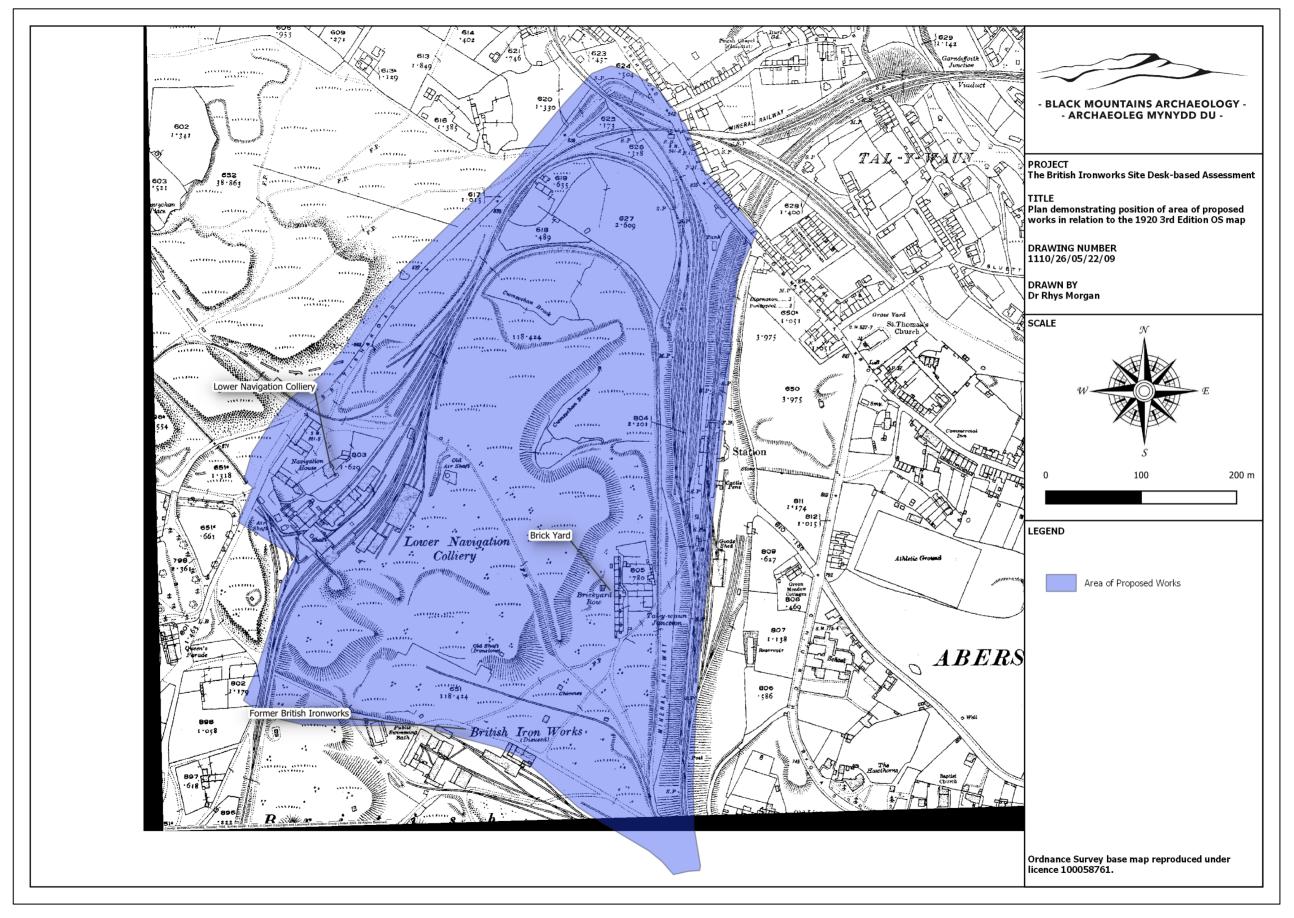


Figure 10. Plan demonstrating area of proposed works in relation to the 1920 3rd Edition OS Map (Monmouthshire Sheet XVIII) (copyright Landmark Information Group Ltd)

8.2 Appendix II – Plates



Plate 1. Photograph of British Ironworks Chimney Base (ID9) (view south)



Plate 2. Photograph of British Ironworks Reservoir Sluice III (ID42) (view north)



Plate 3. Aerial photograph of visible elements of British Ironworks Blast Furnaces (ID50) (view northwest)



Plate 4. Aerial photograph of British Colliery Pumping Engine House (ID1) (view southwest)



Plate 5. Aerial photograph of British Ironworks Office and Foundry Quadrangle (ID54) (viewsouth)



Plate 6. Detailed aerial photograph of British Ironworks Office and Foundry Quadrangle (ID54) (view south)



Plate 7. 1984 aerial photograph of site of former British Ironworks (copyright Air Photo Wales)



