

Merthyr Learning Quarter, Merthyr Tydfil

Archaeological desk-based assessment

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A report for the University of Glamorgan
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Summary

The Glamorgan-Gwent Archaeological Trust, Projects Division (GGAT Projects) were commissioned by the University of Glamorgan to undertake an assessment of the archaeological effects of a proposed development at The Merthyr Learning Quarter, Merthyr Tydfil, the site of the former Ynys Fach Ironworks. The assessment reviewed information held by the regional Historic Environment Record (HER) and the National Monuments Record (NMR), as well as cartographic and documentary sources. Aerial photographs were examined and a site visit conducted.

A total of fourteen sites of archaeological interest were identified within the study area. However, three of the HER entries (308383, 308384, and 308385) may refer to only one feature, namely a bridge on the River Taff. The development area is positioned over the former Ynys Fach Ironworks, of which the surviving iron furnaces are located on its western edge, and are classified as a Scheduled Ancient Monument (SAM Gm 331). Also in the vicinity is the restored northern engine house belonging to the former Ynys Fach Ironworks, which is a Listed Building grade II (LB16073). The study area is located within the Registered Historic Landscape of Merthyr Tydfil (HLW (MGI) 2) (Cadw 1998).*

The proposed development has been assessed as having a possible 'major' effect on the remains of the Ynys Fach Ironworks, both those areas currently surviving above ground (SAM Gm 331) and those areas believed to survive below ground (former casting, boiler and engine houses, and an unidentified small building adjacent to a series of rail lines into the ironworks - MLQ1).

The proposed development has also been assessed as having a possible 'minor' effect on the Glamorganshire canal (01628.0s), which is located immediately to the east of the Ynys Fach Ironworks (now backfilled). It should be noted that this area represents a large area of back-filled material, which may have an effect on the construction design.

Cyfartha Castle Listed Building and Park and Garden (01089m/LB18504/PGW(GM)1(MER)), which is located 0.875km to the northwest (outside the study area), and has a registered Significant View. The proposed development had been assessed as having a possible effect on this site located. However, the site visit confirmed that the development area is obscured from view and this therefore reduces the effect to 'none'.

The potential to encounter buried remains belonging to the former ironworks is considered high. The impact on these remains depends upon the final footprint and foundation design. However, previous investigations have identified structures belonging to the former works from depths as shallow as 0.6m below the present ground surface.

In order to reduce the effect of the development on the archaeological resource an archaeological evaluation, consisting of trenching or test pitting, is recommended in the area of the former Ynys Fach Ironworks (33724/34122/31/01623m/01263m/00964m/LB16073/SAM Gm331 and MLQ1). The purpose of the evaluation is to assess and record the survival and condition of the ironworks and any other sites of archaeological interest, as well as to determine the presence of hazardous materials. Should significant archaeological deposits be encountered during the evaluation then an alteration to the construction design to avoid these deposits should be implemented (i.e. raft foundations etc). If this is not possible, then a preservation by record within the development area may be an appropriate method to reduce the impact of the development from 'major' to 'none'.

It is also recommended that an archaeological watching brief with contingencies be conducted on any intrusive ground works within the proposed development area. Such works include topsoil stripping, trenching and piling.

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1. Introduction

1.1 Planning history

Merthyr Tydfil County Borough Council have requested that work be undertaken in preparation for an outline planning application for the construction of the Merthyr Learning Quarter in Cyfartha, Merthyr Tydfil. The Glamorgan-Gwent Archaeological Trust, Projects Division (GGAT Projects) have been commissioned by the University of Glamorgan to undertake an archaeological desk-based assessment to inform on the impact on the archaeological resource by any proposed development within the designated study area.

1.2 Specification and methodology for study

The assessment comprises a review of existing information about the archaeological resource of an area spanning 0.09km² situated near Merthyr College, Cyfartha, Merthyr Tydfil. Two buildings are intended to be demolished, and the construction of a four-storey building, a road and a college green to link the college site to its riverside location are proposed. The study area is centred on NGR SO 04582 06097 and is outlined in green in Figure 1. The assessment is intended to conform to the Institute for Archaeologists' *Standards in British Archaeology: Archaeological desk-based assessments* (1994, amended 1999, 2001 and 2008).

Information recorded on the regional Historic Environment Record (HER) and National Monuments Record (NMR) was assessed. Cartographic and documentary sources were studied, along with relevant published information. Current Listed Building data and information on Scheduled Ancient Monuments and Historic Landscapes was obtained from Cadw. Collections of aerial photographs held by the Central Register of Air Photography for Wales (CRAPW) were examined and additional information requested from the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW). Additionally, LANDMAP and Historic Surveys were considered in detail. A site visit was made on the 2nd of March 2011.

Detailed advice on archaeology in the planning process is contained in *Welsh Office Circular 60/90 Planning and the Historic Environment: Archaeology*. Works affecting an ancient monument and its setting are protected through the implementation of the *Ancient Monument and Archaeological Areas Act 1979*. Detailed advice on Environmental Impact assessment is contained within *Welsh Office Circular 11/99 Environmental Impact Assessment*, which forms part of the wider *Planning Policy Wales (PPW)*. This document sets out the land use planning policies of the Welsh Assembly Government. Planning Policy Wales is supplemented by a series of TANs, and together with the Welsh Office Circulars comprise the *National Planning Policy*.

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

1.3 Assessment criteria

The archaeological sites within the study area are categorised in accordance with the only available criteria that are nationally agreed; these **values** are set out in the *Department of Transport/Welsh Office/Scottish Office Design Manual for Roads and Bridges* paragraph 3.4 Vol. 11 Section 3 Part 2 (Cultural Heritage).

Category A: national importance

- Category B: regional importance
- Category B: regional importance
- Category C: local importance
- Category D: low importance

To these an additional category has been added

- Category U: unknown

The assessment of the importance of individual sites is essentially a subjective exercise based upon the experience of the project team. The importance of certain sites will be implied by their status within the statutory framework. Scheduled Ancient Monuments will always be of national importance; Listed Buildings will be of at least regional importance. Values assigned to other sites are given both in relation to their individual importance and to their context within the wider landscape.

The **condition** of individual sites and the general overall condition of surviving remains has bearing on the value of the sites themselves and on the value that they impart within a wider landscape context. The condition of sites is recorded following the system used by the GGAT HER, using the following criteria:

- Intact: the site is intact
- Near intact: the site is nearly intact
- Damaged: the site has been moderately damaged
- Near destroyed: the site has nearly been destroyed
- Destroyed: the site has been destroyed
- Restored: the site has been restored
- Moved: the site has been moved (usually finds)
- Not known: the condition of the site is not known

For the purposes of desk-based assessments, **rarity** is assessed at regional level only. The following criteria are used:

- High: very few sites of this type are known
- Medium: the site is not unusual, but cannot be considered common
- Low: the site is quite common

Group association is where a connection between sites within the landscape can be demonstrated. These will usually be of the same period, but may include groups where the presence of an earlier site or sites has led to the formation of a later complex, or where an

earlier site or sites can be shown to have acquired importance as part of a later complex. The criteria are as follows:

- High: the site forms part of an interconnected complex occupying a clearly definable landscape where little or no fragmentation has occurred
- Medium: the site is part of an interconnected complex, which is either limited in scope or badly fragmented
- Low: there are few or no other sites, which are associated

Historical association is where there is a link between the site and known historical or cultural persons or events. Prehistoric sites, which are by definition before historical evidence, cannot have any contemporary historical association, but they may acquire later associations. For the Roman and Early Medieval periods, where survival of historical evidence is poor and patchy, any contemporary documentation at all will be important. Two classifications are given for historical association, one reflecting the certainty of the identification, and the other its importance. Only sites with certain or possible association can be assessed for importance, and historical association can only increase the importance of a site; the absence of it will never decrease its importance.

Historical association- identification

- Certain
- Possible
- Unknown

Historical association- importance

- High
- Medium
- Low

The assignment of values to identified interests requires consideration of the reliability and accuracy of the source data, ranging from fully-recorded features seen in open excavation to antiquarian comments on finds of note from a poorly-defined location. The **confidence** with which the values have been assigned is noted, using the following criteria:

- High: existing information is reliable and detailed
- Medium: existing information is apparently reliable but limited in detail
- Low: existing information is too limited to allow its reliability to be assessed

The **effect** of the proposal on the archaeological resource has been assessed using the following criteria:

- Severe: total loss
- Major: significant loss, likely to result in a reduction of value of the surviving site
- Minor: loss unlikely to result in a reduction of value of the surviving site
- None: no identifiable effect
- Beneficial: development will protect, preserve or enhance the site better than if the development did not occur

2. Background

2.1 Location and topography

The study area is centred on NGR SO 04582 06097, to the west of the Merthyr College main building (Figure 1). The Ynysfach housing area borders its west and southwest sides, separated by the ruins of the Ynys Fach Ironworks furnaces. The ironworks were built against a steep bank, thereby taking advantage of the local topography. The charging platforms were situated on elevated ground and were level with the top of the blast furnaces, in order to facilitate access of the charging barrows to the top of the furnaces (Egloff 2008a). The study area is to the west of the River Taff, which runs roughly northwest to southeast. The development area is relatively flat, typically varying between 168m and 170m OD (Egloff 2008a).

