

**Cyngnor Bwrdeistref Sirol Merthyr Tudful  
Cynllun Datblygu Lleol Amnewid (2016 - 2031)  
Merthyr Tydfil County Borough Council  
Replacement Local Development Plan (2016 - 2031)**

Supplementary Planning Guidance (SPG)  
Note 3: Archaeology and Archaeologically Sensitive Areas

October 2020



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#### **Introduction**

- 1.1 The Merthyr Tydfil County Borough area includes a wide variety and range of historic and archaeological remains, which vary in age, extent and importance, but are a finite resource. In some areas within the County Borough, there is greater potential for archaeological remains to survive. Accordingly, *Policy CW1: Historic Environment*, of the *Merthyr Tydfil Replacement Local Development Plan (LDP) 2016-2031*, defines these areas as Archaeologically Sensitive Areas (ASAs), as illustrated on the *Proposals Map*.
- 1.2 The local planning authority's (LPA) archaeological advisors Glamorgan and Gwent Archaeological Trust (GGAT) first defined the ASAs in their paper *Archaeology and Archaeologically Sensitive Areas*, July 2017<sup>1</sup>. That paper stated that the designation of ASAs would highlight the archaeological significance of these areas and the need for potential developers to seek professional archaeological advice to ascertain the archaeological significance of a proposed development site.
- 1.3 This Supplementary Planning Guidance (SPG) provides further guidance on how the implementation of Policy CW1, in relation to archaeological heritage within the planning process, will be undertaken.
- 1.4 The Welsh Government supports the use of SPG, to set out detailed 'guidance' on the way in which LDP policies will be applied, either in certain circumstances or specific areas<sup>2</sup>. Consequently, whereas the LDP contains policy, this SPG contains guidance and advice only. However, it is consistent with LDP policy and national planning policy guidance.

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<sup>1</sup> Archaeology & Archaeologically Sensitive Areas, Glamorgan and Gwent Archaeological Trust, July 2017.

<sup>2</sup> Local Development Plan Manual – Edition 2 - August 2015, 7.3 Supplementary Planning Guidance.

## **2. Defining Archaeology and Archaeological Remains**

- 2.1 The word, 'Archaeology' is derived from ancient Greek and means "the study of antiquity", which is the ancient past. It entails the study of human history and cultures through the study of material and environmental remains. It is uniquely able to illuminate the impact of human interaction with our environment through time by showing how people in the past lived, ate and drank, worked, travelled and died.
- 2.2 'Archaeological remains' are an important finite source of information about the past. Evidence of past activity can be large or small scale remains, including settlements, buildings, monuments, ruins, buried sites or open landscapes, parks, and gardens, of single finds or a scatter of finds. They can be found underwater or on land, including above or below ground, and features can range from the extraordinary to the everyday. Their investigation and, where appropriate, preservation is not only important in its own right but can also provide an invaluable educational and tourism resource.

## **3 Recording Archaeological Remains**

- 3.1 The Historic Environment Record (HER<sup>3</sup>) is a national Welsh database containing information or 'data' on all known archaeological and historical sites. The County Borough Council does not have its own in-house specialists to curate and maintain a HER itself so has adopted the HER<sup>4</sup> curated by the GGAT.
- 3.2 Data 'points' register the information within HER and indicate the existence of remains, but not necessarily their physical extent. A data point may refer to a single find or a building, or a larger area, for instance, scatters of flint tools, a Roman fort, a burial ground, or a linear feature such as a road, canal, or railway.
- 3.3 HER data concerning sites and 'find spots' may occur in clusters, although this is dependent on period and type, and some may be more widespread and related to landscape use and current understanding. 'Polygons' delineate Scheduled Ancient Monuments (SAMs) and larger areas that form

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<sup>3</sup> <http://www.ggat.org.uk/her/her.html>

<sup>4</sup> The Historic Environment (Wales) Act 2016, Part 4, sections 35-37 details the provision for Historic Environment Records (HERs) and their maintenance.

designated landscapes, such as Registered Parks and Gardens or Registered Landscapes and their constituent character areas.

- 3.4 'Core' data refers to the number of sites and finds recorded on the HER from a variety of sources. 'Event' data relates to recorded archaeological 'works', for example, intrusive works, such as, excavations, field evaluations, and monitoring of intrusive development works, test-pits and sampling and or non-intrusive works, such as, archaeological or heritage assets assessments, appraisals, building recordings and geophysical surveys.
- 3.5 However, HER is not a complete register as new sites, finds and archaeological information are constantly added, ranging in date from the Neolithic through to Modern civic, military, and industrial. Consequently, the absence of a record on the HER system does not necessarily mean that no archaeological interest exists in an area. GGAT therefore continuously monitor planning applications and advise the LPA where proposed development could potentially impact unrecorded archaeological sites.

## **4 National Legislative and Policy Framework**

- 4.1 *The Ancient Monuments and Archaeological Areas Act 1979; the Planning (Listed Buildings and Conservation Areas) Act 1990; and the Historic Environment (Wales) Act 2016* provides the legislative framework for the protection and management of the historic environment and its assets in Wales. These are supported by *Planning Policy Wales (PPW)* (Edition 10, December 2018), which together with Technical Advice Note (TAN) 24: *The Historic Environment* (May 2017), comprises the national planning policy framework.
- 4.2 The Ancient Monuments and Archaeological Areas Act 1979, makes provision for the investigation, preservation and recording of matters of archaeological or historical interest, and for the regulation of operations or activities affecting such matters. The Planning (Listed Buildings and Conservation Areas) Act 1990 relates to special controls in respect of buildings and areas of special architectural or historic interest.
- 4.3 The Historic Environment (Wales) Act 2016 enhances existing mechanisms for the sustainable management of the historic environment in Wales. It also effectively offers more protection to listed and scheduled structures and

includes the creation of a statutory register of historic parks and gardens and secures a more stable future for HERs in Wales.

- 4.4 Section 6.1 of PPW10: *The Historic Environment* deals with the protection of the historic environment in Wales and recognises that it is a finite and non-renewable shared resource, vital and integral to the historical and cultural identity of Wales.
- 4.5 The Welsh Government's objective is to protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations. It is the Planning Systems' responsibility to maintain this resource by seeking to protect, conserve and enhance the significance of historic assets. This can only be achieved if individual historic assets are protected and conserved, and any changes that have the potential to impact historic assets are managed in a sensitive and sustainable way. This is most effective when considered at the earliest stage of designing new proposals.
- 4.6 Technical Advice Note (TAN) 24: The Historic Environment supplements the Historic Environment (Wales) Act 2016, in respect of the historic environment replacing the two Welsh Office Circulars 60/96 and 61/96. Its purpose, amongst other things, is to provide guidance on how the planning system considers the historic environment when making decisions on planning and Listed Building consent applications. It also includes advice on SPG, which may be developed and adopted by LPA's to assist them in delivering local development plan policies and includes specific guidance relating to Archaeologically Sensitive Areas.
- 4.7 Additionally, it provides guidance on World Heritage Sites; Scheduled Monuments (including their setting); Archaeological remains; historic parks and gardens; historic landscapes; conservation areas; listed buildings and historic assets of special local interest, all of which are material considerations in determining a planning application. In addition, Cadw's (the Welsh Government's Historic Environment Service) best practice guides will be of relevance in the determination of planning applications. Other relevant legislation includes *The Wales Spatial Plan* (2008 Update), *The Well-being of Future Generations (Wales) Act 2015* and *Welsh Government Circular (WGC) 016/2014*.



- 4.8 The Wales Spatial Plan provides context and direction for LDPs and thereby for the management of the historic environment. It recognises that Wales as a whole and its regions is rich in archaeology and history, acknowledged as an integral part of its cultural identity.
- 4.9 The Well-being of Future Generations (Wales) Act 2015 places duties on public bodies including the promotion and protection of heritage for sustainable futures. It sets out seven goals for a sustainable improvement to the well-being of Wales' population, i.e. a prosperous Wales, a resilient Wales, a healthier Wales, an equal Wales, a Wales of cohesive communities, a Wales of vibrant culture and thriving Welsh language, and a globally responsible Wales.
- 4.10 It also acknowledges that the understanding of the historic environment and the protection and promotion of culture can contribute to the well-being of Welsh life. As such, Public Bodies are required to produce measurable outcomes relating to historic assets and culture.
- 4.11 Welsh Government Circular (WGC) 016/2014 - The Use of Planning Conditions for Development Management, amongst other things, addresses the use of planning conditions attached to permissions with respect to archaeology.

## **5. Statutorily Protected Sites**

- 5.1 As described above, the protection of statutorily protected sites, which include scheduled ancient monuments, listed buildings, parks, gardens, and landscapes, is required by legislation and the planning policy framework,
- 5.2 The Historic Environment (Wales) Act 2016 Part 2 and Part 3, and the Ancient Monuments and Archaeological Areas Act 1979 provides this protection in Wales. The 1979 Act gives statutory protection for nationally important archaeological sites and scheduled ancient monuments. Section 61(7) of the Act defines a scheduled ancient monument as:
- a) *“any building, structure, or work, whether above or below the surface of the land, and any cave or excavation;*
  - b) *any site comprising the remains of any such building, structure or work or of any cave or excavation;*

- c) any site comprising, or comprising the remains of, any vehicle, vessel, aircraft or other movable structure or part thereof which neither constitutes nor forms part of any work which is a monument within paragraph (a) above; and
- d) any machinery attached to a monument shall be regarded as part of the monument if it could not be detached without being dismantled".

#### **6. Merthyr Tydfil Replacement Local Development Plan 2016-2031**

- 6.1 Local policies complement the national policy framework, and in the case of historic assets, further set out how an LPA will address archaeology within the planning process. In Merthyr Tydfil, these local policies are set out in the Merthyr Tydfil County Borough Council Replacement Local Development Plan (LDP) 2016-2031.
- 6.2 The LDP acknowledges the importance of the built archaeological and cultural heritage within the County Borough. It seeks to ensure that due consideration is given to the conservation of statutorily designated and non-statutory designated assets in the determination of planning applications.
- 6.3 The Plan includes two thematic policies that relate to archaeological heritage, plus this SPG, which focuses on Archaeologically Sensitive Areas, containing measures to protect, manage and enhance the area's heritage assets and historic environment. Policy CW1 covers all the historic environment assets in the County Borough whilst CW2 supports the development of the Cyfarthfa Heritage Area.
- 6.4 Policy CW1 states:

#### **"Policy CW1: The Historic Environment**

***The integrity of our historic environment assets will be conserved and enhanced.***

***Development proposals will only be permitted where it can be demonstrated they would preserve or enhance the architectural quality, character or the historic or cultural importance of our designated historic environment assets.***

***Development affecting undesignated historic environment assets including, Locally Listed Buildings or structures, Landscapes of Outstanding Historic Interest in Wales, Urban Character Areas and Archaeologically Sensitive Areas should have regard to their special character and archaeological importance".***

- 6.5 The Council will consult GGAT, on the potential effect of development proposals on the architectural quality, historic and cultural significance, character, integrity and setting of the above assets.

**7. The Archaeological Resource within the County Borough area**

- 7.1 Currently, recorded within the HER, there are 80 Scheduled Ancient Monuments, 287 Listed Buildings and 344 archaeological sites<sup>5</sup> within the Merthyr Tydfil County Borough Council's administrative area.
- 7.2 The topography and geology, primarily the deep valley and head mineral ore, has influenced the nature of the archaeological resource in the Council's area. Evidence of some form of settlement and land-use dates from as early as the Neolithic period where isolated finds of that date show there was human activity. These early pre-historic remains comprise a mixture of flint tools, and cairns which tend to be located on the higher ground, such as the hill tops at the sides and head of the Taff valley.
- 7.3 The town of Merthyr Tydfil, located in the north of the local authority area, has evidence of occupation from the Roman period onwards. The small medieval settlement of the llan of St. Tydfil the Martyr<sup>1</sup> lay on the banks of the River Taff. Medieval agriculture within the County Borough area comprised relatively few buildings but included granges which were extensive, on land which they covered, now fragile and potentially at risk. Medieval evidence is important as a preserved landscape, representative of intensive activity at that time.
- 7.4 The extraction of mineral ore over the last three centuries<sup>6</sup> led to changes to entire landscapes. This activity expanded greatly from the mid-18th century

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<sup>5</sup> Although data was correct at the time of compilation, it is normal for this to change on a regular basis and therefore for an up-to-date dataset of information, developers should therefore consult the Glamorgan and Gwent Archaeological Trust (GGAT) Historic Environment Record (HER).

<sup>6</sup> Post Medieval to Modern Periods.

onwards when the large-scale extraction and transportation of minerals began. By continuing through to the modern age, the development of industrial, transport and power facilities, in some cases designed around infrastructure production and maintenance, reshaped the landscape and heritage of the area.