Plate 8. 1991 aerial photograph of site of former British Ironworks (copyright Air Photo Wales)



Plate 9. 1995 aerial photograph of site of former British Ironworks (copyright Air Photo Wales)

8.3 Appendix III - Aerial Photograph Inventory

WO no	Sortie No	Date	Photo type
032	8402 ADAS202	1980	B&W
284	Geonex 7791	1991	Colour
016	95130 300	1995	Colour

8.4 Appendix IV – Gazetteer of New Heritage Assets

ID: 51 Enw: Siafft Pwll Glo Gwaith Haearn British

NGR: SO2591003812 Math: Siafft pwll glo Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Olion siafft mwyngloddio a leolir y tu hwnt i ymyl ogledd-ddwyreiniol craidd yr hen Waith Haearn British. Ar hyn o bryd mae'r siafft yma mewn cyflwr adfeiliedig ac wedi ei fewnlenwi gyda choncrit, fodd bynnag mae i'w weld yn glir o fewn y dirwedd. Mae'r siafft wedi'i lleoli y tu hwnt i derfynau Abersycha Big Pits a Lower Navigation Colliery ac felly mae'n debygol y cafodd ei chloddio gan berchnogion Gwaith Haearn British, a oedd yn bosibl at ddibenion echdynnu glo neu fwyn haearn.

ID: 1 Name: British Ironworks Mineshaft

NGR: SO2591003812 Type: Mineshaft Status: None Period: Post-medieval

Description:

Remains of a mineshaft situated beyond the northeast edge of the core of the former British Ironworks. At present, this shaft is in a ruinous state and has been infilled with concrete, however it is clearly visible within the landscape. The shaft is situated beyond the limits of Abersychan Big Pits and the Lower Navigation Colliery and was therefore likely excavated by the proprietors of the British Ironworks, possible for the purposes of extracting coal or iron ore.

ID: 127 Enw: Ceuffos Bosibl Gwaith Haearn British I

NGR: SO2589504072 Math: Ceuffos bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Possible culvert situated within vicinity of British Ironworks Reservoir I (GGAT11521g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 127 **Name**: British Ironworks Possible Culvert I

NGR: SO2589504072 Type: Possible culvert Status: None Period: Post-medieval

Description:

Ceuffos bosibl wedi'i leoli yng nghyffiniau Cronfa Ddŵr I Gweithfeydd Haearn British (GGAT11521g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 128 Enw: Siafft Gwaith Haearn British I

NGR: SO2598503555 Math: Siafft Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siafft wedi'i leoli tuag at gornel dde-ddwyreiniol hen safle Gwaith Haearn British. Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 128 Name: British Ironworks Shaft I

NGR: SO2598503555 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated towards southeast corner of former British Ironworks site. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 129 Enw: Siafft Gwaith Haearn British II

NGR: SO2600103519 Math: Siafft Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siafft wedi'i leoli tuag at gornel dde-ddwyreiniol hen safle Gwaith Haearn British. Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 129 Name: British Ironworks Shaft II

NGR: SO2600103519 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated towards southeast corner of former British Ironworks site. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 130 Enw: Siafft Haearnfaen Bosibl Gwaith Haearn British

NGR: SO2579303718 Math: Siafft Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Possible ironstone shaft situated within core of former British Ironworks. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 130 Name: British Ironworks Possible Ironstone Shaft

NGR: SO2579303718 Type: Shaft Status: None Period: Post-medieval

Description:

Siafft haearnfaen bosibl wedi'i lleoli o fewn craidd hen Waith Haearn British. Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 131 Enw: Ceuffordd Bosible Gwaith Haearn British I

NGR: SO2577003683 Math: Ceuffordd bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Ceuffordd bosibl wedi'i lleoli o fewn craidd hen Waith Haearn British. Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 131 Name: British Ironworks Possible Adit I

NGR: SO2577003683 Type: Possible adit Status: None Period: Post-medieval

Description:

Possible adit situated within core of former British Ironworks. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 132 Enw: Ceuffos Bosibl Gwaith Haearn British II

NGR: SO2570503661 Math: Ceuffos bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Ceuffos bosibl wedi'i leoli o fewn craidd hen Waith Haearn British. Wedi'i leoli tuag at ymyl dwyreiniol y cwrs dŵr.Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 132 Name: British Ironworks Possible Culvert II

NGR: SO2570503661 Type: Possible culvert Status: None Period: Post-medieval

Description:

Possible culvert situated within core of former British Ironworks. Positioned towards eastern edge of watercourse. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 133 Enw: Ceuffos Bosibl Gwaith Haearn British III

NGR: SO2565403666 Math: Ceuffos bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Ceuffos bosibl wedi'i leoli o fewn craidd hen Waith Haearn British. Wedi'i leoli tuag at ymyl deheuol y cwrs dŵr.Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 133 Name: British Ironworks Possible Culvert III