2.2 Geology

Merthyr Tydfil occupies a natural basin at the head of the Taff Valley, surrounded by high hills and ridges reaching 450m OD. The geology of the Merthyr College area is Garw Lower Coal Measures made up of Palaeozoic sandstone and shale, and coal seams. No geological specification is available for the topsoils (SSEW 1983), the site being situated within the urban area of Merthyr Tydfil. The grounds on which Merthyr College is located have been shaped by industrial activity, and the site is reportedly sitting on spoil derived from ironworks and colliery waste three to five metres deep (Ove Arup 2008).

2.3 Walkover survey

A walkover survey was conducted on the 2nd of March 2011. The area was photographed; all sites previously identified from a search of the regional Historic Environment Record (HER) and National Monuments Record (NMR) were visited in order to assess their current condition. A sample of photographs taken illustrating the current condition of the archaeological interests and the site in general can be seen in Appendix II.

The worker's cottages next to the canal (18306/GM486/18306), Cyfartha Castle (01089m/LB18504/PGW(GM)1(MER)), and Cyfartha Ironworks (04960m et al/GM425/34078 et al) were also visited in order to place the Ynysfach Ironworks in context. Cyfartha Castle has a registered Significant View of Cyfartha Ironworks because the castle was built in its position to look out upon the works. The Crawshays, who owned Cyfartha castle and Ironworks, also owned Ynysfach Ironworks for some time and the possibility of the view extending over Ynysfach Ironworks was considered. The site visit confirmed the view of Ynysfach Ironworks is obstructed by a ridge, thus discrediting any extended Significant View.

The Glamorganshire Canal (Plate 1), which runs directly next to or possibly partially beneath the development area, connected both Cyfartha and Ynysfach Ironworks to export their products by sea (via the canal to Cardiff). The section of canal within the development area is entirely backfilled; therefore a photograph of a preserved section of the canal further north is included in the site visit appendix.

The condition of the Ynysfach Ironworks remains consistent with previous reports (Plate 2). The construction of the new buildings for Merthyr College has been completed following the previous desk-based assessment (Egloff 2008a), and the green within the development area has been cleared. The restored engine house is no longer a museum (Plate 3); offices reside within the building though the layout and exhibits remain intact at present.

Merthyr Learning Quarter, Merthyr Tydfil: archaeological desk-based assessment

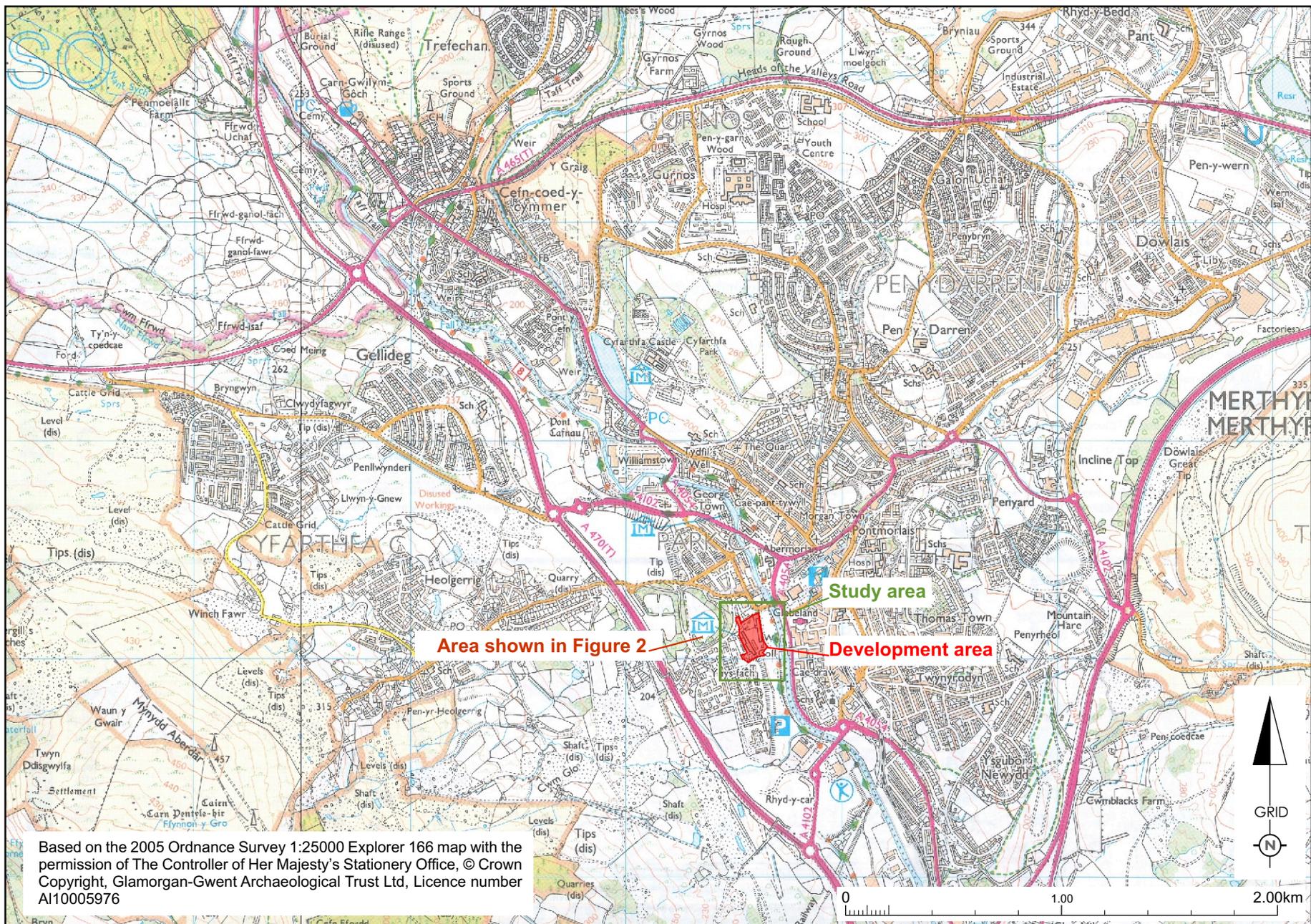


Figure 1. Location plan showing the development area (red) and study area (green)

2.4 General historical and archaeological background

2.4.1 Prehistoric (up to AD43) and Roman (AD43 to 410)

Prehistoric archaeological evidence is sparse for the area and is based primarily on artefacts indicative of general human activity. These include a flint scatter (PRN 00880m) of Mesolithic date found south of Abercanaid, and the find of a ‘thin butted axe-head of siliceous ash’ (PRN 00478m) from near Twynyrodyn, Merthyr Tydfil, which indicates continued activity into the Neolithic period (Roberts 2005).

A chance find of a reddish/buff beaker, together with a spindle whorl, on the Penderyn to Brecon road, as well as three cairn and cist burials (PRN 00445m, 00458m, 00459m) found in the Merthyr Tydfil area, represents human activity in the Bronze Age. A copper alloy looped palstave axe (PRN 00802m), dated to *c*1000 BC, was found during the construction of the Llwyn On reservoir (Merthyr Teachers Centre Group 1981).

A potential hill-fort site at Castell Morlais (PRN 00831m), now partly obscured by the medieval castle, north of Merthyr Tydfil, and another hill-fort in Gwersyll (PRN 00483m), southwest of Merthyr Tydfil, attest to the presence of Iron Age settlement in the region. It is quite likely that upland settlement and associated agricultural enclosure during the late prehistoric period was far more extensive within the area than the distribution of known surviving sites would suggest, with much of the landscape irrevocably masked and altered during the Post-medieval and Modern periods. The majority of settlements of the late prehistoric period in the area were associated with a pastoral cattle-based economy. The settlement site of Garth Fawr (PRN 04313m) provides an excellent example of a late prehistoric agricultural settlement. This site comprises above ground remains of at least three hut circles, a number of scoops, platforms, a hollow way, associated enclosures and wandering walls (Roberts 2005).

Settlement evidence from the Roman period in the Merthyr Tydfil area is suggested by a Roman fort on the site of Penydarren Park (PRN 00833m), discovered during the construction of Penydarren House in 1786. Excavations at the site, carried out in 1902-1904, revealed that Penydarren Fort was occupied *c* 74-120 AD (Merthyr Teachers Centre Group 1981).

Almost all Roman remains relate to military activity (the fort at Penydarren) or related work (the road from Gelligaer to Brecon), though presumably, settlement and associated agriculture was continuous throughout the Iron Age and the Roman period. A cattle-based pastoral economy, which probably dictated a dispersed and mobile settlement pattern, is considered, by analogy, to have been characteristic of the period. (Roberts 2005)

2.4.2 Early-medieval (410 to 1066)

The extent of Early-medieval settlement in the area is unknown; however, it is likely that some measure of continuity of native settlement carried over from the late prehistoric/Roman period. The only definite indication of Early-medieval occupation comes from the dedication of the Church of St. Tydfil at Merthyr Tydfil and place-name evidence indicating early Christian church/monastic settlement (Cil or Church of Sanos, the sister of St Tydfil), in the area of Cil-Sanws, when Merthyr Tydfil was part of the Lordship of Senghenydd. The industrialised and urbanised nature of the valley floor has probably resulted in the significant loss of earlier settlement features (Roberts 2005).

2.4.3 Medieval (1066 to 1485)

Post-1066 Merthyr Tydfil was a hamlet consisting of a wattle and daub church, a mill belonging to the de Clare family that stood near the Chapel of St Tydfil, and scattered farmsteads. Morlais Castle was erected on site of the Iron Age hill-fort by Gilbert de Clare probably in 1270. It is

assumed that the castle was never completed, but it was nonetheless used as a defensive post of the stronghold of the native lord of Senghenydd (Merthyr Teachers Centre Group 1981).