- 7.5 The nature of the technological developments associated with investment in the industries as well as the extensive remains, which differ hugely from the pre-historic remains, is of national and international importance. Furthermore, by understanding the part that families played in making the Merthyr Tydfil area a place of belonging shows the technological and engineering development's cultural importance on the community as well as a world centre of expertise.
- 7.6 Large extents of the County Borough Council area are therefore designated as a registered historic landscape, either as Merthyr Tydfil Landscape of Outstanding Historic interest in Wales (HLW (MGL) 2)<sup>ii</sup> or Gelligaer Common Landscape of Special Historic interest in Wales (HLW (MGL) 4)<sup>iii</sup>.
- 7.7 Archaeological work undertaken in characterising these areas has aimed to describe what makes the character areas within the Landscapes<sup>iv</sup> distinctive and illustrate the wider nature of the remains. For example, the extensive Dowlais Free Drainage System covered a vast area and by gravity and a system of reservoirs, dams and leats fed the ironworks at Dowlais and Penydarren, as well as mines.

## **8. Defining Archaeologically Sensitive Areas within the County Borough area**

- 8.1 The purpose of the Archaeologically Sensitive Areas (ASAs) designation is to assist those who are planning development in areas where there is a known archaeological resource, or where it is likely that remains may be sensitive to development pressures. It is not the intention of this non-statutory designation to introduce new policies or restrictions to development. Rather, it serves to indicate to developers, areas where it is more likely that the effect of a development on the archaeological resource could become an issue, during the determination of a planning application.
- 8.2 The ASAs identified in Policy CW1, illustrate a core or cluster of data points highlighting the archaeological significance of these areas. The boundaries clearly define the most likely areas in which archaeology may become a

component in the determination of planning applications and give potential developers early indications of such factors.

- 8.3 Their designation also serves to enable developers, the LPA and their advisors, to identify where additional information may be required prior to the submission of or to accompany a planning application, in order to establish the importance of the archaeological resource and the potential effect of the proposed development.
- 8.4 National planning policy and guidance stresses the need to evaluate sites, record them and preserve those that are most important. Potential developers should therefore seek professional archaeological advice to identify the likely archaeological resource within the proposed development area as early as possible. This will enable the earliest possible consideration of the potential impact that a development might have on an archaeological resource. Introducing appropriate mitigation measures into the proposal, to protect the identified resource at an early stage, will ensure that proposals are sensitive to the preservation of archaeological remains within them.
- 8.5 It must be noted however, that although the ASAs show the areas where archaeological remains are most likely to occur, they are not confined to these areas. Areas outside a designated ASA may contain archaeological and/or historical sites of importance that could factor in the determination of any planning application. To this end, 'Archwilio'<sup>7</sup> provides public access to the Historic Environment Record (HER) including information on historic sites and past and present investigative works carried out across Wales.
- 8.6 GGAT advise consultation with them early in the design process of any proposed development in the County Borough Council area. This will verify whether any archaeological sites are present or suspected of being located within or in proximity to an application site or development area. It will also ascertain whether pre-determination or post-determination mitigation is required whilst ensuring that proposals are sensitive to the preservation of archaeological remains and not needlessly destroyed through careless development.

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<sup>7</sup> <https://archwilio.org.uk/arch/>

#### 9. **Archeologically Sensitive Areas designated in the County Borough**

GGAT have identified Nine Archaeologically Sensitive Areas<sup>8</sup> within the County Borough as follows:

1. Cyfarthfa Castle and Park.
2. Cyfarthfa Ironworks and Infrastructure.
3. Penydarren Roman Fort and Environs.
4. Penydarren Ironworks.
5. Prehistoric Enclosures; Morlais Castle; Morlais Castle Quarries.
6. Dowlais Ironworks; Supporting Infrastructure; Dowlais Gas.
7. Plymouth Ironworks; Trevithick's Tunnel; Associated Infrastructure.
8. Merthyr Tydfil West: Heolgerrig, Winch Fawr, Cwm Du, Cwm Glo and
9. Gelligaer Common.

#### 9.1 **ASA 1: Cyfarthfa Castle and Park**

9.1.1 This area is shown on the plan, attached at Appendix 1 and lies within the Park ward. The HER Registers include 14 Core Entries. Its principal designations comprise of:

- Cyfarthfa Castle Grade II\* - Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales.
- Three Listed Buildings including two Grade I.
- Cyfarthfa Conservation Area.
- Merthyr Tydfil - Register of Landscapes of Outstanding Historic Interest in Wales: HLW (MGL) 2: HLCA<sup>9</sup> 013: Cyfarthfa Castle and Park.

#### 9.1.2 Significance

9.1.2.1 Cyfarthfa Castle Grade II\* : Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales - Cyfarthfa Castle was the seat of the ironmaster William Crawshay<sup>v</sup>, and was built in 1825; the castle and grounds were built and developed next to the ironworks. A Grade I Listed building set in a Grade II\* Landscape, it is probably the most historically important ironmaster's home in Wales. Landscaped and extensive grounds surround the castle, designed as a Romantic mansion, and there is visual and physical connectivity to the site of the ironworks and its extractive landscape. It being

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<sup>8</sup> Archaeology and Archaeologically Sensitive Areas background paper, GGAT 2017.

<sup>9</sup> Historic Landscape Character Area.

registered in both Parts of the Register; as a Park in Part One and within the Landscape in Part Two reflects its importance.

#### 9.1.3 Reasons for Increased Archaeological Potential

- 9.1.3.1 Construction of the castle and park began in 1824, on a south west facing slope above the River Taff, which runs between Cyfarthfa Park and the site of the Cyfarthfa Ironworks. Commissioned by William Crawshay, and designed by Robert Luger<sup>vi</sup>, as a mock castle with battlements, crenellations and turrets.
- 9.1.3.2 Initially an informal park, later 19th century designs created a more formal landscaped layout and planting. The castle and the grounds in which it is located are the core survival of a much larger park, the surviving park covering some 64 hectares, which at the time of its inception was 245 hectares.
- 9.1.3.3 The core area that remains of the estate park includes the castle buildings, reached by a formal drive, and remains of the associated estate buildings such as the icehouse, kitchen garden area and bothy, and a series of dams, reservoir and fishponds.
- 9.1.3.4 Remains exist of the water management system, which includes four aligned elliptical reservoirs, revetted by dams towards the tops of the slope. The lower lake, marked on historic OS mapping as a fishpond, now reduced in size, also supplied Cyfarthfa works with water. This was contained in a feeder channel, shown on the OS second edition map, leading from both the south-eastern part of the lake, and from the north-western part of the former estate, to Pont-y-Cafnau and onward to the ironworks.
- 9.1.3.5 To the north-west of the Castle, there were estate ranges including stables, glasshouses, and kitchen gardens. Although now demolished, these demonstrated the involvement of such estates in developing the technical means of growing exotic species, such as pineapples in the 19th century. Wider species planting of trees in the formal landscape reflected the involvement of plant hunting and was a typical display of wealth at the time. The tree planting gave a long-term, basis to the wealth of the new estate owners and looked forward to a prosperous future.

#### 9.1.4 Development in the Archeologically Sensitive Area

- 9.1.4.1 Pressures of development on such a landscape and building are likely to include small-scale developments and those that affect drainage. Renovation of smaller structures may reveal archaeological features associated with the earlier formation of the landscape and its buildings, which in turn informs the knowledge of the wider management and development. Works to structures relating to the water management systems, lakes, ponds, and dams can reveal technical information as to how they were originally constructed.
- 9.1.4.2 Policy CW2 of the replacement LDP, which relates to the Cyfarthfa Heritage Area, based around the Castle and Park, supports the development of a heritage-based visitor attraction to complement the offer of Castle and Park. A design Charrette, which took place in October 2017, to review the industrial heritage assets and potential future development of the area resulted in a 'Crucible' design Charrette report. The report prepared by the Design Commission for Wales<sup>vii</sup> and Geraint Talfan Davies<sup>viii</sup> set out recommendations for potential regeneration strategies discussed at the Charette by the Council, partners, and stakeholders.
- 9.1.4.3. Subsequently, to ensure the long-term future of the park, the Council commissioned Ian Ritchie Architects<sup>ix</sup> to develop a 20-year masterplan to turn the Cyfarthfa Heritage Area into an industrial heritage centre of international significance.

#### 9.2 **ASA 2: Cyfarthfa Ironworks and Infrastructure**

- 9.2.1 This area is shown on the plan, attached at Appendix 2, and lies within the Park ward. The HER Register include 14 Core Entries and 32 Event Records. Its principal designations comprise of:
- Three Scheduled Monuments: GM424: Pont y Cafnau Tramroad Bridge GM425: Remains of Blast Furnaces, Cyfarthfa (two areas) and GM486: Iron Canal Bridge from Rhydycar.
  - Seven Listed Buildings including one Grade II\*.
  - Cyfarthfa Conservation Area.
  - Merthyr Tydfil Register of Landscapes of Outstanding Historic Interest in Wales: HLW (MGL) 2: HLCA009: Georgetown, Former Industrial Settlement; HLCA012a Cyfarthfa Ironworks; HLCA012b Cyfarthfa



Ironworks Cinder Tip; HLCA014 and River Taff Canal and Railway Corridor and HLCA079 A470 (T) Road Corridor.

#### 9.2.2 Significance

9.2.2.1 Nationally and internationally significant ironworks; 18th century foundation; in 1806 was the largest ironworks in the world; first works to produce bar iron and adopt other technological advances. Associated infrastructure includes industrial transport and water management.

#### 9.2.3 Reasons for Increased Archaeological Potential

9.2.3.1 Located on the south of the River Taff, Bacon and Brownrigg<sup>x</sup> founded the ironworks in 1765, by on a lease from William Talbot<sup>xi</sup>. Initially with a single furnace producing pig iron, it was the third of the five large ironworks<sup>10</sup> in the area to open. The advantages of the area included an abundance of raw materials, as well as iron ore, there was limestone, coal, and water.

9.2.3.2 On the retirement of Bacon in 1783, Richard Crawshay<sup>xii</sup> gained control of the works and the expansion of the works increased, both physically and technologically. The Henry Cort's<sup>xiii</sup> method of a reverberatory furnace refined the production of pig iron, soon after patenting. This method avoids physical contact of the ore with the fuel, producing better-quality iron as a result.

9.2.3.3 The number of blast furnaces increased to four by 1800, and paintings by Pamplin<sup>xiv</sup> show the extent of the works at that time, with tramroads, furnaces, charging banks and casting houses, and a large diameter waterwheel. Further buildings shown housed puddling furnaces and rolling mills. Production of gun carriages, cannon and shot occurred at this time.

9.2.3.4 The 1830s and 1840s saw construction of new mills and furnaces. The works expanded with the increase in railway transport and was at its peak during the 1870s. The works moved to steel production in 1884, and the construction of new furnaces enabled technological changes and improvement. Coking ovens were constructed, and the steel production continued until the early part of the 20th century. A decline in the 1920s led to the closure of the works and part of the site became a factory making incandescent lamps.<sup>xv</sup>

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<sup>10</sup> Dowlais Ironworks opened in 1759 and Plymouth Ironworks in 1763.

#### 9.2.4 Development in the Archeologically Sensitive Area

9.2.4.1 Descriptions of redevelopment work in some areas of the works since then show the works as being destroyed, but this refers primarily to the demolition of most of the upstanding visible structures. Recent archaeological evaluation work undertaken prior to development has shown that significant buried remains survive, with a high degree of integrity. Although, deeply buried in part, in some areas they have a shallow cover only. Contamination present is a consideration in any proposed redevelopment.

9.2.4.2 Three areas are Scheduled Ancient Monuments, the works itself (two areas with one number) and two of the bridges made with iron from the works. These statutory designations reflect the importance of the site, from a technological aspect also reflecting its global importance.

9.2.4.3 Any redevelopment work is likely to encounter significant archaeological remains, and industrial remains by their nature will be complex and deeply stratified. Moreover, the Historic Environment Act 2016 states that the impact of a development on the setting of Scheduled Ancient Monuments is also a consideration, as well as the physical impact of any development on the archaeological resource.

### 9.3 **ASA 3: Penydarren Roman Fort and Environs**

9.3.1 This area as shown on the plan, attached at Appendix 3 lies situated within the Park ward. The HER Registers include 15 Core Entries and 22 Event Records. Its principal designations comprise of:

- Two Listed Buildings including Grade II.
- Town Centre and Morgantown Conservation Areas.
- Merthyr Tydfil Register of Landscapes of Outstanding Historic Interest in Wales: HLW (MGL) 2: HLCA003: Penydarren Park and Gwaelod-y- Garth.

#### 9.3.2 Significance

9.3.2.1 Site of a Roman Fort, with associated remains of roads, a bathhouse, stone buildings and human remains, external to the fort. Site of Penydarren House, built in 1786 and home of the Ironmaster Samuel Homfray<sup>xvi</sup>.