NGR: SO2565403666 Type: Possible culvert Status: None Period: Post-medieval

Description:

Possible culvert situated within core of former British Ironworks. Positioned towards southern edge of watercourse. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 134 Enw: Ceuffos Bosibl Gwaith Haearn British IV

NGR: SO2564703672 Math: Ceuffos bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Ceuffos bosibl wedi'i leoli o fewn craidd hen Waith Haearn British. Wedi'i leoli tuag at ymyl deheuol y cwrs dŵr.Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 134 Name: British Ironworks Possible Culvert IV

NGR: SO2564703672 Type: Possible culvert Status: None Period: Post-medieval

Description:

Possible culvert situated within core of former British Ironworks. Positioned towards southern edge of watercourse. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 135 Enw: Ceuffos Bosibl Gwaith Haearn British V

NGR: SO2556403710 Math: Ceuffos bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Ceuffos bosibl wedi'i leoli ar ymyl gorllewinol craidd neu hen Waith Haearn British. Wedi'i leoli tuag at ymyl gorllewinol y cwrs dŵr. Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 135 Name: British Ironworks Possible Culvert V

NGR: SO2556403710 Type: Possible culvert Status: None Period: Post-medieval

Description:

Possible culvert situated on western edge of core or former British Ironworks. Positioned towards western edge of watercourse. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 136 Enw: Ceuffos Bosibl Gwaith Haearn British VI

NGR: SO2595604078 Math: Ceuffos bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Ceuffos bosibl wedi'i leoli yng nghyffiniau Cronfa Ddŵr I Gweithfeydd Haearn British (GGAT11521g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 136 Name: British Ironworks Possible Culvert VI

NGR: SO2595604078 Type: Possible culvert Status: None Period: Post-medieval

Description:

Possible culvert situated within vicinity of British Ironworks Reservoir I (GGAT11521g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 137 Enw: Ceuffos Bosibl Gwaith Haearn British VII

NGR: SO2594303962 Math: Ceuffos bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Ceuffos bosibl wedi'i leoli yng nghyffiniau Cronfa Ddŵr II Gweithfeydd Haearn British (GGAT11522g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 137 Name: British Ironworks Possible Culvert VII

NGR: SO2594303962 Type: Possible culvert Status: None Period: Post-medieval

Description:

Possible culvert situated within vicinity of British Ironworks Reservoir II (GGAT11522g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 138 Enw: Ceuffordd Bosible Gwaith Haearn British II

NGR: SO2591803881 Math: Ceuffordd bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Ceuffordd bosibl wedi'i leoli i'r de o Cronfa Ddŵr II Gweithfeydd Haearn British (GGAT11522g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 138 Name: British Ironworks Possible Adit II

NGR: SO2591803881 Type: Possible adit Status: None Period: Post-medieval

Description:

Possible adit situated to south of British Ironworks Reservoir II (GGAT11522g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 139 Enw: Ceuffos Bosibl Gwaith Haearn British VIII

NGR: SO2589303877 Math: Ceuffos bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Ceuffos bosibl wedi'i leoli i'r de o Cronfa Ddŵr II Gweithfeydd Haearn British (GGAT11522g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 139 Name: British Ironworks Possible Culvert VIII

NGR: SO2589303877 Type: Possible culvert Status: None Period: Post-medieval

Description:

Possible culvert situated to south of British Ironworks Reservoir II (GGAT11522g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 140 Enw: Ceuffordd Bosible Gwaith Haearn British III

NGR: SO2590303817 Math: Ceuffordd bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Ceuffordd bosibl i'r gogledd o Waith Brics Gwaith Haearn British (GGAT11516g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 140 Name: British Ironworks Possible Adit III

NGR: SO2590303817 Type: Possible adit Status: None Period: Post-medieval

Description:

Possible adit situated to north of British Ironworks Brickworks (GGAT11516g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 142 Enw: Siafft Gwaith Haearn British III

NGR: SO2590203808 Math: Siaftt Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siaftt wedi'i leoli i'r gogledd o Waith Brics Gwaith Haearn British (GGAT11516g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 142 Name: British Ironworks Shaft III

NGR: SO2590203808 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated to north of British Ironworks Brickworks (GGAT11516g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 143 Enw: Siafft Gwaith Haearn British IV

NGR: SO2593903768 Math: Siaftt Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siaftt wedi'i leoli i'r dwyrain o Waith Brics Gwaith Haearn British (GGAT11516g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 143 Name: British Ironworks Shaft IV

NGR: SO2593903768 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated to east of British Ironworks Brickworks (GGAT11516g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 144 Enw: Siafft Gwaith Haearn British V