The cartographic record and place-name evidence affords some indication of the location of medieval settlement along the valley floor, as on the higher ground, *i.e.* hendre and hafod place-names, *e.g.* Hendre-Fawr. The surviving settlement features of the period are exclusively known from the higher upland areas. The settlement features would have been predominantly platform houses, longhuts, typically in set out pairs; these upland dwellings or hafodau appear to have been occupied on a seasonal basis and were associated with pastoral agriculture, chiefly based on the rearing of cattle. The platform house sites are typically situated at the upper break of slope of the valley side along the periphery of the extensive upland pasture, the location frequently reflects the upper extent of the Post-medieval enclosure and encroachment (Roberts 2005).

2.4.4 *Post-medieval (1485 to 1901) and Modern (1901 to present)*

Prior to the arrival of the ironmasters, several of whom migrated from Sussex as early as the 17th century (Merthyr Teachers Centre Group 1981), activity in the region was closely linked to agriculture, *i.e.* lime burning, corn-milling and leather tanning. Merthyr Tydfil had no established industrial tradition. The reliance on dairy farming continued into the 17th and 18th centuries; it is known for instance that during the period 1688-1725 farmers in the Merthyr Tydfil area each on average owned fifteen cows (Merthyr Teachers Centre Group 1981). Merthyr Tydfil underwent a radical transformation in the second half of the 18th century. In 1696, it is described as ‘a village of about 40 houses’ and a population of 110 inhabitants has been conjectured; by 1801, the population of Merthyr Tydfil had increased to 7,700, making it at that time the largest town in Wales (Merthyr Teachers Centre Group 1981).

Despite the lack of industrial skills in the region, the Taff Valley represented an ideal setting for the establishment of an iron industry, due to the availability of iron ore, coal, timber, limestone, and waterpower, all in convenient proximity. Thanks to improved means of production in the late 18th century, iron had become more readily available and more affordable. At the same time, the wider context of constant wars, the increased use of iron tools and implements in domestic and agricultural contexts, and the spread in iron use in construction, all resulted in an upsurge in the demand for iron. This represented a very lucrative market, which lured potential investors into investing vast sums of money into the iron industry. The ironworks of northern Glamorganshire and Monmouthshire were large-scale enterprises from the beginning, where outside capital was essential.

The first iron furnaces and forges were erected near the head of the Taff Valley between 1759 and 1765. By the early 1780s, there were four ironworks in operation in Merthyr Tydfil: Dowlais, Plymouth, Cyfarthfa, and Penydarren. Dowlais Ironworks started as probably the first coke powered ironworks in South Wales in 1759. Plymouth opened in 1763, Cyfarthfa in 1765, and Penydarren in 1784. Ynys Fach Ironworks was conceived as a subsidiary works to Cyfarthfa, and opened in 1801. Other subsidiary ironworks to open in the early 19th century were Ivor by Dowlais, Dyffryn by Plymouth, and further forges in Pentrebach, a part of Plymouth Ironworks.

The years 1791-4 saw the construction of the Glamorganshire Canal by the Merthyr Tydfil iron masters, linking Merthyr Tydfil with Cardiff through 50 locks (Ynys Fach had its own transshipment point at Chapel Row, connected by a tram-line). An iron bridge (PRN 01618m/116/Gm283) over the river Taff was finished in May 1800, and became a vital link between Ynys Fach and the town itself. Dismantled in 1963, it has been restored and is now on display in Cyfarthfa Park. The Local Board of Health, set up in 1850, was given powers to lay down a sewerage system and provide Merthyr Tydfil with an adequate water supply. However,

work on supplying water only began in 1858 and was completed in 1861, when water was finally available from standpipes in the streets (Perkins, Thomas, and Evans 1986).

With the global demand for iron being gradually replaced by the need for steel during the second half of the 19th century, the Merthyr Tydfil ironworks were faced with transformation into steel production plants or closure; Penydarren was closed in 1858 and Plymouth bought out in 1863 (Newman 1995). Ynys Fach was reconditioned and put in stand-by in 1879, while Cyfarthfa was given a second life as a steel production works (Egloff 2008a).

2.5 Specific historical and archaeological background

The history of the Ynys Fach Ironworks is intimately linked to that of the Cyfarthfa works. It was conceived to supplement the Cyfarthfa furnaces, primarily in order to increase the total output of pig iron. The ironworks was situated on an area of prime land, abutting a steep sloping hillside, with coal and ore being initially mined only a few yards away. Transportation of materials was available in the form of an easy access to the Glamorganshire Canal, on which Ynys Fach works had its own transshipment point, reached by way of a tram-line.

A working forge is recorded on site in 1769, but unfortunately no name for the leasee of the land at that time is known. Plymouth was in the hands of Anthony Bacon since he had bought the works in 1765. Following this, the forge in Cyfarthfa was used to process pig iron produced in the Plymouth factory. Charles Wood states in his diary that Cyfarthfa Ironworks commenced in 1766, and it is therefore possible that forging was carried out in Ynys Fach prior to the opening of Cyfarthfa. There is no evidence to suggest that Bacon was leasing land at Ynys Fach at this early date. He did, however, lease part of Ynys Fach from the Griffiths family of Gelly in the Parish of Llanwonno, in May 1782, at an annual rent of £3 3s (The Merthyr Tydfil Heritage Trust).

In September 1782, Bacon leased part of the Cyfarthfa Ironworks to Francis Homfray for a term of 50 years. Homfray was granted the 'Lower Works' or 'Foundry' and a mill at Cyfarthfa for the boring of cannon. It has been suggested that the 'Lower Works' included the forge at Ynys Fach. However, the site is not unequivocally identified. Francis Homfray left for Penydarren in October 1784, and the mill and the forge were taken over by David Tanner of Monmouth. In March 1786, Tanner's lease passed into Richard Crawshay's hands. The cannon boring mill was reportedly so successful that pig iron had to be imported from Dowlais and Plymouth in addition to the Cyfarthfa production.

On Bacon's death in January 1786, lease of the works at Cyfarthfa – with the exception of the above mentioned cannon boring mill and forge, already in Crawshay's possession – was granted by the Court of Chancery to Richard Crawshay and Company, *i.e.* Crawshay, James Cockshutt, and William Stephens from January 1, 1787, until 1795, when Bacon's eldest illegitimate son would reach the age of maturity. The Crawshay–Cockshutt–Stephens partnership was dissolved in 1791, and Richard Crawshay and George Watkins took over the works from 1792 onwards.

At this point, Crawshay's lease of the Lower Works and mill was not due to expire until 1832, whereas his lease of the Cyfarthfa Ironworks would, at best, need to be renegotiated with Bacon's heir at the latest in 1795. Again, assuming that the Lower Works partly, or fully, referred to the forge at Ynys Fach, it is likely that Crawshay would preferably invest in the latter, more secure leasehold.

Ynys Fach Ironworks was opened in 1801. It initially had two blast furnaces, according to plans drawn by engineer Watkin George and built by Thomas Jones of Merthyr Tydfil. These were voluminous furnaces for the period, being 53 feet (c 16.15m) high, and 12 feet (c 3.65m) across the boshes. They were the second furnaces to have steam-powered air blast in Merthyr Tydfil, the first ironworks using a steam engine owned by Richard Crawshay. As a consequence, output

was more regular, and considerably higher than that of the Cyfarthfa works. Between 45 and 62 tons of iron were produced weekly at the waterwheel-powered Cyfarthfa plant, whereas Ynys Fach produced between 65 and 70 tons a week.

The northern engine house, which survives until the present day, has a style typical for Cyfarthfa. It comprises three storeys, and its quoins consist of limestone work. It housed a beam engine, possibly similar to the double acting Boulton and Watt blowing engine installed at Dowlais three years previously. The adjacent boiler house supplied steam from coal fired boilers. A 100 feet high square stack stood nearby.

In 1836, two additional furnaces and adjoining casting houses were erected at Ynysfach (the inscription WC 1836 on the cast iron keystone of furnace no. 3 is still visible today – Plate 7). A new engine house with boiler and chimneystack, built to the south of the new furnaces, provided them with blast power.

Ynys Fach Ironworks closed during the strike of 1874, until Robert Thomson Crawshay's death five years later. While Cyfarthfa was converted to a steel production plant, the Ynys Fach furnaces were reconditioned and held in stand-by in case of a renewed demand for iron. However, Ynys Fach was probably never used again, and by 1905 the masonry was reported to be starting to crumble. The southern engine house was demolished some time after 1905, and the masonry was reused to construct a fan pit at Gethin.

Due to its perceived precarious condition, one boiler stack (belonging to the northern boiler house) was brought down in December 1949 using a charge of explosives.

The majority of the 19th century buildings and canal structures survived until the late 1950s, when development of the college commenced. All buildings were then destroyed, with the exception of the western part of the ironworks and its northern engine house. The canal and all other water retaining structures were also backfilled.

2.6 Review of previous archaeological works, cartographic and aerial resources:

Previous Archaeological Works

Eight archaeological investigations conducted by the Glamorgan-Gwent Archaeological Trust have previously been carried out within the bounds of the study area. These consist of four watching briefs (Lawler 1995, Egloff 2008b, James 2009b and James 2011), one desk based assessment (Egloff 2008a), and two written scheme of investigations (Dunning 2009 and James 2009). The study area is also included within the Southeast Wales Industrial Ironworks Landscapes (Roberts 2005).