#### 9.3.3 Reasons for Increased Archaeological Potential

- 9.3.3.1 The fort was established in the last quarter of the first century AD and built on a spur of land above the confluence of the Morlais and Taff Rivers. With an occupation period of AD c70 to c140, two main phases of construction have been identified, firstly of timber and secondly of stone.
- 9.3.3.2 Roman remains, comprising fragments of mosaic, and Roman building material were first uncovered in 1786 during the construction of Penydarren House, located to the west of Penydarren Ironworks. The first organised archaeological work undertaken in 1902, showed evidence that the fort was part of a complex of military buildings. Archaeological work undertaken by an antiquarian society<sup>xvii</sup> revealed remains of a hypocaust system that was part of a military bathhouse, located to the south east of the fort. Finds comprising a tessellated floor and a stone paved area and stone building to the south, initially identified a high-status stone building to the north of the fort.
- 9.3.3.3 It was the Roman practice to inter their dead outside forts, partly for health reasons, but also to indicate to visitors the importance of those who lived and worked there. Although excavations unearthed evidence of the cemetery to the north and north-west of the fort, its extent remains unknown. In addition, given that interment of the cremation burials occurred in what appears to be an irregular pattern, it is difficult to predict their exact location with any certainty. Later excavations undertaken during the construction of the football stadium (Penydarren Park) in 1905 confirmed the site as military, with the identification of a granary within the fort.
- 9.3.3.4 Homfray built Penydarren House in the 18th century during the development of the area as a world centre of ironworking and industrial development. He supported research into the science surrounding metallurgical development and extraction through which Richard Trevithick<sup>xviii</sup> developed steam engines for the ironworks. This led to the construction of the world's first steam powered train and locomotive-hauled railway journey<sup>xix</sup>.
- 9.3.3.5 The area surrounding the present day Penydarren Park sports facility developed as a prosperous suburb of Merthyr Tydfil in the late 1800's, when civic and public buildings and suburban villas were created.

9.3.3.6 Penydarren House later divided into two, with one part known as Penydarren Place, and at one time occupied by William Forman<sup>xx</sup>. After the decline of the ironworking industry, it played refuge to the 93<sup>rd</sup> Regiment<sup>xxi</sup> for eight days during the Merthyr Rising<sup>xxii</sup> of 1831. It initially, become a school<sup>xxiii</sup> in the latter part of the 19th century, later requisitioned by the UK Government at the start of World War II and finally handed over to the Ministry of Works in 1943. The House was demolished in 1957, and the present-day housing built on the parkland and estate surrounding the House following another period of archaeological excavation of the Roman fort.

#### 9.3.4 Development in the Archeologically Sensitive Area

9.3.4.1 In this area, the nature of the archaeological resource ranges from human remains, remains of Roman features that may be of a structural nature, finds of building material, pottery, and metalwork; to features and finds associated with Penydarren House and its estate.

9.3.4.2 Relating the impact of development to this, the creation of even small extensions may reveal Roman cremation burials, being very small and not easily recognisable to the untrained eye. Any larger developments or developments requiring deep groundworks are likely to have a more significant impact. The capability to identify and record the occurrence and extent of features and finds ensures their preservation by record, and greater understanding of the archaeology and heritage of the area. It would be in line with current legislation, and, in adding to the HER, inform future responses to any further proposed development work.

#### 9.4 **ASA4: Penydarren Ironworks**

9.4.1 This area as shown on the plan, attached at Appendix 4, lies within the Park ward. The HER Registers include 7 Core Entries and 4 Event Records. Its principal designations comprise of:

- Town Centre Conservation Area.
- Merthyr Tydfil Register of Landscapes of Outstanding Historic Interest in Wales: HLW (MGL) 2: HLCA004 Penydarren Ironworks Area; HLCA005 Penydarren and HLCA036 Thomas Town (East) and Penyard.

#### 9.4.2 Significance

- 9.4.2.1 Nationally and internationally important ironworks; associations with technological and rail advances, associations with Trevithick<sup>xxiv</sup>.

#### 9.4.3 Reasons for Increased Archaeological Potential

- 9.4.3.1 Francis Homfray<sup>xxv</sup> founded Penydarren Ironworks in 1784. By 1788, it was the second of the large works to be producing bar iron, buying pig iron from the Dowlais works<sup>xxvi</sup> to refine.

- 9.4.3.2 The works' extensive network of tramroads and railways ensured the smooth and regular supply of raw material including from the Morlais Castle Quarries (see 9.4: ASA5). Maps from 1799 show "wagonways" linking the internal buildings and bringing raw materials from mines. It was here that Richard Trevithick developed steam engines for rail transport within the works, and external to the works for the tramroad. It was from Penydarren that the first locomotive<sup>xxvii</sup> in the world hauled ten tons of iron plus passengers to Abercynon. The works also produced iron rails for the Liverpool and Manchester Railway<sup>xxviii</sup> during the 1850s.

- 9.4.3.3 Dowlais Ironworks Company bought the lease to the mineral grounds of Penydarren in 1859, after an increasingly competitive market caused production to cease. Closed first, as shown in early photographs, the works although still extensive, was in ruins by the 1870s.

#### 9.4.4 Development in the Archeologically Sensitive Area

- 9.4.4.1 The works were relatively short-lived and do not appear on the 1880 First Edition OS maps. In the early part of the 20th century, the Merthyr Electric Traction and Lighting Company<sup>xxix</sup> occupied the areas of the furnaces. Workers housing soon developed on other parts of the work, with Trevithick Street being in place by 1905.

- 9.4.4.2 Although much of the extensive site has been redeveloped, with some of that being early 20th century development<sup>xxx</sup> to create both housing and industrial units, the below ground clearance is unlikely to have removed the underground elements of the works. Deeply stratified and complex remains, previously believed as demolished and or even removed, have in fact survived as evidenced by archaeological work on industrial sites.

#### 9.5 ASA5: Prehistoric Enclosures; Morlais Castle; Morlais Castle Quarries

9.5.1 This area as shown on the plan, attached at Appendix 5, lies situated within the Pant ward. The HER Registers include 35 Core Entries and 7 Event Records. Its principal designations comprise:

- Three Scheduled Monuments: GM028 Morlais Castle, GM563 Morlais Hill Ring Cairn and GM594 Merthyr Tramroad, Morlais Castle.
- Two Listed Buildings including one Grade II\*.
- Merthyr Tydfil Register of Landscapes of Outstanding Historic Interest in Wales: HLW (MGL) 2: HLCA027: Taff Fechan; HLCA044 Morlais Castle Quarries; HLCA045 Morlais Hill Castle and HLCA052 Gurnos Farm and Bunkers Hill.

#### 9.5.2 Significance

9.5.2.1 Prehistoric defensive and funerary enclosures; medieval castle on the border of the Lordships of Glamorgan and Breconshire and extensive industrial extraction landscape and infrastructure.

#### 9.5.3 Reasons for Increased Archaeological Potential

9.5.3.1 Morlais Hill is the location for an Iron Age univallate hillfort. This originally enclosed approximately 1.5 ha and only parts of it now survive, following damage by the construction of Morlais Castle and its outworks. Stretches of the ditch, berm, and counterscarp bank survive well in places at the southern part of the hilltop.

9.5.3.2 A ring cairn is located on the slopes to the east of the hillfort, and is of earlier, probably Bronze Age origin. Some 33m in diameter, large for a funerary monument of this type. Isolated funerary monuments usually represent settlements in the surrounding area, which itself has left no trace within the landscape, obscured by agricultural or industrial activity.

9.5.3.3 The early establishment of Morlais Castle at the northern border of Glamorgan by Gilbert de Clare<sup>xxxi</sup> in 1288 marked the Normans taking over the Welsh Kingdoms of Glywysing and Brycheiniog<sup>xxxii</sup>. Its building took advantage of the strategic topography on Morlais Hill above the river valley to the north, and the views in all directions. The defensive position matches Cae Burdydd<sup>xxxiii</sup> on the north bank of the Taff Fechan some 500m north-west

of Morlais, as pairs of castle or mottes across rivers are a feature of the Norman landscape.

- 9.5.3.4 Its location was provocative in relation to the Lord of Brecon, Humphrey de Bohun<sup>xxxiv</sup>, and following disagreement between them followed by an uprising, the life of the castle appears to have been short lived, with it falling into decay and probably abandoned by the mid-1290s.
- 9.5.3.5 A curtain walled enclosure was surrounded by rock cut ditches and banks; six towers were spaced along the wall, which encompassed an inner and outer ward, and further settlement outside the walls. Having been soundly built and despite collapse, the remains are well preserved and represent medieval defensive and domestic practice of national importance. The Scheduling description notes the significance of its archaeological potential with a strong probability of structural evidence and intact associated deposits.
- 9.5.3.6 The land became part of the Plymouth Estates<sup>xxxv</sup>. Maps depict the field patterns of the area which, when compared with later maps, the pattern survives. Extensive quarries forming a surround to Morlais Hill represent the next phase of intensive activity in the area. Leased to the Dowlais Iron Company<sup>xxxvi</sup> from 1765 and to the Plymouth Iron Company<sup>xxxvii</sup> from 1810, the extractive landscape supplied the Penydarren, Dowlais and Plymouth Ironworks. The Morlais Tramroad<sup>xxxviii</sup> constructed from 1793 and accessed by branches facilitated supply between the ironworks and the quarries. The quarries remained in operation until the early part of the 20th century.
- 9.5.4 Development in the Archeologically Sensitive Area
- 9.5.4.1 Currently largely a rural area, the importance of the early and later remains is nationally recognised, and it is a characteristically important visual part of the landscape. Pressures on this area are those which may have an impact on field patterns, and those which affect drainage, particularly relating to the lower lying prehistoric and medieval remains, which are likely to include fragile organic material. Developments, which may have a visual impact on the setting of the remains, and those that have potential to impact on the integrity of the linear features, are a risk.



#### 9.6 **ASA6: Dowlais Ironworks; Supporting Infrastructure; Dowlais Gas**

9.6.1 This area as shown on the plan, attached as Appendix 6 lies within the Dowlais ward. The HER Registers include 35 Core Entries and 4 Event Records. Its principal designations comprise:

- One Listed Buildings including Grade II\*.
- Dowlais Conservation Area.
- Merthyr Tydfil Register of Landscapes of Outstanding Historic Interest in Wales: HLW (MGL) 2: HLCA007: Dowlais; HLCA008: Dowlais Iron Works Area; HLCA078 Dowlais Great Tip and Trecati; Trehir and Twyn-y-Waun.

#### 9.6.2 Significance

9.6.2.1 Nationally and internationally important ironworks, in operation between 1759 and 1930; surviving standing structures. Most important of the four 18th century ironworks in Merthyr Tydfil. Industrial infrastructure and power generation.

#### 9.6.3 Reasons for Increased Archaeological Potential

9.6.3.1 Thomas Lewis<sup>xxxix</sup> leased the land for the works in 1747; the works itself opened in 1759 by the Lewis in partnership with Isaac Wilkinson<sup>xl</sup>. As with the other ironworks, the proximity of raw material led to the proliferation of extraction sites and the necessary infrastructure linking them. The discovery of coal within the land lease enabled production of iron achieved by using coke instead of charcoal. During the 1780s and 1790s, Dowlais supplied Penydarren and Cyfarthfa with pig iron; after the failure of Onions puddling process at Dowlais, unlike Cort's at Cyfarthfa. By the 1790s, investment had increased and steam-blowing engines were in place, replacing the water driven bellows.

9.6.3.2 Dowlais produced rails at the start of the rail boom, for the Stockton and Darlington Railway<sup>xli</sup>, patenting the hot blast technique in 1828. The Global export of rails gave rise to the construction of steam powered rolling and cogging mills to produce the rails and plates, Big Mill<sup>xlii</sup> in 1839, Little Mill<sup>xliii</sup> in 1849 and Goat Mill<sup>xliv</sup> in 1857, followed by Sleeper Mill and Sole Plate Mill<sup>xlv</sup>. The works also produced Locomotives<sup>xlvi</sup>.



- 9.6.3.3 The Dowlais Gas undertaking, created in 1856 was one of a number in south Wales established between 1820 and 1860 was. The gas works located to the north west of the Dowlais work provided gas to light the works.
- 9.6.3.4 The Bessemer process used to produce steel was trialled at Dowlais, between 1856 and 1865, although as the local iron ore was unsuitable the process later transferred to coastal sites using imported ores. Dowlais used the Siemens-Martin process from 1871 and production was increased. By 1897, Dowlais had eleven blast furnaces, six Bessemer converters, and seven rolling mills. Ownership transferred through the Guest<sup>xvii</sup> family to merge to form GKN<sup>xviii</sup> with multiple sites, amalgamating with Crawshays of Cyfarthfa in the early 20th century. Following more changes, the works closed because of the economic depression in 1936.
- 9.6.3.5 The foundry remained and extended in the 1950s, with one blast furnace brought back into use. A new foundry was built in the late 1950s, when it became part of British Steel as the result of nationalisation of the industry. The works closed permanently in 1987.

#### 9.6.4 Development in the Archeologically Sensitive Area

- 9.6.4.1 The complexity and nature of archaeological remains, similar to all long-running industrial sites, will be significant. As Dowlais operated for over two hundred years, with several new builds, technological changes, improvements, rebuilds, extensions and demolitions, the amount of buried remains will be significant. It is widely known that the demolition of the works primarily affected the upstanding structures, some of which although reduced in height, remain buried beneath spoil tips. There has not been any large-scale archaeological works, although comparable sites have shown that remains survive with a high degree of integrity. Any proposed developments are likely to have an impact on these buried remains, and on any drainage systems also possibly buried in the wider area.

#### 9.7 **ASA7: Plymouth Ironworks; Trevithick's Tunnel; Associated Infrastructure**

- 9.7.1 This area as shown on the plan, attached at Appendix 7, lies within the Town ward. The HER Registers include 6 Core Entries and 4 Event Records. Its principal designations comprise:

- One Scheduled Monument: GM573 Merthyr Tramroad Tunnel (Trevithick's Tunnel).
- Merthyr Tydfil Register of Landscapes of Outstanding Historic Interest in Wales: HLW (MGL) 2: HLCA019: Penydarren Tramroad Corridor and HLCA048 Cwm Blacks.