NGR: SO2590303752 Math: Siaftt Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siaftt wedi'i leoli i'r de o Waith Brics Gwaith Haearn British (GGAT11516g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 144 Name: British Ironworks Shaft V

NGR: SO2590303752 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated to south of British Ironworks Brickworks (GGAT11516g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 145 Enw: Ceuffordd Bosible Gwaith Haearn British IV

NGR: SO2592303742 Math: Ceuffordd bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Ceuffordd bosibl i'r dwyrain o Waith Brics Gwaith Haearn British (GGAT11516g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 145 Name: British Ironworks Possible Adit IV

NGR: SO2592303742 Type: Possible adit Status: None Period: Post-medieval

Description:

Possible adit situated to east of British Ironworks Brickworks (GGAT11516g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 146 Enw: Siafft Gwaith Haearn British VI

NGR: SO2598303509 Math: Siaftt Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siafft wedi'i lleoli yng nghornel de-ddwyreiniol hen safle Gwaith Haearn British. Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 146 Name: British Ironworks Shaft VI

NGR: SO2598303509 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated in southeast corner of former British Ironworks site. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 147 Enw: Ceuffos Bosibl Gwaith Haearn British IX

NGR: SO2584903928 Math: Ceuffos bosibl Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Ceuffos bosibl wedi'i leoli i'r gorllewin o Cronfa Ddŵr II Gweithfeydd Haearn British (GGAT11522g). Wedi'i leoli tuag at ymyl gorllewinol y cwrs dŵr. Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 147 Name: British Ironworks Possible Culvert IX

NGR: SO2584903928 Type: Possible culvert Status: None Period: Post-medieval

Description:

Possible culvert situated to west of British Ironworks Reservoir II (GGAT11522g). Positioned towards western edge of watercourse. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 148 Enw: Siafft Gwaith Haearn British XI

NGR: SO2586303897 Math: Siaftt Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siafft i'r de-orllewin o Waith Brics Gwaith Haearn British (GGAT11516g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 148 Name: British Ironworks Shaft XI

NGR: SO2586303897 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated to southwest of British Ironworks Brickworks (GGAT11516g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 149 Enw: Siafft Gwaith Haearn British VII

NGR: SO2598403888 Math: Siaftt Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siafft bosibl wedi'i leoli i'r dwyrain o Cronfa Ddŵr II Gweithfeydd Haearn British (GGAT11522g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 149 Name: British Ironworks Shaft VII

NGR: SO2598403888 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated to east of British Ironworks Reservoir II (GGAT11522g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 150 Enw: Siafft Gwaith Haearn British VIII

NGR: SO2587503660 Math: Siaftt Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siafft wedi'i lleoli yng nghraidd Efail a Melin Newydd Gwaith Haearn British (GGAT11510g). Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 150 Name: British Ironworks Shaft VIII

NGR: SO2587503660 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated within core of British Ironworks New Forge and Mill (GGAT11510g). It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 151 Enw: Siafft Gwaith Haearn British IX

NGR: SO2598203495 Math: Siaftt Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siafft wedi'i leoli ar gornel de-ddwyreiniol craidd hen safle Gwaith Haearn British. Mae'n Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 151 Name: British Ironworks Shaft IX

NGR: SO2598203495 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated to southeast corner of core of former British Ironworks site. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 152 Enw: Siafft Glofa Lower Navigation I

NGR: SO2554903856 Math: Siaftt Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siafft wedi'i leoli yng nghyffiniau Glofa Lower Navigation Mae'n Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 152 Name: Lower Navigation Colliery Shaft I

NGR: SO2554903856 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated within vicinity of Lower Navigation Colliery. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 153 Enw: Siafft Glofa Lower Navigation II

NGR: SO2554103851 Math: Siaftt Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siafft wedi'i leoli yng nghyffiniau Glofa Lower Navigation Mae'n Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 153 Name: Lower Navigation Colliery Shaft II

NGR: SO2554103851 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated within vicinity of Lower Navigation Colliery. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.

ID: 154 **Enw**: Siafft Gwaith Haearn British X

NGR: SO2595603555 Math: Siaftt Statws: Dim Cyfnod: Ôl-ganoloesol

Disgrifiad:

Siafft wedi'i leoli ar gornel de-ddwyreiniol craidd hen safle Gwaith Haearn British. Mae'n Cynigiwyd y bydd y nodwedd hon yn destun gwaith adfer, a gomisiynwyd gan Gyngor Bwrdeistref Sirol Torfaen, at ddibenion draenio'r tomennydd gwastraff yn yr ardal.

ID: 154 Name: British Ironworks Shaft X

NGR: SO2595603555 Type: Shaft Status: None Period: Post-medieval

Description:

Shaft situated to southeast corner of core of former British Ironworks site. It has been proposed that this feature will undergo remediation work, commissioned by Torfaen County Borough Council, for the purposes of draining the spoil tips situated in the area.



- 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.

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