The two watching briefs (one including a photographic survey) conducted in 1995 and 2009 primarily dealt with the Parliament Lock and the Rhydyar Canal Bridge respectively and both reiterate the fact that the Glamorganshire Canal is backfilled within the study area (Lawler 1995 and James 2009b).

In 2008, a series of geotechnical test pitting and trial trenching, conducted under archaeological watching brief conditions revealed that the buildings associated with the Ynys Fach Ironworks were not fully removed or leveled during the construction of Merthyr college and the associated workshops, but are still extant in places, possibly up to a height of c 1.20m. Walls found during the course of this watching brief are located at a depth of 0.6m in an area where the Ynys Fach houses once stood. Two distinct typological phases were identified, which could mirror the changes and aggrandizement that Ynys Fach underwent in 1836, when two blast furnaces were added to the two initial ones. Within the perimeter of the refinery building, a brick floor and stone block, with a vertical iron bar rising up from it, was uncovered at a depth of 1.8m. Brick and mortar structures were located under the subsequently constructed Merthyr College

buildings at depths ranging from 0.65m to 1.8m. The other test pits contained spoil or waste deposits that relates to the ironworks, at depths of 0.65m, 1.0m and 1.8m. The results of the watching brief confirm that below-ground remains associated with the Ynys Fach ironworks survive within the proposed development area at a minimum depth of 0.6m, and are very likely to be encountered during any construction works (Dunning 2009 and Egloff 2008b).

The watching brief conducted in 2010 (report forthcoming) revealed a stone built wall that was exposed within the development area (which is now beneath the new warehouses with a minimum length of 18.5m, 0.5m wide and with a depth of 1.7m from the top of the surviving wall to the base. It was orientated roughly northeast-southwest and constructed entirely of stone bonded with a light grey/white mortar. The remainder of the wall was left *in-situ*. During excavation a length of tramline was also exposed at 0.7-1m below the current ground level, a record was made of this feature and this too remained *in-situ*. Deposits consisting of a high concentration of coal dust and slag as well as vast amounts of demolition rubble with large stones and bricks with a maximum depth of 1.6m were encountered, beneath topsoil which measured 0.07-0.1m in depth (James 2011).

Cartographic

Most structures constituting the former Ynys Fach Ironworks were removed in the late 1940s to early 1950s. The destruction process was not well documented; therefore the former structures could only be located using map regression and aerial photographs. On the Map of Merthyr Tydfil, 1836 (Figure 3), the first phase of the Ynys Fach Ironworks is clearly discernible. Unfortunately, the lack of accuracy of this map only allows for approximate mapping. It is therefore impossible to locate the structures of the first phase of the Ynys Fach Ironworks with much precision. However, the Ynys Fach Ironworks displayed on this map does not exhibit its final form, following its aggrandisement in 1836. The two initial furnaces of the ironworks – reused in the second phase of Ynys Fach Ironworks post 1836 – are depicted as forming one block with what is presumably a casting house to the east, and a boiler house to the north of the furnaces. Two new furnaces erected in that same year are depicted to the south of the initial ironworks. The corresponding casting houses were deemed missing, as well as the southern engine house and accompanying boiler house, until a watching brief (see above, Egloff 2008b) uncovered walls presumably belonging to two distinct phases where the casting houses once stood, directly to the east of the upstanding Ynys Fach blast furnaces. Also present on the 1836 map mentioned above is the Ynys Fach Row, located north of the Ironworks. Consequently, it can be suggested that the Ynys Fach Row was designed to provide accommodation to the ironworkers of the first generation of Ynys Fach Ironworks.

The later maps display Ynys Fach Ironworks in its final form, post 1836. The most accurate depiction of the distinct structures constituting Ynys Fach Ironworks is provided by the Local Board of Health Plan, 1852 (Figure 5). Each structure is identified individually and associated with a description. This map is the first of the regression, following their chronological sequence, to allow for an accurate plotting. It allows for each building to be located with a satisfactory level of precision.

A structure is depicted on the 1852 map of the Local Board of Health Plan, 1852 (Figure 5), located above and to the west of the blast furnaces. These could well be calcining kilns, rather than the limekilns they are referred to as. Due to the limited amount of iron in the Welsh ore, it was common practice in Wales to roast the ore prior to smelting, in order to reduce its carbon and water content. From 1850 on, richer ores were imported.

On the hillside, above the calcining kilns lay the coke ovens and coke yards, where coal mined in the Cyfarthfa collieries to the south was prepared and stored, prior to use in the furnaces.

A rectangular building referred to as “refinery” on the 1852 map of the Local Board of Health Plan, 1852, is linked by rail to the casting houses. Given that no engine house is present in the vicinity of the refinery, it is unlikely that forging or rolling took place there. The refinery process – an intermediate stage of puddling – might have been carried out on site, while the actual puddling and rolling processes took place at Cyfarthfa. A watching brief conducted by the Glamorgan-Gwent Archaeological Trust uncovered a brick layered floor that could be part of the refinery building (Egloff 2008b).

There is also a small and detached, unidentified structure of particular note to the east of the Engine House visible on the Local Board of Health Plan, 1852 and the 1st Edition Ordnance Survey maps, 1876, which would be directly beneath the new development. The structure is not visible on any of the other maps studied, and appears to be connected to the tramways. It is possible that this structure is related to the railway.

The three subsequent Ordnance Survey maps (Figure 6, 7, and 8) from 1876, 1904, and 1919 respectively, show that the structure of the Ynys Fach Ironworks had not been altered following

its enhancement in 1836. By the time of the second and 3rd edition maps (1904 and 1919) were published, the Ynys Fach Ironworks is marked as being “disused”.

Aerial Photography

The earliest coverage of the development area dates to 1947 (CPE UK 1997), in which there are no traces of bombing. The western kilns, blast furnaces, some side walls of casting houses, roofless engine houses, northern stack chimney, a northern building (which is possibly the forge) are all still standing but in a ruinous state. The boilers have been dismantled and removed, and so have all the rails. Comparing the earliest photograph available and subsequent photographs, it is clear that there were strong alterations in the refinery building, surrounding area, and the building standing over the refinery and access platforms. The workmen’s row’s gardens have been shortened. The workmen’s rows and eastern buildings (around canal square, timber yards etc) seem inhabited, and look similar to the 3rd Edition Ordnance Survey map. The Glamorgan canal has been entirely backfilled.

By the time aerial photographs were taken in 1955 (542 RAF 205), there have been dramatic alterations and the condition of the area is very much as it is now. There is no trace of the casting houses, forge or any other structures previously mentioned. Merthyr College has been built with annexe buildings standing over the casting houses. The top of the furnaces and the lime kilns are covered with earth, access platforms to the west have been covered and levelled, and the Ynysfach housing estate is finished. The eastern buildings have been slightly altered but are still extant, and the workmen’s rows are still standing but uninhabitable. The northern engine house walls are still standing.

Aerial photographs taken between 1967 and 1996 show overgrown blast furnaces, a ruinous engine house, the removal and replacement of the iron bridge, the flattening of the eastern buildings to make way for the current car park, the demolition of the worker’s rows, the growth, flattening and re-growth of the Ynysfach housing estate, the restoration of the engine house and additions and alterations to Merthyr College itself. No other sites of potential archaeological interest were apparent within the development area.

3. Archaeological Interests

There are fourteen sites of archaeological interest identified within the study area (Table 1). The furnaces and kilns of the Ynys Fach Ironworks (IW 019, Roberts 2005), are a Scheduled Ancient Monument (SAM Gm331). The Iron Bridge over the River Taff is a Scheduled Ancient Monument (SAM Gm283). The northern Ynys Fach Ironworks engine house is a Listed Building (LB 16073). Merthyr Tydfil is a Registered Historic Landscape (HLW (MGI) 2) (Cadw 1998). Further information relating to these interests can be found in the gazetteer in Appendix IV.

Numbers with a letter suffix are Primary Record Numbers (PRNs) in the regional Historic Environment Record (HER). Five and six figure numbers without a letter suffix are National Primary Record Numbers (NPRNs) of the National Monuments Record, as supplied to the HER under the ENDEX agreement. Numbers with a 'LB' prefix are Listed Buildings, as provided by Cadw. Numbers with a 'Gm' prefix are Scheduled Ancient Monuments (SAMs). Cyfartha castle lies just outside of the study area, it has been included in this study because it is a registered park and garden and listed building and has possible significant views to and from the development area. Numbers with a "MLQ" prefix are new sites identified during the course of the present study.