#### 9.7.2 Significance

- 9.7.2.1 Nationally and internationally important ironworks, and enhancing knowledge and understanding of the development of transport network associated with the iron industry: Trevithick's Tunnel<sup>xlix</sup>, first recorded railway tunnel use by a steam locomotive on rails.

#### 9.7.3 Reasons for Increased Archaeological Potential

- 9.7.3.1 Founded by Isaac Wilkinson<sup>i</sup> and John Guest<sup>ii</sup> in 1763, this was the earliest of three sites relating to the Plymouth works, the others being Pentrebach and Dyffryn<sup>iii</sup>. Later associated with the Hill family<sup>iiii</sup>, who were involved with both the Hirwaun<sup>lv</sup> and Cyfarthfa Ironworks, as well as in the construction of tramroads to supply raw materials to ironworks and transport made goods to the Glamorgan Canal and later to railheads.
- 9.7.3.2 The Penydarren Tramroad<sup>lv</sup> was constructed in 1810 following disagreements over tariff charges on the Glamorgan Canal, which itself had revolutionised transport of iron and coal to the south coast, following its construction between 1790 and 1794. The use of rail as the preferred method of transport resulted in the cancellation of plans to construct branch canals. The Tramroad constructed in 1802 linked the Penydarren ironworks with the canal at Abercynon, with its route passing through Plymouth Works where the tunnel ran beneath the charging bank.
- 9.7.3.3 The works were unusual in that it used waterpower rather than steam. Although the works introduced steam in 1844 following dry weather increasing production, there was not the amount of investment in Plymouth as there was in other works. Production declined as a result and the works closed in 1880.

#### 9.7.4 Development in the Archeologically Sensitive Area

- 9.7.4.1 Although there has been land reclamation work on the site in the 1970s, there is a high likelihood that buried remains exist within the area, which, should this be developed, would be at risk. The tunnel itself is a scheduled monument of national importance, and noted as of international importance due to the links with the world leading development of steam-powered transport on rails and through the tunnel. Any development, which has the potential to impact features and their setting, would require mitigation.

#### 9.8 **ASA8: Merthyr Tydfil West: Heolgerrig, Winch Fawr, Cwm Du and Cwm Glo**

- 9.8.1 This area as shown on the plan, attached at Appendix 8 lies within the Cyfarthfa ward. The HER Registers include 779 Core Entries and 13 Event Records. Its principal designations comprise:

- One Scheduled Monument: GM554 Iron Scours and Patch Workings at Winch Fawr, Merthyr Tydfil GM460 Cwmdu Air Shaft and Fan GM467 Cyfarthfa Canal Level GM573.
- Eleven Listed Buildings.
- Merthyr Tydfil Register of Landscapes of Outstanding Historic Interest in Wales: HLW (MGL) 2: HLCA063 Clwyd-y-Fagwr, Gellideg and Pen-llwynDeri; HLCA064 Winch Fawr, Pen-yr-Heolgerrig, Cwm Du, and Upper Cwm Glo Workings; HLCA068 Heolgerrig and Pen-yr-Heolgerrig; HLCA069 Cwm Glo North; HLCA070 Cwm Glo: Tramroad, Plateway and Incline Corridor; HLCA073 Mynydd Aberdare and HLCA074 Blaen-Canaid and Hendre-Fawr.

#### 9.8.2 Significance

- 9.8.2.1 Nationally and internationally important industrial extractive landscape associated with Cyfarthfa Ironworks, includes levels, drifts, mines, quarries, canals, inclines and tram and railroads, water management and drainage, transport corridors clearance cairns; earlier religious funerary and ritual remains.

#### 9.8.3 Reasons for Increased Archaeological Potential

- 9.8.3.1 A long history of mineral working began in the 18th century, with mining and quarrying for coal and ironstone, and stone. The distinctive remains of patch and scour working, whereby the topsoil was removed by hand and water release, has left distinctive remains which are scheduled as a monument of national importance.
- 9.8.3.2 The landscape exists due to two centuries of working and includes areas of early settlement and social infrastructure of schools, churches and chapels, libraries and working men's clubs.
- 9.8.3.3 Much of the northern part of the area was subject to extraction over a wide area of shallow depth scouring, in patches of leased land. The use of either hand or waterpower from small reservoirs, via a system of leats, accomplished topsoil removal, followed by the creation of shallow pits and levels to remove coal and ironstone. The south-eastern area was subject to extraction on a larger scale, with deeper pits, of which the remains of airshafts and canal levels are visible, with inclines and tramroads to convey the minerals to the works. Water balance conveyed materials within the mines. The use of canal levels creates a direct route, which cuts out the loading stage; the canal is within the mine and the use of locks allows changes in levels between the mines and the main canal.
- 9.8.3.4 Isolated settlements associated with the industrial workings have now grown into larger villages, although some isolated buildings remain, for example, the non-conformist chapels such as Cwm Glo, associated with radical thinking and established in the early 1600s.

#### 9.8.4 Development in the Archeologically Sensitive Area

- 9.8.4.1 This landscape is likely to be under development pressure; the mine workings of a deeper style mean that shafts, tunnels and galleries covering a wide area, extensively disturb the ground. The above and below ground remains, both known and unrecorded in extent, are important in the understanding of 18th and 19th century extraction and transportation systems. The impact of any development on the setting of both scheduled and unscheduled features is also a material consideration.

- 9.8.4.2 All landscapes such as this are at risk from both large and small-scale development and are essentially fragile. The impact overall of several small-scale developments must be considered. Their importance not only lies in their being individual features, but also in their clusters and group value, which enables understanding of a cohesive industrial landscape.
- 9.8.4.3 At the earliest stage of any development proposal, the developer should commission an Assessment of the Impact of a Development on a Historic Landscape (ASIDOHL) together with an archaeological desk-based assessment.

## 9.9 **ASA9: Gelligaer Common**

- 9.9.1 This area as shown on the plan, attached at Appendix 9 lies within the Bedlinog ward. The Historic Environment Record (HER) Registers include 194 Core Entries and 26 Event Records. Its principal designations comprise:

- Scheduled Monuments: GM556 Gelligaer Common Roman Road; GM220 Gelligaer Common Round Cairns; GM320 Platform Houses on Coly Uchaf; GM314 Platform Houses and Cairn Cemetery on Dinas Noddfa; GM260 Dyke 315m E of Tyla-Glas and GM221 Gelligaer Common Standing Stone.
- Bedlinog Conservation Area.
- Gelli-gaer Common Register of Landscapes of Outstanding Historic Interest in Wales: HLW (MGL) 4: HLCA003 Western Enclosed Common; HLCA005 Central Open Common and HLCA006: Pen Garbugail Mynydd Fochriw Open Common.

### 9.9.2 Significance

- 9.2.1 Rare survival of high upland moor, with a rich and diverse archaeological resource; ridge rises to over 470m OD above Cwm Bargoed and Bargoed Rhymney, with moorland plateau, and improved pasture and enclosed fields to the south; remarkable continuity of occupation. Prehistoric funerary and ritual landscape, Roman and Medieval transport system, medieval agricultural settlement, and practice. Significant archaeological potential.

#### 9.9.3 Reasons for Increased Archaeological Potential

- 9.9.3.1 A Bronze Age landscape of funerary and ritual monuments dominates much of the upland area. Whilst there is one Scheduling number, this includes several discrete cairns. Pen Garnbugail<sup>vi</sup> is visually dominant, near the summit of Cefn Gelligaer, a slab bounded monument some 16.5m in diameter. This represents extensive occupation of the area, although the funerary monuments are visual survivals, the day to day life is not represented in the visual archaeological record but is highly likely to exist as buried remains. Later prehistoric evidence comes from the Iron Age, as there are remains of hut sites of this date.
- 9.9.3.2 The impact of the Roman occupation of the common is notable, with stretches of Roman roads surviving; the Pen Garnbugail stretch followed the route of a prehistoric trackway. The preservation of this stretch includes the agger (the central causeway of the road) as well as the drainage ditches to the side of the road itself. Linking the forts at Cardiff and Brecon, via those at Gelligaer, the road is an important element within the wider context of occupation. The survival of related evidence is to be expected.
- 9.9.3.3 The re-use of earlier monuments records early medieval evidence of activity, for example, 6th/7th century lettering carved into the Bronze Age Gelligaer Common standing stone.
- 9.9.3.4 The Medieval period brought evidence of settlement, such as the upland house platforms, cut into the hillsides to create level areas for houses. These normally relate to seasonal agricultural practices, with transhumance leaving physical and place name evidence. Post-medieval agriculture and settlement has left field boundaries that have changed little today.
- 9.9.3.5 The common and upland areas represent a remarkable continuity of occupation, with transport and communications links, funerary monuments, settlement, and agricultural practices all leaving remains from prehistoric to post-medieval. Some of these have statutory protection, the importance of the landscape lying in its preservation and diversity. The nature of the geology means that peat deposits, on the higher ground are undisturbed and it is often the case that the anaerobic conditions within the peats preserves organic material such as wood and leather.

#### 9.9.4 Development in the Archeologically Sensitive Area

- 9.9.4.1 Threats to the cohesive nature of the landscape and archaeological remains may come from a variety of sources. The impact of small isolated developments, which would cause accumulative erosion of the special qualities of the landscape, need to be assessed. Larger developments may not be likely in the short-term but should be discouraged. The impact of structures, such as wind or solar energy developments, would need an Assessment of the Significance of the Impact of the Development on the Historic Landscape (ASIDOHL) undertaken, where the impact will be both physical and visual. The setting of historic assets is a material consideration in the planning process, as is the impact of any development on archaeological remains.

## 10 Archaeological Remains and Development Management

### 10.1 **Pre-planning stage**

- 10.1.1 Paragraph 4.2 and 4.9 of TAN 24: The Historic Environment, states that a monument and its setting, irrespective of it being scheduled or not, is a material consideration in determining an application for planning permission.
- 10.1.2 PPW10 (paragraph 5.1.24) and TAN 24: The Historic Environment (paragraphs 4.2 and 4.11) stress that there should be a presumption in favour of the physical preservation 'in situ' of scheduled or nationally important archaeological remains. This means that when considering development proposals that affect scheduled monuments, or other statutorily protected or other nationally important remains there should be a presumption against proposals that would involve significant alteration or cause damage, or would have a significant adverse impact causing harm within the setting of the remains.
- 10.1.3 The pre-planning stage should identify such works together with an appropriate mitigation strategy. This could involve e.g., where aspects of a proposal might cause damage, the relocation of drains or redesign of foundations to avoid penetrating archaeological layers. Careful design could also minimise the effect upon setting e.g. through detailed siting of the development and consideration of external appearances by removal of existing unsightly elements and the use of screening. In some cases, it may

be possible to enable the partial preservation of archaeological remains, although leaving 'islands' of preserved archaeology is undesirable.

#### 10.1.4 Consultation with the LPA's archaeological advisors - The Glamorgan and Gwent Archaeological Trust (GGAT)

10.1.4.1 In areas that are designated as ASA's or where there is a possibility that archaeological remains may be present or archaeological material is suspected consultation with GGAT Archaeological Planning<sup>11</sup>, as the archaeological planning advisors to the LPA, at the earliest stage of considering a development proposal is strongly recommended. Early consultation will help to determine if the proposal might adversely affect known archaeological remains or if there is a significant constraint that may prevent development.

10.1.4.2 The first step in this process would be supplying GGAT with a plan showing a red outline boundary of the development area, including any access tracks or roads, utilities connections and site compounds; an accurate grid reference or a georeferenced plan, together with any planning reference number and a brief written description of the proposed development.

10.1.4.3 The GGAT planning team will consult the Historic Environment Record (HER), and where archaeological remains are known to exist or there is a potential for them to survive, there are initially two ways to proceed: pre-determination work, or post-determination as a condition.

10.1.4.3 If either archaeological pre-determination or post-determination work is required, it will be important for the developer to employ an archaeological consultant or archaeological contractor at an early stage. This will ensure that work is an appropriate standard and thereby avoid potential delays.

#### 10.1.5 Pre-application discussions with Merthyr Tydfil LPA

10.1.5.1 Pre-application discussions are useful to reconcile potential conflicts between development proposals and the preservation of significant archaeological remains. Certain major developments require pre-application consultation with the local planning authority (LPA). This should be between the applicant, and the Council's Development Management Planning Team, who will draw upon the expertise and advice of GGAT and

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<sup>11</sup> [http://www.ggat.org.uk/archplan/arch\\_planning.html](http://www.ggat.org.uk/archplan/arch_planning.html)



in cases where scheduled monuments may be affected Cadw<sup>vii</sup> or where specialist advice is required, the Welsh Ministers through Cadw.

- 10.1.5.2 Paragraph 4.5 of TAN 24 and paragraph 5.48 of WGC 016/2014 also note that in exceptional circumstances, where the LPA is aware of a threat to a known archaeological site, resulting from the exercise of permitted development rights, it can withdraw those rights and require granting planning permission before the development can proceed.

## **10.2 Pre-determination – information required to accompany Planning Applications**

- 10.2.1 Regulation 4 of the Town and Country Planning (Applications) Regulations 1988 (SI 1812), allows the LPA to require the submission of necessary details to allow a planning application to be determined. Pre-determination work may comprise a desk-based assessment and or field evaluation undertaken prior to submitting a planning application (Paragraph 6.1.26 & 6.1.28) of PPW10, and paragraphs 4.7 and 4.8 of TAN 24: The Historic Environment) with the results submitted as part of any planning application.
- 10.2.2 Where known archaeological remains exist or there is a potential for them to survive, sufficient information should accompany an application, to enable a full understanding of the impact of the proposal on the significance of the remains. This may also include details of any measures incorporated into the design of the development to preserve the archaeological resource and any other strategies put in place to protect it. This will assist in the determination of whether an archaeological interest exists and, if so, whether the remains merit preservation in situ or “by record” (i.e. excavation) prior to development. The provision of insufficient or inadequate archaeological information could lead to significant delays in determination by the LPA. GGAT may also request that a decision be deferred or recommend refusal.
- 10.2.3 The LPA may also require the applicant to commission a suitably qualified archaeologist to prepare an archaeological assessment of the site and/or to carry out an archaeological evaluation of the area. The archaeologist should be either a Registered Organisation with the Chartered Institute of Archaeologists (CIfA) or have Member level membership (MCIfA). This

should ensure the appropriate level of experience, competence, and expertise in dealing with complex archaeological projects.<sup>12</sup>

#### 10.2.4 Archaeological or historic environment desk-based assessments

10.2.4.1 If an archaeological or historic environment desk-based assessment is required, both the project design and final assessment report should meet the Standards and Guidance for Archaeological Desk-Based Assessments set by the Chartered Institute for Archaeologists<sup>13</sup>. Consultation with GGAT is recommended at this stage.

10.2.4.2 A desk-based assessment may provide sufficient information to preclude the need for fieldwork prior to the submission of the planning application and if sufficient information has been gathered, then an appropriate site strategy should be prepared for submission. On the other hand, the results of an assessment or initial search may show that a field evaluation is required (PPW10 paragraph 6.1.27, and TAN 24: The Historic Environment, paragraph 4.8).

#### 10.2.5 Field evaluations

10.2.5.1 Field evaluations should be carried out to a brief supplied by GGAT (Archaeological Planning) outlining the required works and not undertaken until a detailed specification detailing how the works required will be achieved, has been approved by GGAT. The archaeological contractor who will undertake the work should prepare the specification. GGAT<sup>14</sup> will monitor all fieldwork and reports and may reject any unmonitored work or work that has not been undertaken in accordance with an approved project design.

10.2.5.2 The pre-planning stage may include other field survey and recording elements either to inform further intrusive archaeological works or to fulfil recording of features. This comprises earthwork surveys e.g. field boundaries, ridge or furrow; field walking, as part of the assessment or to record the extent and nature of finds; and or geophysical survey, which in certain circumstances allow intrusive trenching targeted at potential features.

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<sup>12</sup> <https://www.archaeologists.net/regulation/organisations>

<sup>13</sup> [www.archaeologists.net/sites/default/files/CIfAS%26GDBA\\_3.pdf](http://www.archaeologists.net/sites/default/files/CIfAS%26GDBA_3.pdf)

<sup>14</sup> Details of the monitoring policy can be found at [www.ggat.org.uk/archplan/monitoring.html](http://www.ggat.org.uk/archplan/monitoring.html)

- 10.2.5.3 On completion of fieldwork, the results will need to be analysed by the archaeological contractor followed by preparation of a report on the works. The information contained in the report should be sufficient for the importance and nature of the archaeological resource, its extent to be determined and an appropriate mitigation strategy produced. This may be attached to a consent as a condition or require further pre-determination fieldwork to be undertaken.

### **10.3 Determination**

- 10.3.1 The impact of the proposed development on an archaeological resource will be a material consideration in the determination of an application. This includes whether the archaeological resource can be preserved in-situ on site and protected within the development.
- 10.3.2 The preservation of material in-situ will not necessarily preclude development as such deposits can be sealed or incorporated into the design of a structure, as part of a mitigation strategy. However, if a developer refuses to accommodate important remains within their plans, the Council will have to consider refusing the proposal. This would depend on the merits of the case, taking account of the importance of the remains and other material considerations. In exceptional circumstances, the Council may also refuse permission on a site where a proposed development is inappropriate.
- 10.3.3 Where a planning application directly affects a scheduled monument and its setting then the LPA will consult the Welsh Ministers through Cadw. Planning permission on its own would not be sufficient to authorise the works to take place, these require the prior consent i.e. 'scheduled monument consent' of Welsh Ministers, through Cadw, in addition to any planning permission required for development<sup>15</sup>. Applications will normally require the same level of information required for full planning consent. Class 10 consents allow specified types of work at such sites.<sup>16</sup> In cases where there are issues of more than of local importance, applications may also be 'called in' for determination by the Welsh Ministers.

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<sup>15</sup> Annex A: Scheduled Monuments, paragraph A3, TAN 24.

<sup>16</sup> Annex A: Scheduled Monuments, paragraph A8, TAN 24 & the Cadw publication Scheduled Monument Consent - [cadw.gov.wales/docs/cadw/publications/Scheduled\\_Monument\\_Consent\\_EN.pdf](http://cadw.gov.wales/docs/cadw/publications/Scheduled_Monument_Consent_EN.pdf).

- 10.3.4 Assessment of cases involving less significant archaeological remains, or remains that do not meet the criteria for national importance (see TAN 24 Annex A [2]) are based on their individual merits. The LPA will take account of relevant policies and material considerations and the relative significance of the archaeological remains and their settings weighed against the benefits of the development and other factors, including the need for the proposed development.
- 10.3.5 Having considered all policies, other material considerations and the need for the development, the LPA may decide that the significance of the archaeological remains is not sufficient to justify their physical preservation<sup>17</sup>. Where the Council approves such an application, it will secure proportionate arrangements for the excavation and recording of archaeological remains (prior to development), the results analysed and published and arrangements made for their deposition in an approved repository.
- 10.3.6 However, it should be noted that the ability to record such evidence will not necessarily be the only factor in deciding whether controlled removal would be permitted in a situation where archaeological remains could be needlessly destroyed.

#### **10.4 Post-determination - planning permission with attached conditions**

- 10.4.1 Conditions to planning consents can be attached to protect archaeological resources and ensure reasonable access to an archaeologist. Such conditions usually require that either a 'watching brief' or archaeological investigation is undertaken that help to ensure that the archaeology is preserved and recorded. They would also prohibit the development until such works are completed.
- 10.4.2 TAN 24: The Historic Environment replaced The Welsh Office Circular 60/96 that addressed the use of planning conditions in respect of archaeology; however, TAN 24 does not include reference to such conditions. Conditions relevant to archaeology are included in WO Circular 16/2014 - The Use of Planning Conditions for Development Management, (paragraphs 5.46 - 5.48, and Annexes 22, 23 and 24)<sup>18</sup>, as shown below.

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<sup>17</sup> See Paragraph 6.1.27 and 6.5.8 of Chapter 6 of PPW10 and paragraph 4.12 of TAN 24: The Historic Environment.

<sup>18</sup> <https://gov.wales/sites/default/files/publications/2019-05/the-use-of-planning-conditions-for-development-management-wgc-0162014.pdf>

10.4.2.1 Archaeology (watching brief):

- Annex 22 – “No development or site clearance shall commence until the local planning authority have been informed in writing of the name of a professionally qualified archaeologist who is to be present during the undertaking of any excavations in the development area so that a watching brief can be conducted. No work shall commence until the local planning authority has confirmed in writing that the proposed archaeologist is suitable. A copy of the watching brief report shall be submitted to the local planning authority within two months of the archaeological fieldwork being completed”.
- Annex 23 – “The developer shall afford access at all reasonable times to any archaeologist nominated by the local planning authority and shall allow him/her to observe the excavations and record items of interest and finds”.

10.4.2.2 Archaeology (archaeological investigation)

- Annex 24 – “No development shall take place until the applicant, or their agents or successors in title, has secured agreement for a written scheme of historic environment mitigation which has been submitted by the application and approved by the local planning authority. Thereafter, the programme of work will be fully carried out in accordance with the requirements and standards of the written scheme”.

10.4.2.3 Annex 22 is a ‘negative’ archaeological condition but may also include provision for differing types of written scheme, such as, for building recording, or from a watching brief to full excavation. Usually, GGAT would outline the programme of work that they envisage, in a consultation letter, recommending to the LPA that such a condition is attached to a planning permission.

10.4.2.4 In this case, the applicant should engage an archaeologist to inspect their proposed development plans and devise a suitable written scheme (WSI). GGAT can discuss the contents of the scheme and ensure that the scheme devised is appropriate. Occasionally, the scheme may include contingency arrangements in the case of complex archaeology, or for example the discovery of human remains.

- 10.4.2.5 In approving the WSI, the LPA will identify a monitoring programme. This will include during and post excavation/fieldwork stages and how planning conditions are to be discharged at each stage. Amendments to the WSI may be made between outline and full planning applications and will need to be kept under regular review during the discharge of the conditions.
- 10.4.2.6 Normally archaeological investigations are undertaken to meet an Annex 24 condition, but occasionally these can be secured through a legal agreement under Section 106 of the (Town and Country Planning Act, 1990). This may be required where appropriate to formalise any voluntary agreements, made between the applicant and the LPA. These agreements will regulate development and may include provision for funding, investigation by excavation, the subsequent recording, and the publication of results.
- 10.4.2.7 All resulting archaeological information must be deposited with the appropriate HER for public use and agreed between the developer/applicant and GGAT. This is particularly important when the results of investigations of archaeological remains will be only preserved by record.
- 10.4.3 Circumstances where conditions will not be imposed
- 10.4.3.1 Planning conditions will not duplicate the effect of the provisions of Scheduled Monument Consent, where this required by the Ancient Monuments and Archaeological Areas Act 1979. The LPA when granting permission in such circumstances would, instead draw attention to the relevant provisions of the 1979 Act.
- 10.4.3.2 Where the LPA has been informed that a development site is extremely likely to contain an archaeological resource of importance it may be deemed inappropriate to attach a condition but instead require that archaeological and investigative surveys be submitted for consideration as part of the application prior to determination. Failure to provide sufficient information in such instances could lead to the refusal of planning permission (WGC 016/2014, paragraph 4.26).

## **10.5      Discharge of planning conditions**

- 10.5.1      In most instances, this requires the formal submission of details to the LPA. Any development carried out in breach of condition constitutes a breach of planning control. As such, any enquiry received because of a local search relating to the property will confirm that the development is unauthorised.
- 10.5.2.      A condition requiring a 'watching brief' to be undertaken is partly met when the applicant informs the Council of the name of their appointed suitably qualified archaeologist. It is fully discharged once the 'watching brief' has been carried out and a report on the work has been submitted and approved.
- 10.5.3      Discharging a condition requiring an archaeological programme of investigation (WSI) is more complex. In the first instance, the programme of archaeological work designed by the applicant's archaeologist needs to be submitted to the Council. Once approved the on-site works outlined in the document will need to be undertaken. A final report is produced on completion of these works, or in the case of excavations, a post-excavation assessment should be produced.
- 10.5.4      In the latter case, the works outlined in the assessment will need to be undertaken and then the final report produced. This process can take some time and it is recommended that the applicant should submit information at the end of each of the above stages to the Council (and through them GGAT) in order for a partial discharge of condition notice to be issued.
- 10.5.5      Following submission of the final report and the publication of the results in a suitable medium agreed (when deemed necessary), full discharge of the conditions be possible (TAN 24: The Historic Environment, Paragraph 4.14).

## **10.6      Breaches of planning condition; enforcement**

- 10.6.1      It is recommended that the discharge of conditions be addressed as early as possible in the development process. Serious consequences, including formal enforcement action by the Council, can result from undertaking work in breach of condition.



- 10.6.2 In the event of a breach of a condition, the Council has powers, under Section 187A of the Town & Country Planning Act 1990, to serve a breach of condition notice. This requires steps to remedy the breach<sup>19</sup>.
- 10.6.3 Contravention of a valid Breach of Condition Notice can lead to prosecution and up to a £1,000 fine. Prosecution's cases must be assessed on the criminal standard of proof i.e. "beyond reasonable doubt". In the event of a prosecution, precisely formulated planning conditions will enable the Magistrate's Court to have no doubt about the requirements needed to comply with its terms.
- 10.6.4 Where Planning Obligations have been agreed through a section 106 Agreement, a breach of an agreement can also be pursued through the Courts, but this can be a costly way to remedy a breach.
- 10.6.5 The Council may also issue an Enforcement Notice where planning controls appear to have been breached. These set out any remedial action that needs to be taken to correct the breach. Once served, there is a 28-day period before the notice comes into effect, after which there is a further period to allow for compliance. Failure to comply with an enforcement notice is a criminal offence and can lead to a fine of up to £20,000.
- 10.6.6 The LPA can also issue a Stop Notice, to stop a development or an activity. Such notices may be served alongside an Enforcement Notice or after an Enforcement Notice has been served. Failure to comply with a Stop Notice can also lead to a substantial fine of up to £20,000.
- 10.6.7 Additionally, the LPA can issue Temporary Stop Notices under the provisions of the Planning and Compulsory Purchase Act 2004 (Commencement No. 14) and Saving Order 2015. This requires that an activity in breach of planning control is stopped immediately but does not have to be issued alongside an Enforcement Notice. It is only issued when the LPA believes that the breach should be stopped immediately and ceases to have effect after 28 days.
- 10.6.8 If the LPA considers that a breach of planning control is sufficiently serious, it may apply to the Courts for a restraint injunction. Those in breach of such an injunction can be imprisoned.