Table 1: Identified archaeological interests

ID	Name	NGR	Period	Site status	Value
01089m/LB18504/PGW (GM) 1(MER)	Cyfartha Castle	SO04150735	Post-medieval	LB/Historic Parks and Gardens	A
01618m/116/SAM Gm283	Iron Bridge	SO04720616	Post medieval	SAM	A
01628.0s	Glamorganshire Canal	SO0415706811	Post-medieval	None	C
01702m	Capel Ynysgau	SO04730618	Post medieval	None	C
020611.0m/026911.0m	Rhymney Railway	SO0445205968	Post-medieval	None	C
24978/00456m	Ynys Fach Manorial Mill	SO047061	Medieval	None	U
286142	Old Ynysfach, 35-36	SO04520620	Post-medieval	None	C
308383	Merthyr Bridge	SO047062	Post-medieval	None	B
308384	Lattice Girder Bridge over River Taff	SO04700618	Post-medieval	None	B
308385	Bridge over River Taff	SO04670624	Post-medieval	None	B
33724/34122/31/01623m/01263m/00964m/LB16073/SAM Gm331	Ynysfach Ironworks	SO04550605	Post-medieval	SAM / LB	A
85237/03548m	Parliament Lock No. 3	SO0465006015	Post-medieval	None	C

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91561	Middle Lock No. 2, Glamorganshire Canal	SO04620622	Post- medieval	None	C
91562	Canal Square Warehouses	SO04640616	Post- medieval	None	C
MLQ1	Railway and rectangular building	SO0459106034	Post- medieval	None	C

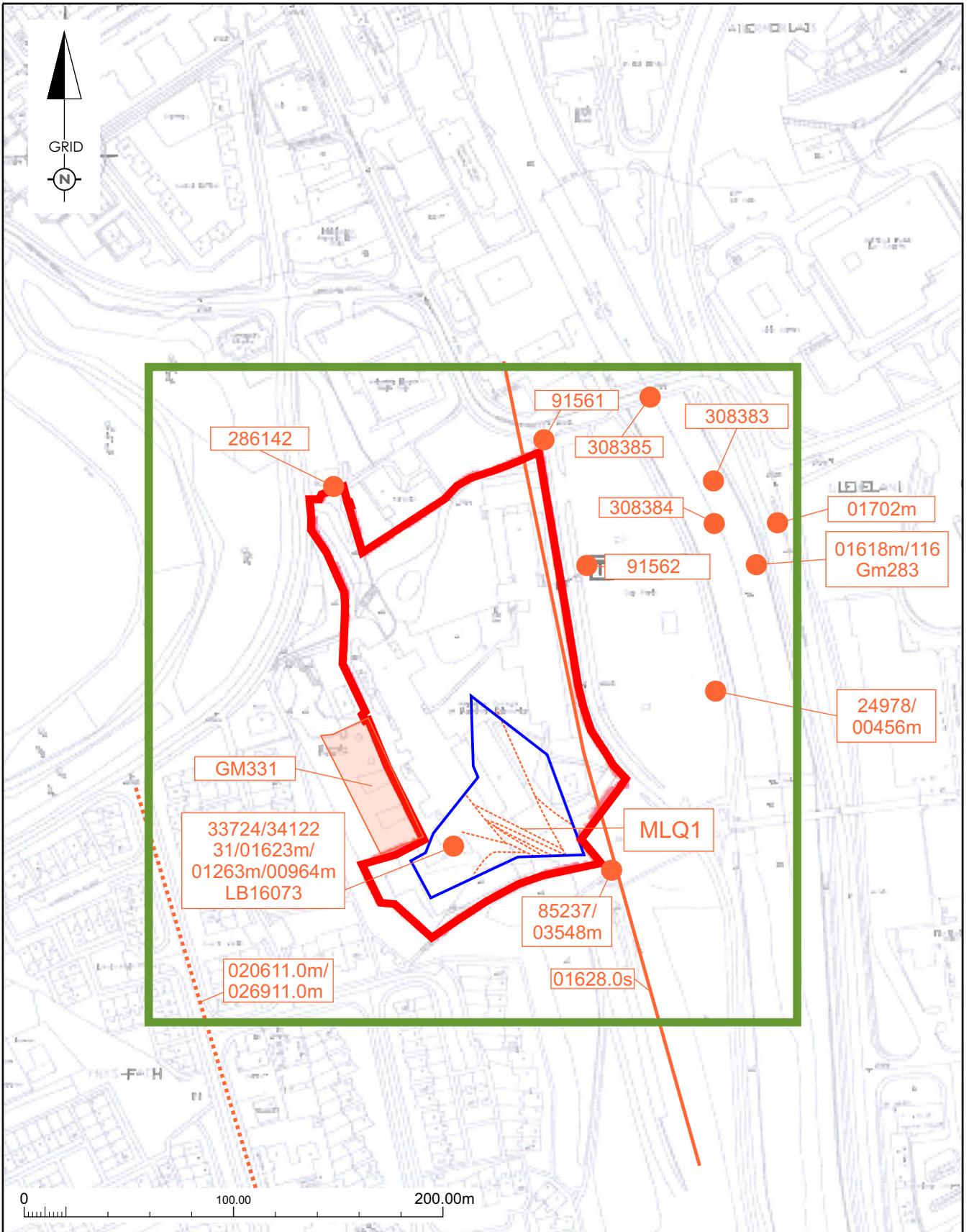


Figure 2. Location of the development area (red), study area (green) and archaeological interests including Scheduled Ancient Monument area (orange) and building footprint (blue). Cyfartha Castle (01089m/LB18504) is not shown (situated 0.875km northeast)

4. Assessment

4.1 Effect of the development on archaeological sites

A total of fourteen sites have been identified within the study area; of these, the former Ynysfach Ironworks lies within the proposed development area. The eastern buildings associated with Ynys Fach Ironworks do not survive above ground; however, there is a likelihood of finding remains surviving below ground within the development area. As the replacement workshops are to be built on top of the location of the Ynys Fach casting houses, refinery, southern engine house, forge, an unidentified structure related to the works and Ynys Fach Row, the effect of the proposed development upon the buried remains of the ironworks has been assessed as ‘major’.

A network of railways (MLQ1) leading to the Ynysfach Ironworks are also visible on several of the maps assessed during the course of the study which are not located on the HER (Historic Environment Records). This feature is likely to be encountered and the development will have a direct impact upon it, the effect of which has been assessed as ‘major’.

The development will also be constructed directly next to or possibly partially on top of the Glamorganshire Canal (PRN 01628.0s), which is now backfilled. The consistency of the backfill may not be as compact as the surrounding soil, which may affect construction techniques utilised in the development and if constructed partially on top of the canal the works may encounter buried remains. Therefore, the effect of the proposed development upon the canal has been assessed as ‘minor’.

The upstanding remains of the Ynys Fach Ironworks located within the study area are some distance from the proposed works. As a result, the proposed development should have no impact on these remains. However, due to the constricted space available, particular attention should be given to the protection of exposed structures, such as the furnaces and charging banks.

Following the site visit, it was ascertained that the development would have no effect upon the Significant View Cyfartha Castle retains.

The impact of the proposed development on the remaining ten sites situated within the study area, outside of the actual development area, has been assessed as ‘none’.

Table 2: Effect of the development on known archaeological interests

ID	Name	NGR	Period	Value	Effect
33724/34122/01623m/01263m/00964m/LB16073/SAM Gm331	Ynysfach Ironworks	SO04550605	Post-medieval	A	Major
MLQ1	Railway and rectangular building	SO0459106034	Post-medieval	C	Major
01628.0s	Glamorganshire Canal	SO0415706811	Post-medieval	C	Minor

4.2 Effect on potential sites

In addition to the definite effect on the three known site of archaeological interest, there is also a possibility that previously unknown features or structures may be encountered during the construction programme. Whilst historical mapping suggests that the area was open land until the establishment of the Ynysfach Ironworks in the middle of the 18th century, archaeologically

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significant features from earlier periods have been encountered in the general vicinity of the development area, and contingencies should be put in place to reflect this possibility.

5. Mitigation

Without forms of archaeological mitigation it is possible that the proposed development will have a ‘major’ effect on any surviving buried remains associated with the Ynys Fach Ironworks including parts of the refinery, casting houses, forge, the boiler house, one of the engine houses, an unidentified small building, a network of railways and the Glamorganshire Canal. A total of fourteen sites of archaeological interest were identified within the study area, three of which (308383, 308384, and 308385) may refer to only one feature, namely a bridge on the River Taff.

The proposed development has been assessed as having a possible ‘major’ effect on the remains of the Ynys Fach Ironworks (33724/34122/31/01623m/01263m/00964m/LB16073/SAM Gm331), both those areas currently surviving above ground (SAM Gm 331) and those areas believed to survive below ground (former casting, boiler and engine houses, and an unidentified small building adjacent to a series of rail lines into the ironworks - MLQ1).

The proposed development has also been assessed as having a possible ‘minor’ effect on the Glamorganshire canal (01628.0s), which is located immediately to the east of the Ynys Fach Ironworks (now backfilled). It should be noted that this area represents a large area of back-filled material, which may have an effect on the construction design.

Cyfartha Castle Listed Building and Park and Garden (01089m/LB18504/PGW(GM)1(MER)), which is located 0.875km to the northwest (outside the study area), and has a registered Significant View. The proposed development had been assessed as having a possible effect on this site. However, the site visit confirmed that the development area is obscured from view and this therefore reduces the effect to ‘none’.

The potential to encounter buried remains belonging to the former ironworks is considered high. The impact on these remains depends upon the final footprint and foundation design. However, previous investigations have identified structures belonging to the former works from depths as shallow as 0.6m below the present ground surface. This is consistent with work carried out at similar ironwork sites in the area (Cyfartha Ironworks) where substantial remains have been found just below the surface and it is therefore likely that significant archaeological deposits survive below ground across the development area.