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<sup>19</sup> Guidance about this type of notice is given in Annex 4 of Welsh Office Circular 24/97 (Enforcing Planning Control: legislative Provisions and Procedural Requirements).



- 10.6.9 The Historic Environment (Wales) Act 2016 Part 2 also includes details of enforcement action in relation to Scheduled Monuments. This includes “scheduled monument enforcement notices” where Welsh Ministers may require, for example, works to cease through issuing a temporary stop notice; or allow the power of entry to ascertain whether an enforcement notice should be served; or undertake any works required by the notice if the works have not been carried out. Failure to comply with scheduled monument enforcement notices may lead to conviction, including a fine.

#### **10.7 Archaeological material discovered once development has commenced**

- 10.7.1 On occasions, unforeseen archaeological remains may only become apparent when a development has commenced or discovered during the process of a development. If this does occur, the policy advice for preserving archaeological material in-situ stands (PPW10 paragraph 6.1.27 and TAN 24: The Historic Environment, Paragraphs 5.32 and 5.33). This means that a written scheme of investigation (WSI) should be either put in place prior to development, considering how to react to such circumstances or attached as an appropriate condition to the Planning Permission requiring a watching brief.
- 10.7.2 Where remains discovered are deemed of national importance, Welsh Ministers have the power to schedule the site and, in such circumstances, scheduled monument consent will be required before works can continue.

**APPENDICES**  
**PLANS OF ARCHEOALOGICALLY SENSITIVE AREAS IN MERTHYR TYDFIL COUNY BOROUGH**  
**AREA**

**Appendix 1: ASA 1 - Cyfarthfa Castle and Park**

**Conservation and the Built/Historic Environment**

Type: Archaeologically Sensitive Area

Name: Cyfarthfa Castle and Park

Policy: CW1





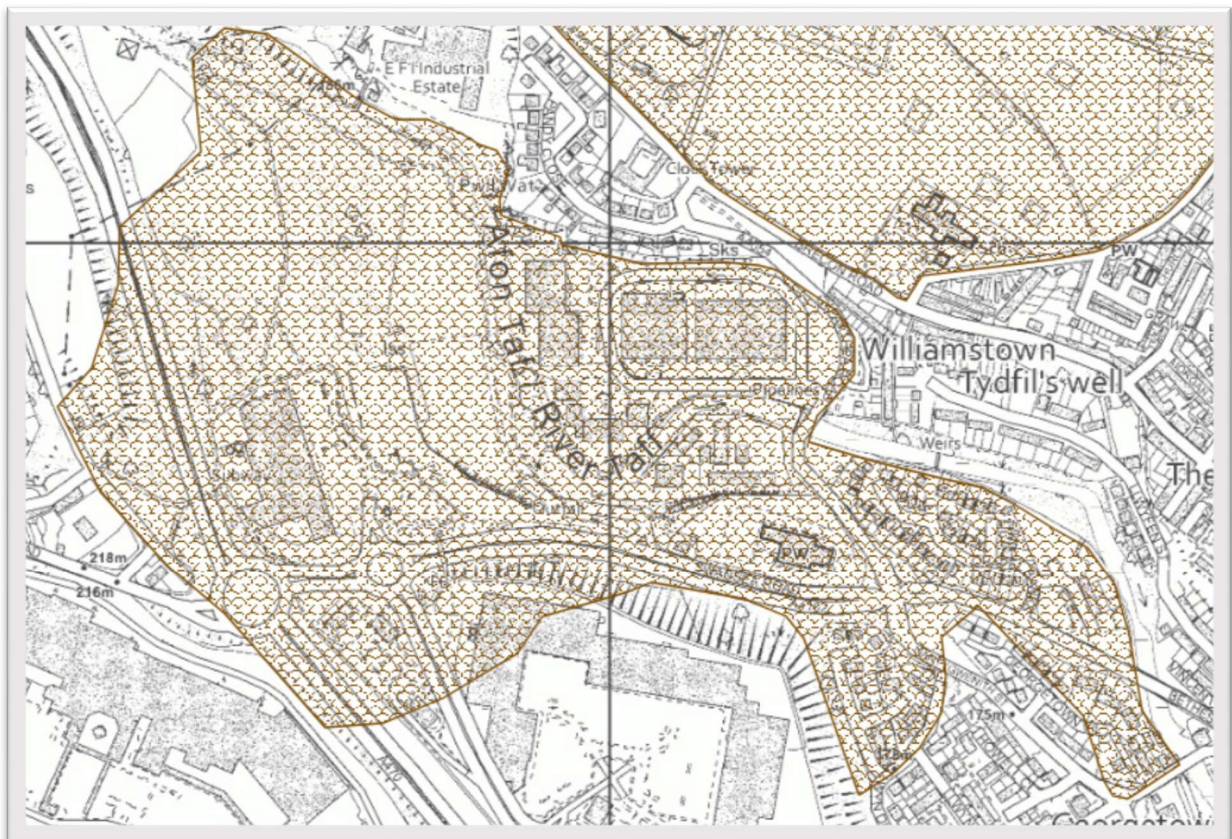
**Appendix 2: ASA - Cyfarthfa Ironworks and Infrastructure**

**Conservation and the Built/Historic Environment**

Type: Archaeologically Sensitive Area

Name: Cyfarthfa Ironworks and Infrastructure

Policy: CW1



### Appendix 3: ASA 3 - Penydarren Roman Fort and Environs

**Conservation and the Built/Historic Environment**

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Type: Archaeologically Sensitive Area

Name: Penydarren Roman Fort and Environs

Policy: CW1

Type: Archaeologically Sensitive Area

Name: Penydarren Roman Fort and Environs

Policy: CW1





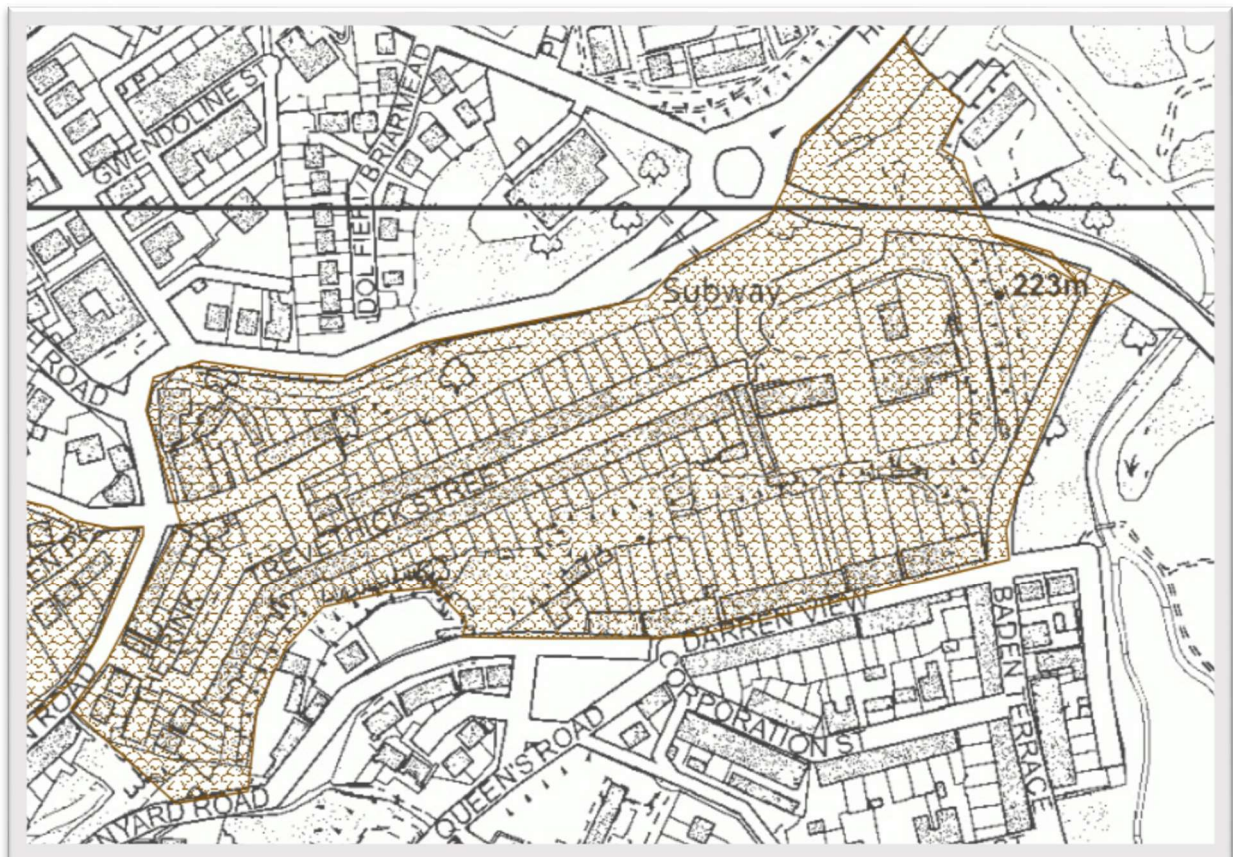
**Appendix 4: ASA4 - Penydarren Ironworks**

**Conservation and the Built/Historic Environment**

Type: Archaeologically Sensitive Area

Name: Penydarren Ironworks

Policy: CW1



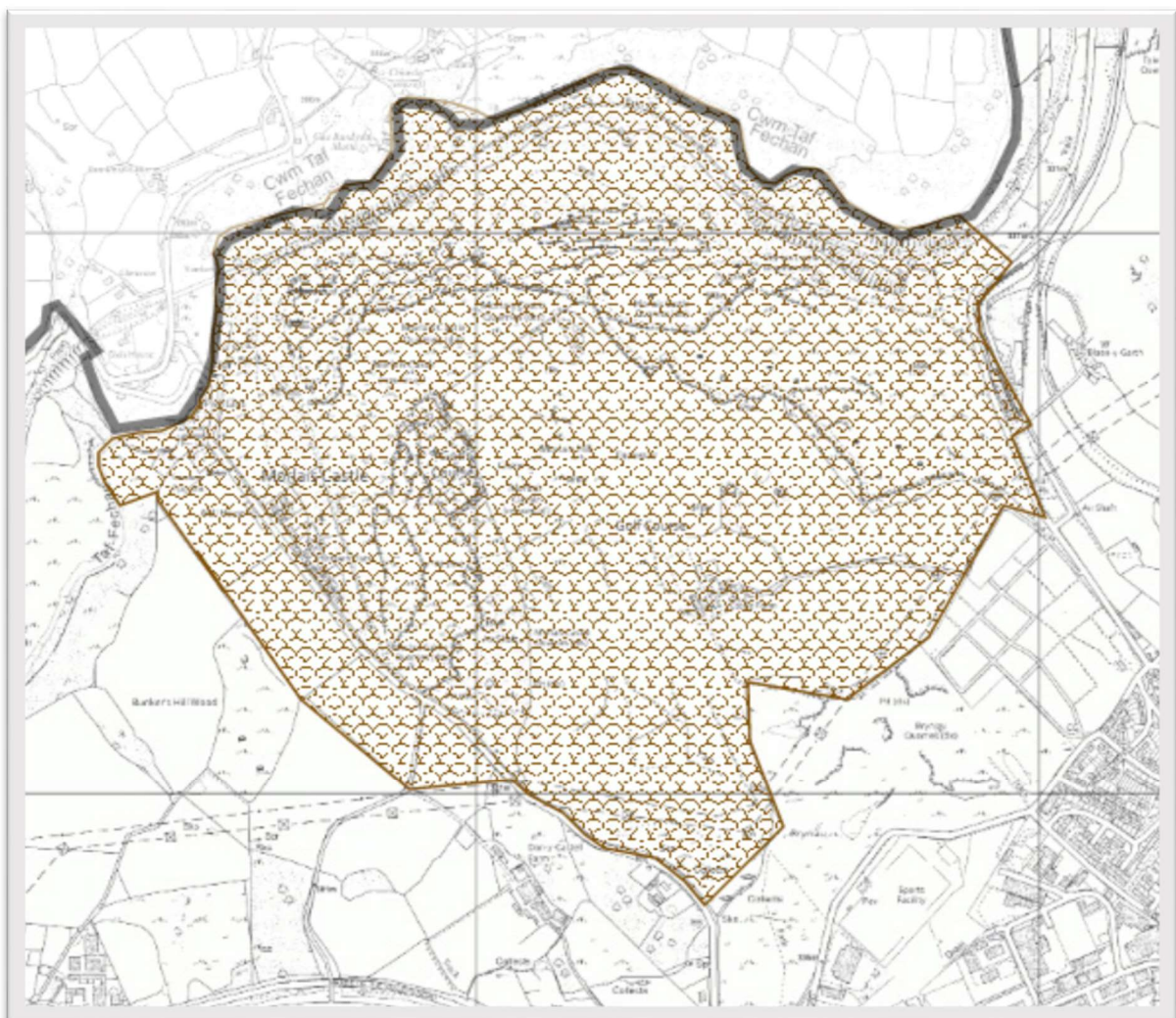
**Appendix 5: ASA5 - Prehistoric Enclosures; Morlais Castle; Morlais Castle Quarries**

**Conservation and the Built/Historic Environment**

Type: Archaeologically Sensitive Area

Name: Prehistoric Enclosures; Morlais Castle; Morlais Castle Quarries

Policy: CW1





**Appendix 6: ASA6 - Dowlais Ironworks; Supporting Infrastructure; Dowlais Gas**

**Conservation and the Built/Historic Environment**

Type: Archaeologically Sensitive Area

Name: Dowlais Ironworks; Supporting Infrastructure; Dowlais Gas

Policy: CW1





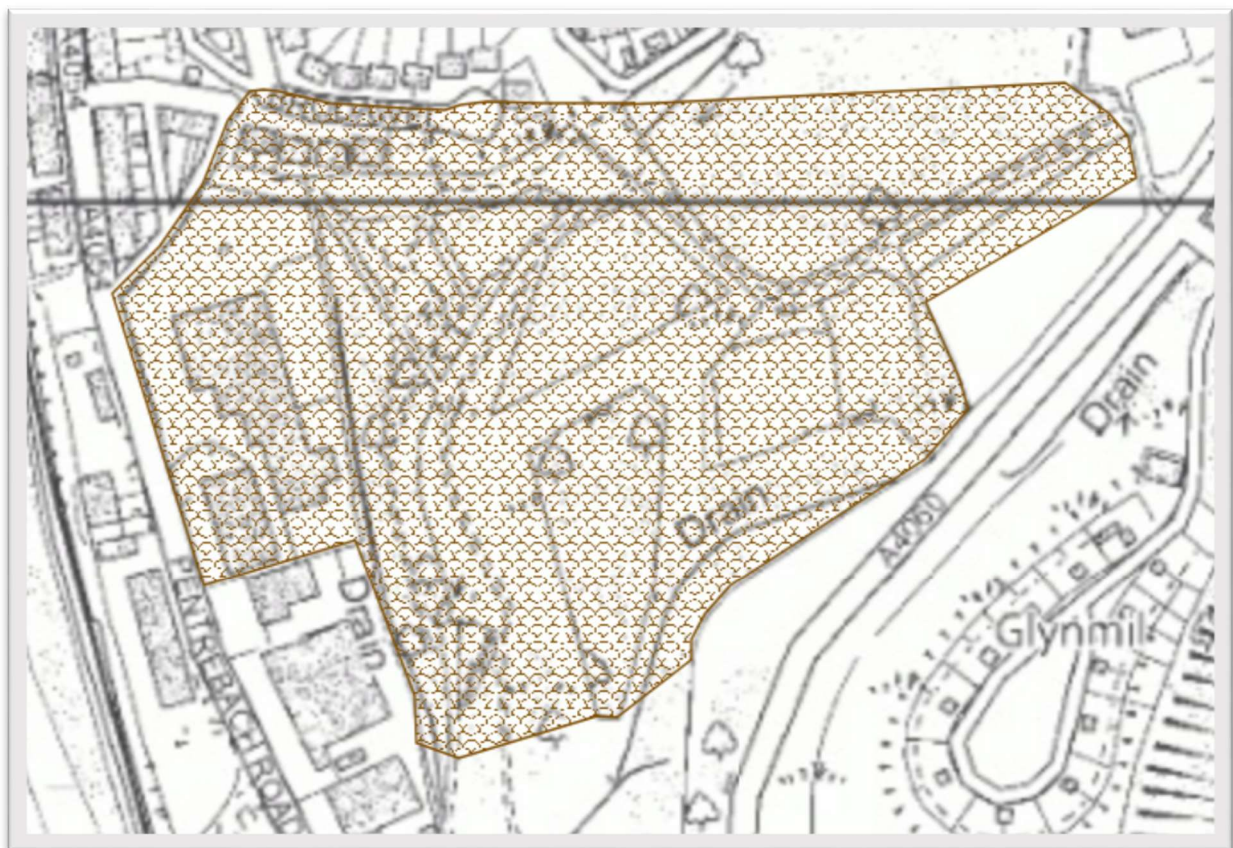
**Appendix 7: ASA7 - Plymouth Ironworks; Trevithick's Tunnel; Associated Infrastructure**

**Conservation and the  
Built/Historic Environment**

Type: Archaeologically Sensitive  
Area

Name: Plymouth Ironworks;  
Trevithick's Tunnel;  
Associated Infrastructure

Policy: CW1



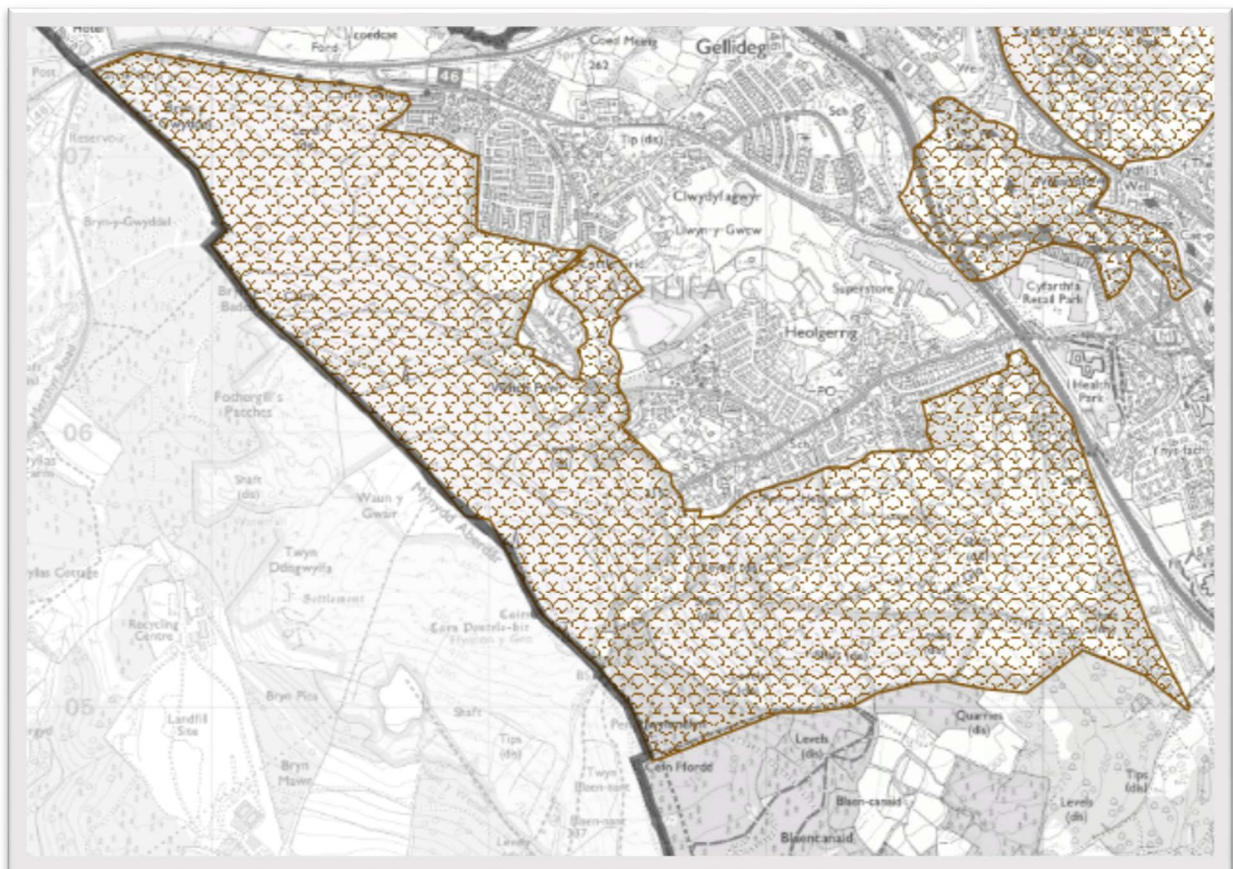
**Appendix 8: ASA8 - Merthyr Tydfil West: Heolgerrig, Winch Fawr, Cwm Du and Cwm Glo**

**Conservation and the  
Built/Historic Environment**

Type: Archaeologically Sensitive  
Area

Name: Merthyr Tydfil West:  
Heolgerrig, Winch Fawr,  
Cwm Du, Cwm Glo

Policy: CW1





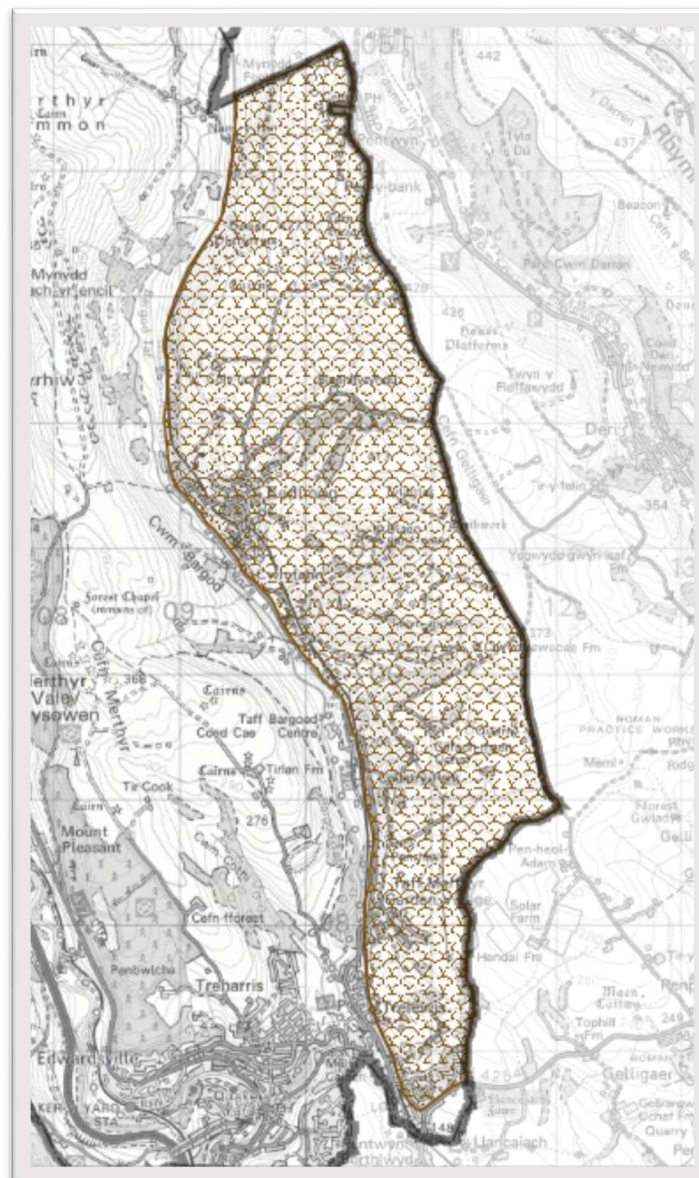
**Appendix 9: ASA9 - Gelligaer Common**

**Conservation and the Built/Historic Environment**

Type: Archaeologically Sensitive Area

Name: Gelligaer Common

Policy: CW1



### **Appendix 10: Glossary of Terms**

Bar iron - wrought iron moulded into bars.

Berm - a narrow shelf, path, or ledge typically at the top or bottom of a slope and  
Counterscarp - the outer slope or wall of the ditch (furthest from the fort).

Bessemer process – an inexpensive process removing impurities by oxidation and keeping the iron molten.

Cairns – places where human remains were interred (buried) in stone and earthen mound.

Casting houses – structures where molten iron is tapped off into sand moulds and cast.

Charging banks – structures located at the top level of blast furnaces.

Cogging mills – structures where steel ingots are rolled down to steel sheets.

Coking ovens – structures used to heat coal to cook out non-carbon elements to produce coke in the absence of air.

Conviction on indictment - An indictable offence is an offence, which can only be tried in the Crown Court. The term also includes 'either-way' offences (offences that can be tried in the magistrates' court or the Crown Court).

Cort's – a process of refining pig iron to wrought iron (or bar iron) using innovative production systems.

Counterscarp - the outer slope or wall of the ditch situated furthest from a fort.

Crenellation - a rampart built around the top of a castle with regular gaps or 'crenels' for firing arrows.

Hot blast technique - patented by James Beaumont Neilson (1792-1865) in 1828, which pre-heats air before it enters the blast furnace substantially reducing the amount of coke required for smelting iron.

Hypocaust (Latin: hypocaustum) - a system of central heating in a building that produces and circulates hot air below the floor of a room, and may also warm the walls with a series of pipes through which the hot air passes. This air can warm the upper floors as well.

Llan – a religious enclosure or land around a church where Christian converts settled often connected with a local patron saint.