In order to reduce the effect of the development on the archaeological resource an archaeological evaluation, consisting of trenching or test pitting, is recommended in the area of the former Ynys Fach Ironworks (33724/34122/31/01623m/01263m/00964m/LB16073/SAM Gm331 and MLQ1). The purpose of the evaluation is to assess and record the survival and condition of the ironworks and any other sites of archaeological interest, as well as to determine the presence of hazardous materials. Should significant archaeological deposits be encountered during the evaluation then an alteration to the construction design to avoid these deposits should be implemented (i.e. raft foundations etc). If this is not possible, then a preservation by record within the development area may be an appropriate method to reduce the impact of the development from ‘major’ to ‘none’.

Due to the high potential of encountering archaeological remains it is also recommended that an archaeological watching brief with contingencies be conducted on any intrusive ground works within the proposed development area. Such works include topsoil stripping, trenching and piling.

In addition, efforts should be made to reduce the off-site changes (i.e. noise, pollution, vibration) during the construction phase, in order to minimise the effects on the nearby structures that are protected as Listed Buildings and Scheduled Ancient Monuments (Ynys Fach Ironworks SAMGm331 and Engine House LB16073).

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Information concerning the extent of the surviving archaeological resource pertaining to the Ynys Fach Ironworks (including 33724, 34122, 01623m, 01263m, 00964m, LB16073 and SAMGm331) is limited, as at present the condition of these interests is not known. However, because the site was formerly utilised for the transformation of iron ore and the production of iron on an industrial scale, the ground may still contain hazardous substances, which are likely to have been disposed of in the cavities of the disused ironworks buildings. In particular, blue asbestos is known to have been commonly used as cladding for pipe-work in the context of iron processing plants (as found during recent excavations at Cyfartha Ironworks).

All archaeological work should be carried out to the standards laid down by the *Institute for Archaeologists*.

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Front Cover

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Plan of Merthyr Tydfil, from actual Survey, 1836. Arch. Ref. No. **DX 941/1**

Plan of the Town of Merthyr Tydfil, Surveyed by the Ordnance Survey Department Under the Provisions of the Public Health Act for the Local Board of Health, 1852. Arch. Ref. No. **B/M**

Tithe map of 1850 for the parish of Merthyr Tydfil. Plan Ref. No. **P4**, Award Ref No. **D4**

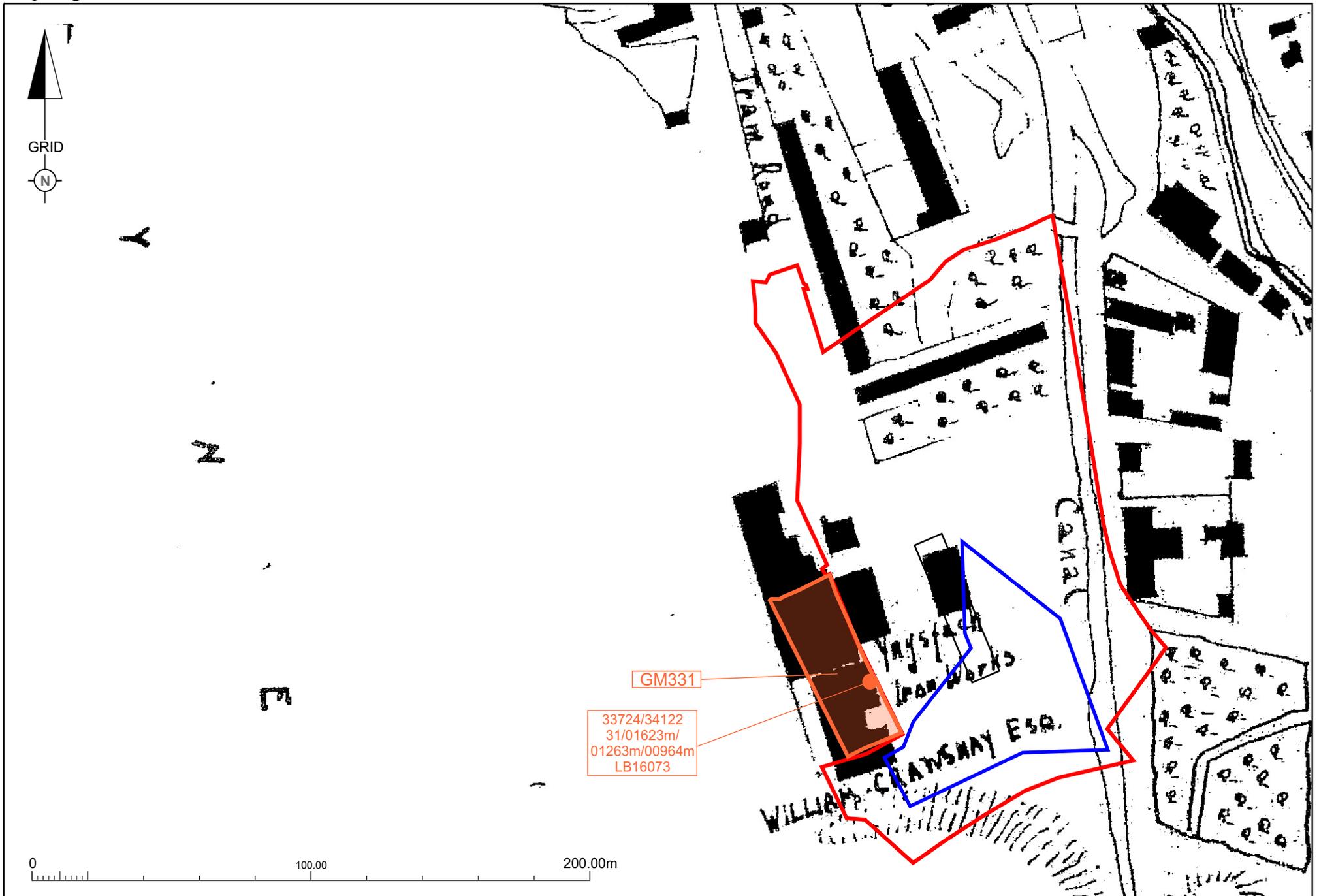


Figure 3. Plan of Merthyr Tydfil, 1836



Figure 4. Merthyr Tydfil Parish Tithe Map, 1850

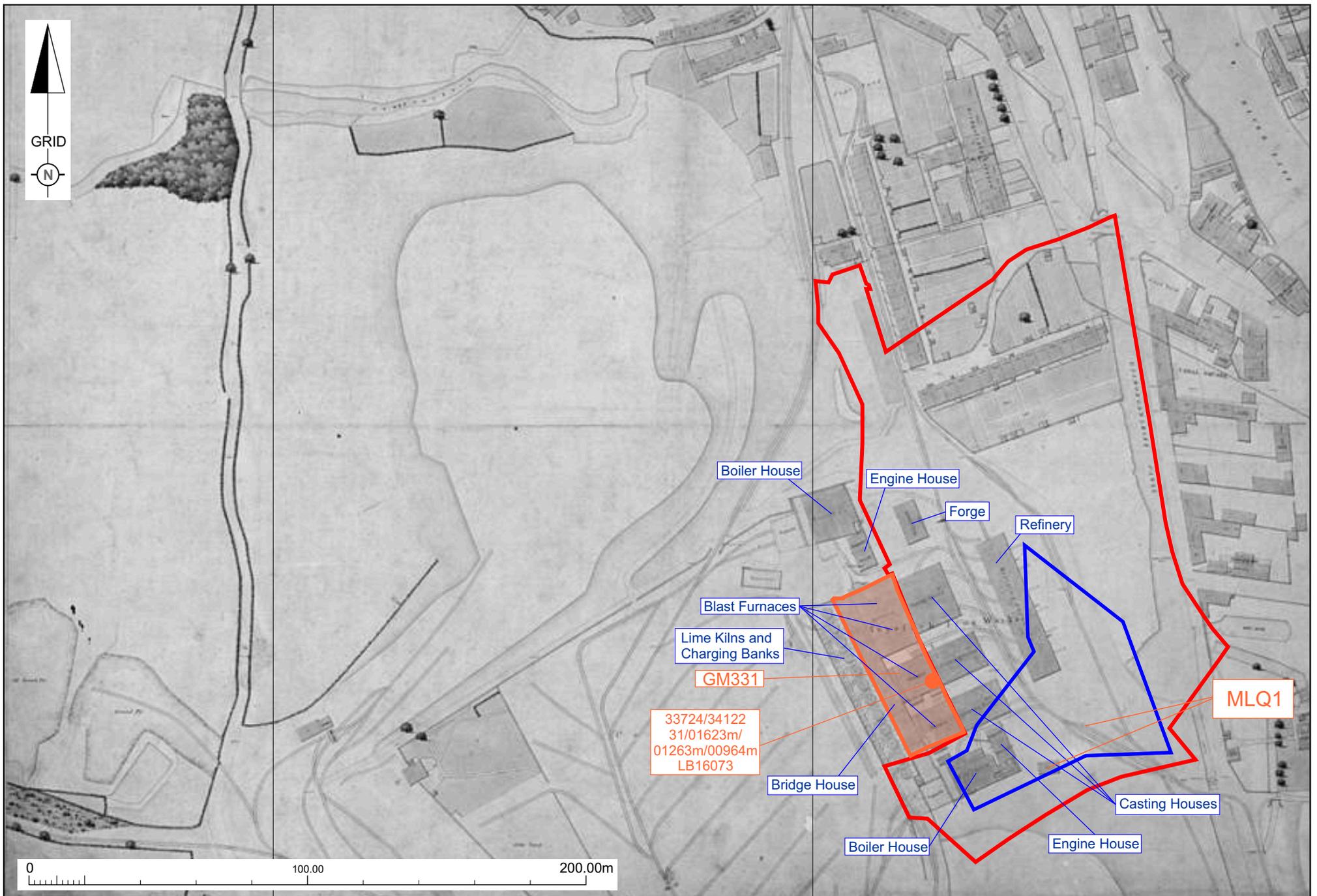


Figure 5. Provisions of the Public Health act for the Local Board of Health Plan, 1852