Liable on summary conviction – a summary offence specified by statute that describes the (usually minor) offence charged in a summary court i.e. a magistrates Court that accordingly attracts a lesser sentence or summary conviction.

Neolithic period - the final division of the Stone Age or New Stone Age.

Medieval granges – agricultural centres from which monks exploited their landscape and co-ordinated farming and industrial work to provide food and raw materials.

Onions' puddling process - a patented puddling process for refining pig iron into wrought iron invented by Peter Onions (1724-98).

Pig iron - crude iron as first obtained from a smelting furnace, in the form of oblong blocks.

Plant hunting – practise of collecting plant specimens from the wild for the purposes of research, cultivation or as a hobby.

Puddling furnaces – structures used to process the melting of pig iron and converting it to wrought iron.

Revetted - to face or retain (a rampart, wall, or embankment etc.) with masonry, a layer of stone, concrete, or other supporting material, especially in fortification.

Ring cairn - a circular or oval man-made bank of stone, originally with a clear space in the middle, though sometimes the centre was later filled in.

Rolling mills - structures where the iron stock passed through one or more pairs of rolls to reduce the thickness and to make the thickness uniform.

Siemens-Martin (open-hearth)– a steel-making process carried out in an open-hearth furnace in which selected pig iron and malleable scrap iron are melted, together with pure iron ore.

Tessellated – floor or paved area decorated with mosaics.

Univallate- Single ditch with one raised edge or wall surrounding the depression often with timber-laced or box-framed banks to provide a strong but substantial inner element to the forts defences.

Transhumance – the movement of people and animals to higher ground during the summer.

Wrought iron - a kind of iron that contains some slag and very little carbon that is resistant to corrosion, tough, and ductile.

## Notes

<sup>i</sup> St. Tydfil the Martyr - a Welsh martyr, reportedly from the clan of Brychan. In 480AD, she received a martyr's crown when killed during a pitched battle between her family and a band of marauding Picts or Saxons during the fifth century. She gave her name to Merthyr Tydfil (Merthyr meaning martyr in the Welsh language).

<sup>ii</sup> Merthyr Tydfil Landscape of Outstanding Historic interest in Wales - occupies a natural basin at the head of the Taff valley. The mid C19th rapidly transformed the town and its associated landscape, from a modest village in the 1750s to the largest town in Wales by 1801 and probably the largest iron-making town in the world.

<sup>iii</sup> Gelligaer Common Landscape of Special Historic interest in Wales - represents an increasingly rare survival in South East Wales of an area of high upland moor rich in a diverse archaeological resource and historical content, which displays a remarkable continuity of occupation.

<sup>iv</sup> Landscape Character Area - geographically unique area of the County Borough, where a combination of factors such as topography, vegetation pattern, land use and cultural associations combine to create an area with a distinct, recognisable character.

<sup>v</sup> William Crawshay II (1788 – 1867) - generally called the 'Iron King' was the day-to-day manager of the Cyfarthfa works.

<sup>vi</sup> Robert Lugar (1773 – 1855) - an English architect and engineer of the Industrial Revolution. He carried out much of his most important work in Scotland and Wales, employed by several leading industrialists to design grand houses including Cyfarthfa Castle in 1824.

<sup>vii</sup> Design Commission for Wales - established by the then National Assembly for Wales to promote good design with a remit spanning the whole of the built environment.

<sup>viii</sup> Geraint Talfan Davies - a long serving Trustee and Chairman of many Welsh civic, arts, media, and cultural organisations as well as a Welsh journalist and broadcaster.

<sup>ix</sup> Ian Ritchie Architects (iRAL) - an architectural practice established in 1981, world renowned for seminal work on glass and fabrics structures including the Louvre pyramids and sculpture courts.

<sup>x</sup> Anthony Bacon (1717 - 1786) - of Bees, Cumberland, then of London, and William Brownrigg (1711/12-1800), of Whitehaven, Cumberland, a doctor, and scientist as well as a businessman, the first to recognise platinum as a new element. The partnership between them dissolved in July 1777.

<sup>xi</sup> William Talbot (1710-1782) - 1st Earl Talbot, known as the Lord Talbot from 1737 to 1761, member of Parliament for Glamorganshire and later Baron Dynevor, of Dynevor in the County of Carmarthen.

<sup>xii</sup> Richard Crawshay (1739 - 1810) - of Normanton, Yorkshire, later proprietor of a London Ironware house through marriage.

<sup>xiii</sup> Henry Cort (c. 1740 – 1800) - an English ironmaster, who began refining iron from pig iron to wrought iron (or bar iron) using innovative production systems.

<sup>xiv</sup> William Pamplin (1791-1800) - Richard Crawshay's gardener, sketched two views of Cyfarthfa House and the surrounding iron works.

<sup>xv</sup> The Electric Lamp Service Company Ltd - established in 1928, later renamed as Thorn Electrical industries in 1936, opened an incandescent lamp operation in Merthyr in 1847. The lamp factory closed in 1992, shortly following the takeover of Thorn by GE Lighting of America and demolished in 1993.

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<sup>xvi</sup> Samuel Homfray (1762-1822) - the proprietor of the Penydarren Ironwork, one of the chief promoters of the Glamorganshire Canal, later High Sheriff of Monmouthshire, Member of Parliament for Staffordshire and brother-in-law to William Crawshay II. The ironworks financed by Richard Forman I (c.1733-1794), son of a wealthy London landowner and clerk in the Board of Ordnance, at the Tower of London who later became a partner in the business.

<sup>xvii</sup> Antiquarian society - this was the first time that the site was considered to be that of a Roman fort, following the examination of the site by Dr F Haverfield of Oxford University.

<sup>xviii</sup> Richard Trevithick (1771 –1833) - a Cornish inventor and mining engineer who successfully harnessed high-pressure steam and constructed the world's first steam railway locomotive (1803).

<sup>xix</sup> On 21 February 1804, Trevithick's steam locomotive successfully hauled a train along the tramway of the Penydarren Ironworks, proving it was possible to haul heavy carriages along a "smooth" iron road.

<sup>xx</sup> William Forman (c.1767-1829) - son of Richard Forman, held a three-eighths share in the Penydarren ironworks, see also xvi.

<sup>xxi</sup> The 93<sup>rd</sup> Regiment - the 93rd (Sutherland Highlanders) Regiment of Foot was a Line Infantry Regiment of the British Army, raised in 1799.

<sup>xxii</sup> Merthyr Rising – the depression of the iron industry caused redundancies and rising prices forcing ironworkers into debt leading to demonstrations and marches and ultimately to riots suppressed by troops and mass arrests.

<sup>xxiii</sup> Merthyr Proprietary School (1876 to 1888) - the house was leased from the James family who purchased the House and Estate from William Henry Forman (1794–1869), son of William Forman in the late 1850 early 1860's.

<sup>xxiv</sup> Richard Trevithick - see xviii.

<sup>xxv</sup> Francis Homfray (1725 – 1798) - an English industrialist who leased an ironworks from Anthony Bacon in 1782, used mainly for manufacturing weapons and ammunitions, the eventual result was the establishment of the Penydarren works.

<sup>xxvi</sup> Dowlais Ironworks - established by a partnership of nine members in 1759, one of four ironworks in the County Borough area that included a coke-fuelled blast furnace.

<sup>xxvii</sup> On 21 February 1804 Trevithick's unnamed steam locomotive successfully hauled 10 tons of iron, 5 wagons and 70 men, a distance of 9.75 miles (15.69 km) in 4 hours and 5 minutes, at an average speed of approximately 2.4 mph (3.9 km/h) along the tramway of the Penydarren Ironworks, see also xiv & xvi.

<sup>xxviii</sup> Liverpool and Manchester Railway - founded in 1824, was the first fully timetabled railway service relying entirely on the steam locomotive for traction when it opened in 1830.

<sup>xxix</sup> Merthyr Electric Traction and Lighting Company - a subsidiary of the British Electric Traction Company opened a tramcar service in 1901 operating 16 tramcars. The service closed in 1939.

<sup>xxx</sup> In the 1890s, developments included the general hospital, the Roman Catholic Church of St. Mary's, Park Terrace, and nearby large villas. The filling in of the former fishpond facilitated the development of Penydarren Park, between 1902 and 1905, during which additional excavation of the Roman fort was undertaken and enabled the development of the terraces along Gwaelod-y-Garth lane.

<sup>xxxi</sup> Gilbert de Clare (1243 – 1295) - 6th Earl of Hertford, 7th Earl of Gloucester, 3rd Lord of Glamorgan, 9th Lord of Clare.

<sup>xxxii</sup> Glywysing - a petty kingdom from the sub-Roman period to the Early Middle Ages, probably named after Glywys, a real or legendary early monarch and Brycheiniog - an independent kingdom in the Early Middle Ages.

<sup>xxxiii</sup> Cae Burdydd Castle - a probable timber or masonry Castle situated in Vaynor.

<sup>xxxiv</sup> Lord of Brecon, Humphrey de Bohun (c. 1249 –1298) - 3rd Earl of Hereford and 2nd Earl of Essex, an English nobleman and active participant in the Welsh Wars (1277 – 1278, 1278 & 1294–95).

<sup>xxxv</sup> Plymouth Estates - acquired Glamorgan properties through marriage in the 18th century.

<sup>xxxvi</sup> The Dowlais Iron Company – founded following the discovery of coal on leased property in 1767 and used to replace charcoal for smelting, the company having purchased the mineral ground of the Penydarren Ironworks in 1759.

<sup>xxxvii</sup> The Plymouth Iron Company – managed and later owned by Richard Hill (Anthony Bacon's brother-in-law) prospered under his and then his son Anthony Hill's management closing in 1882 after Anthony's death.

<sup>xxxviii</sup> Morlais (Penydarren) Tramroad - a section of the Merthyr Tramroad from the quarries to the Glamorganshire Canal.

<sup>xxxix</sup> Thomas Lewis (1699 - 1764) - born into a landed family from Cardiff, he already owned the Penttyrch blast furnace and several small forges, later served as High Sheriff of Glamorgan in 1757.

<sup>xl</sup> Isaac Wilkinson (c 1695 - 1784) - an English industrialist born in Washington who already owned a subcontracted casting business and patents for a cast box smoothing-iron and a novel moulding process.

<sup>xli</sup> Stockton and Darlington Railway – opening in 1825 was the first railway in the world to operate freight and passenger service with steam traction.

<sup>xlii</sup> The Big Mill – structure used for rolling wrought iron rails.

<sup>xliii</sup> Little Mill – structure constructed in 1840 to produce rails.

<sup>xliv</sup> The Goat Mill - the world's most powerful rolling mill, constructed by George Thomas Clark (1809–1898), a surgeon and engineer and Trustee of the ironworks, and the works manager William Menelaus (1818–1882).

<sup>xlv</sup> Sole Plate and Sleeper Mills – King George V and Queen Mary visited the mills in 1912, which produced steel and tin plate and railway sleepers, during a tour of South Wales.

<sup>xlvi</sup> Dowlais Locomotives – the first complete locomotive was produced in 1906 and the last in 1920, two were named after King George V and Queen Mary, respectively during their 1912 visit.

<sup>xlvii</sup> The Guest family – John Guest (1722-1787) a brewer, farmer and coal merchant became manager in 1767 and partner in 1782. His son Thomas Guest (c1745-1807) continued as manager and part owner and his son John Josiah Guest (1785-1852) became the sole manager in 1815 and the first MP for Merthyr Tydfil in 1832. His son Ivor Bertie Guest (1835-1914), 1st Baron Wimborne and High Sheriff of Glamorgan sold the Ironworks in 1899.

<sup>xlviii</sup> GKN - an engineering company formerly known as Guest, Keen and Nettlefolds.

<sup>xlix</sup> Trevithick's Tunnel - Merthyr Tramroad Tunnel situated at Pentrebach in 1804, Richard Trevithick's high-pressure steam engine travelled the Merthyr Tramroad, passing through the tunnel on its way to Abercynon, see also see also xxiii & Xiv.

<sup>l</sup>Isaac Wilkinson see xxxvi - collaborated with John Guest in starting the Plymouth Ironworks.



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- li John Guest (1722-1787) - a brewer, farmer and coal merchant collaborated with Isaac Wilkinson in starting the Plymouth Ironworks.
  - lii The Pentrebach Forge and Dyffryn furnaces - were located within the area, on the west side of the Taff these were later additions to the works, set up after the creation of the Plymouth Forge Company in 1803.
  - liii Hirwaun Ironworks - one of 3 early ironworks in the Cynon valley Founded in 1757 producing bar iron.
  - liiv The Hill family - Richard Hill (d 1806), manager of Plymouth Ironworks and brother-in-law to the wife of the owner Anthony Bacon, leased the works after his death. He became owner in 1803 and with his sons was instrumental in constructing sections of the Tramroad and his youngest son Anthony (1784-1862) was instrumental in construction of the Taff Vale Railway.
  - lv The Penydarren (Merthyr) Tramroad - a 9.75 miles (15.69km) long line, connecting Dowlais and Penydarren (also serving Plymouth along the way) Ironworks' private lines with the Glamorganshire Canal at Abercynon.
  - lvi Pen Garnbugail - a mountain summit 477 metres high with a prominence of 90 metres.
  - lvii Cadw - the Welsh Governments Historic Environment Service.