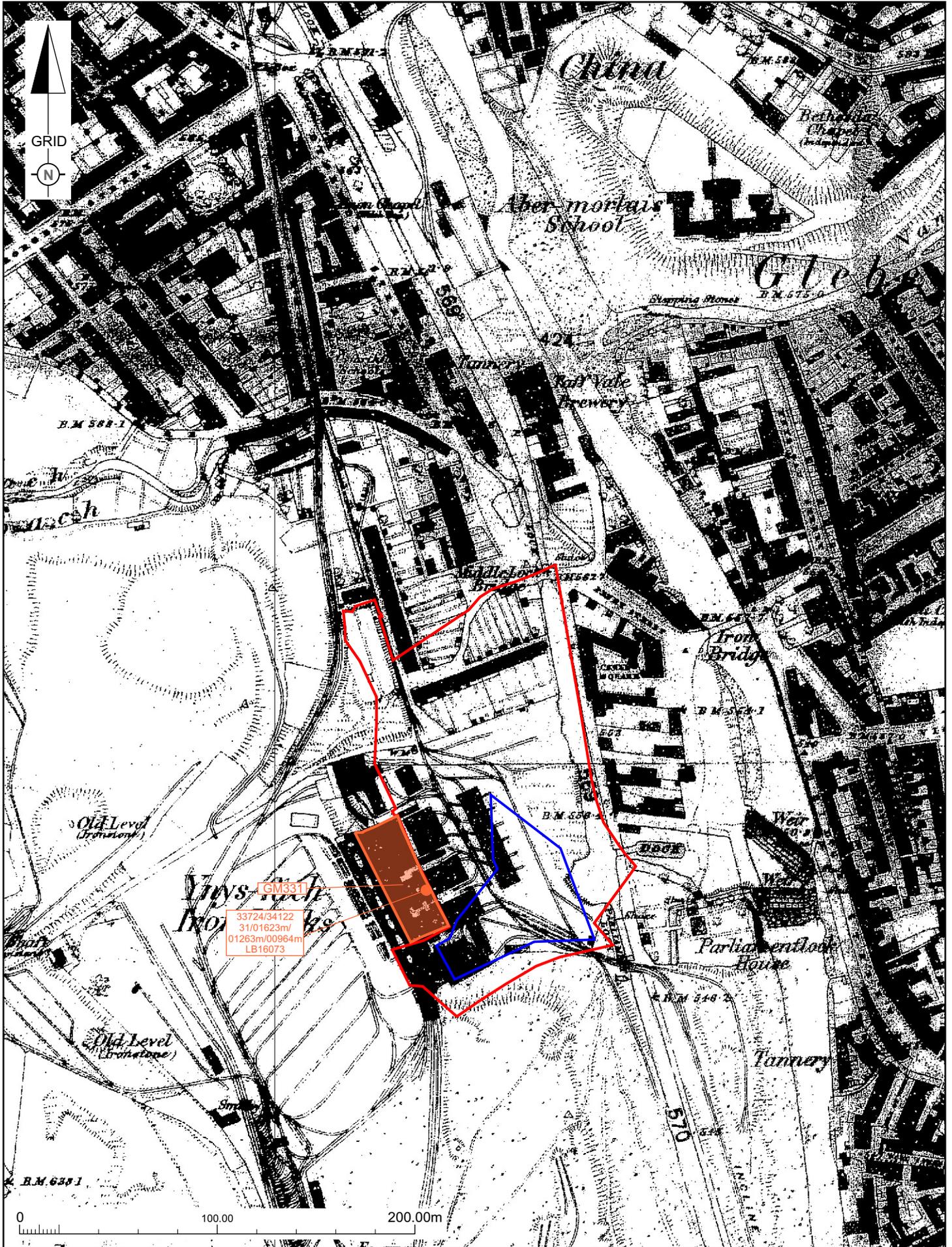


Figure 6. 1st Edition Ordnance Survey Map, 1876

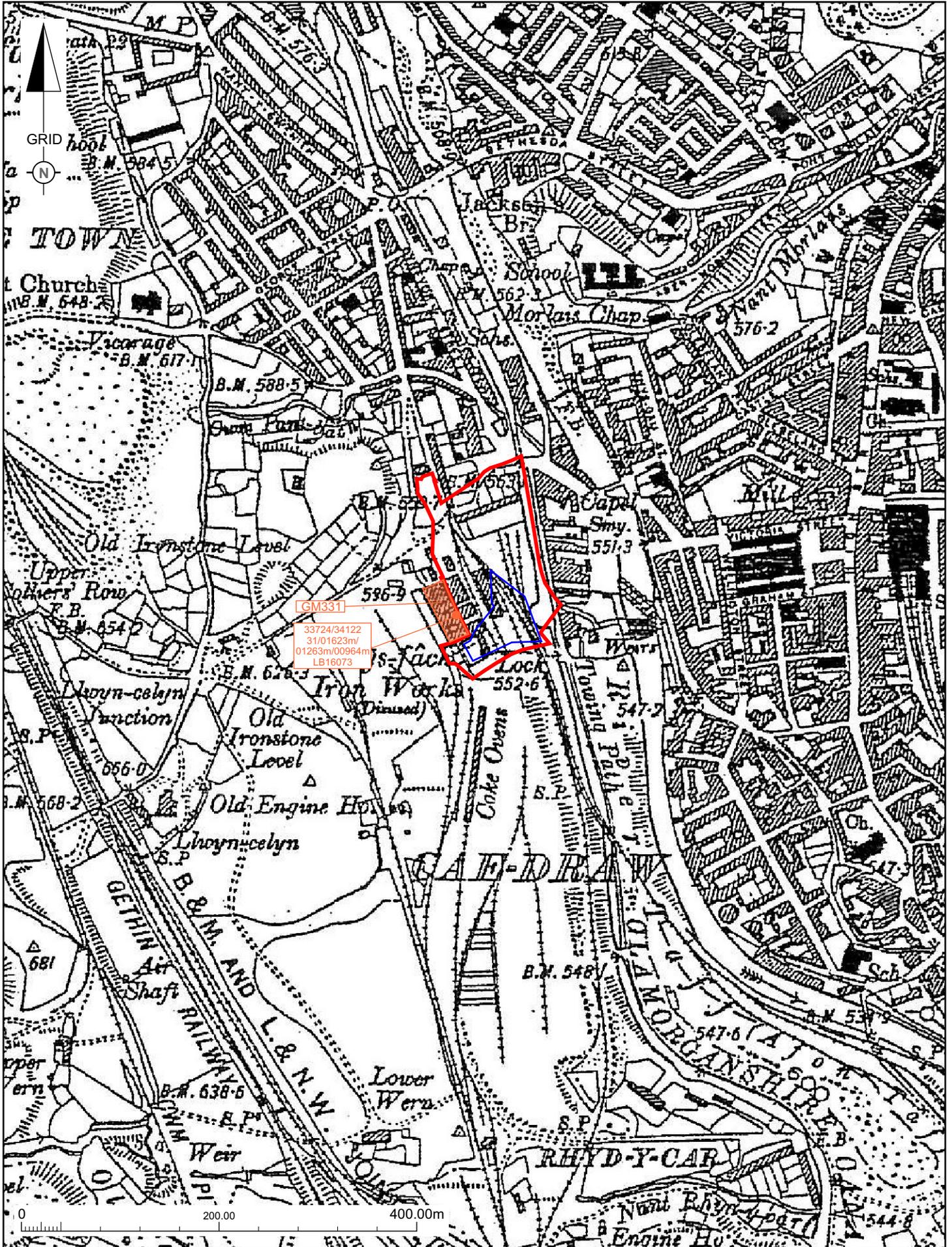


Figure 7. 2nd Edition Ordnance Survey Map, 1904

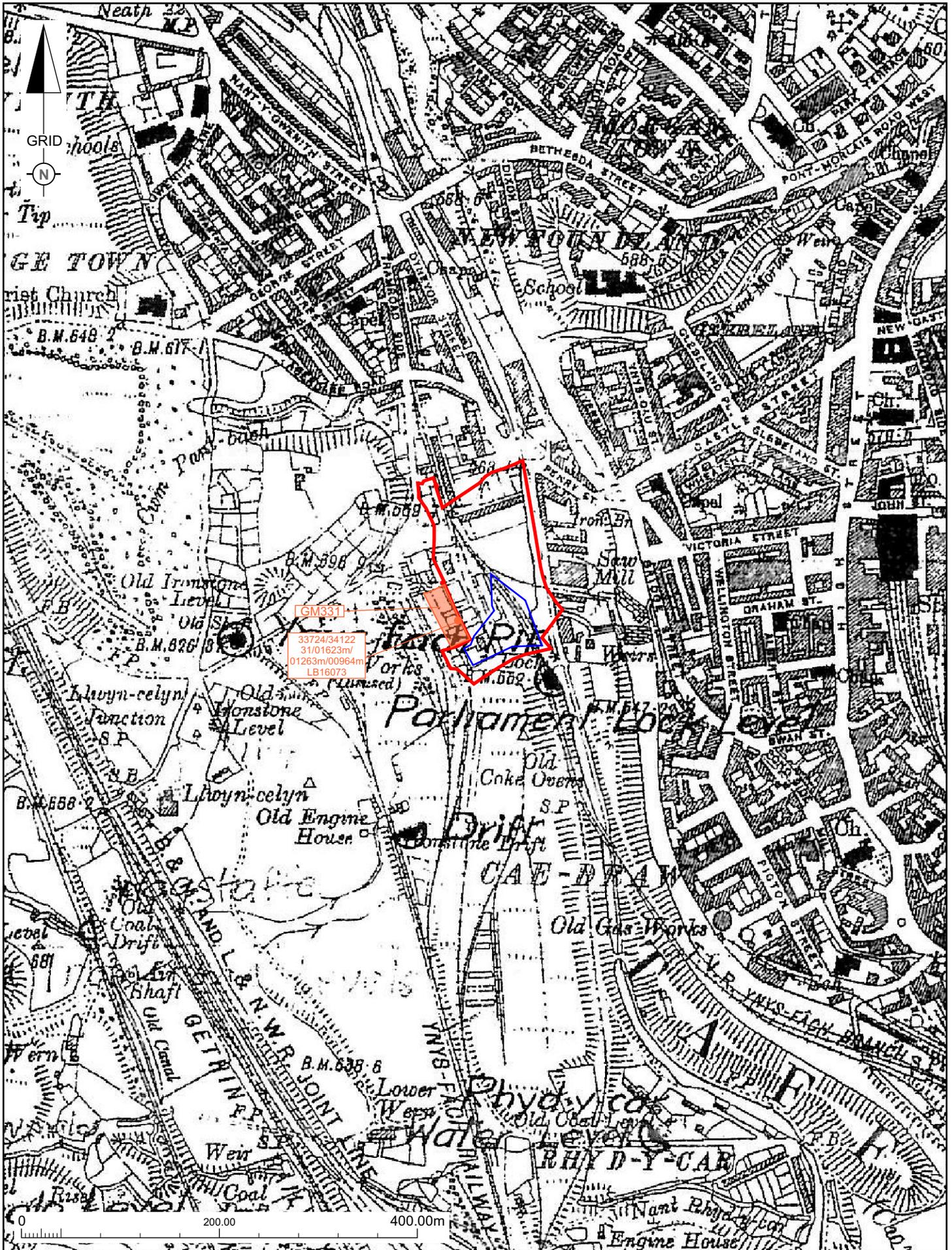


Figure 8. 3rd Edition Ordnance Survey Map, 1919

Appendix II

Walkover Survey



Plate 1: Glamorganshire Canal near Joseph Parry's Cottage looking southeast



Plate 2: Ynysfach Furnaces looking south



Plate 3: Engine House looking northwest

Appendix III

Aerial Photographs with Coverage of the Evaluation Area

The following is a list of the aerial photographs with coverage of the study area held by the Central Registry of Air Photography for Wales.

RAF Sorties

Sortie	Scale	Date	Frames
3G TUD T19 Pt 1	1:25000	03/08/1945	Not available at present.
CPE UK 1997	1:9800	13/04/1947	3328, 3329
CPE UK 2487	1:16600	10/03/1948	4001 No prints held.
541 RAF 116	1:9960	29/07/1948	4031 No prints held.
58 RAF 676	1:10000	12/05/1951	4405 No prints held.
542 RAF 205	1:10000	11/07/1955	F21: 45, 46

Ordnance Survey

Sortie	Scale	Date	Frames
OS 75 071	1:26000	24/04/1975	161
OS 75 037	1:24000	24/04/1975	51, 52
OS 81 067	1:8200	01/08/1981	12, 13
OS 87 049	1:13000	06/05/1987	24, 25
OS 87 048	1:6500	06/05/1987	10, 11
OS 89 120	1:12800	04/05/1989	933, 934
OS 89 121	1:6000	04/05/1989	633, 634
OS 94 292	1:6300	22/08/1994	33, 34
OS 96 564	1:9100	08/05/1996	39, 40
OS 97 085	1:6000	09/04/1997	14, 15 No prints held.

Commercial and other Sorties

Sortie	Scale	Date	Frames
Meridian 71/67	1:5000	23/07/1967	116 - 118
Carto Serv. 667/77	1:12800 ?	20/05/1977	1742, 1743
MAFF	1:12000	10/06/1984	201: 196, 197
J A Story 0985	1:20000	28/04/1985	1285: 133, 134 0985: 17, 18
Carto Serv. 900525	Various	24/04/1990	8087, 8088, 8199, 8200
Geonex	1:10000	01/08/1991	8691: 189, 190
Getmapping	1:10000	01/01/2000	On screen/available from Bluesky International
Getmapping	n/a	01/01/2009	On screen/available from Getmapping.com
COWI	1:10000	01/06/2006	On screen/available from Bluesky International

The above were examined and no new sites were identified. However, the sortie CPE UK 1997 exhibited a building – described as “refinery” on Ordnance Survey map from 1852 (Figure 5), to the east of the Ynys Fach Ironworks casting houses, had a very different shape to the one represented on the cartographic evidence.

Appendix IV

Apportionments relating to the Merthyr Tydfil Parish Tithe Map, 1850

Land owner	Occupier	Parcel number	Name and description of parcel
William Crawshay	William Crawshay	1521	Cowder Tip
William Crawshay	William Crawshay	1523	Rubbish Tip
William Crawshay	William Crawshay	1528	Coke Yard and Furnaces
William Crawshay	William Crawshay	1529	Part of Cae Cwm Bach Ishaf (Isaf?)
William Crawshay	William Crawshay	1538	Waste

Appendix V

Gazetteer of archaeological interests

ID	24978/00456m		
Name	Ynys-Fach Manorial Mill	Period	Medieval
NGR	SO047061		

Full description

The supposed site of a Medieval manorial watermill and identified in documents and plotted by Rees in 1932. The document records that in the inquisition after the death of Edward Despenser in 1375, a fulling-mill worth 20s a year was recorded in upper Senghennydd. In 1427-8 the fulling-mill at Merthyr Tydful in upper Senghennydd was in the lord's hand for want of repair: it is probable that this is the former Despenser pandy.

Type	Condition	Status
Water mill	Not known	None
Rarity	Group association	Historical association
High	Low	Possible (Medium)
Confidence	Value	Effect
Medium	U	None

ID	33724/34122/01623m/01263m/00964m/LB16073/GM331		
Name	Ynysfach Ironworks	Period	Post-medieval
NGR	SO04550605		

Full description

A block of four furnaces with an engine house freestanding at the north end. A cast iron plaque over one of the furnaces reads, 'WC 1836. The arches are now blocked with brick and the stacks have been reduced. The Ynysfach Ironworks were founded in 1801 when two blast furnaces were built to plans by Watkin George, engineer and foundry manager at Cyfarthfa from 1792. In 1836 two more furnaces were built together with the engine house which replaced an earlier one painted by Penry Williams c1815.

The engine house was built in 1836 for the adjacent furnaces of Ynysfach Ironworks, and was a subsidiary of the successful Cyfarthfa works owned by the Crawshay family. It was rebuilt in the 1830's. It is located at the west of Merthyr College and just north of the remains of the Ynysfach blast furnaces, and contained a beam blowing engine made at the Neath Abbey Ironworks. The engine house (01623m) is a well-built stone building with three storeys and a basement divided into two sections. The original roof is now replaced. The Ynysfach works closed in 1874 and the engine house fell into disuse. It was restored between 1986 and 1989 and converted to a heritage centre and offices. The building was formerly part of the scheduled ancient monument Gm 331, which was revised to exclude the building following its conversion to a heritage centre and offices. The heritage centre was closed at the time of survey and is now private offices.

Type	Condition	Status
Iron works	Damaged	SAM
Rarity	Group association	Historical association
Medium	High	Certain (High)
Confidence	Value	Effect
High	A	Major

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ID 01618m/116/GM283

Name Iron Bridge **Period** Post-medieval

NGR SO04720616

Full description

Single span bridge of early 19th century date over river Taff made of iron with crudely designed iron balustrade. The bridge is now situated in Cyfarthfa Park.

Type	Condition	Status
Bridge	Moved	none
Rarity	Group association	Historical association
High	Medium	Certain (Medium)
Confidence	Value	Effect
High	B	None

ID 01702m

Name Capel Ynysgau **Period** Post-medieval

NGR SO04730618

Full description

Cwm-y-glo, the first permanent chapel was a barn, erected in 1689. This lasted until 1749 when it was replaced by the building of Capel Ynysgau.

Type	Condition	Status
Ecclesiastical building	Unknown	None
Rarity	Group association	Historical association
High	Low	Possible (Low)
Confidence	Value	Effect
Medium	C	None

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ID 85237/03548m
Name Parliament Lock No. 3 **Period** Post-medieval
NGR SO0465006015

Full description

The surviving fabric of the lock was constructed to a high standard from ashlar limestone masonry. A sump hole dug by contractors suggested that the lock was originally around 1.3716 metres deep.

Type	Condition	Status
Canal lock	Damaged	None
Rarity	Group association	Historical association
Medium	High	Possible (Medium)
Confidence	Value	Effect
Medium	B	None

ID 20611.0m/026911.0m
Name Rhymney Railway **Period** Post-medieval
NGR SO0445205968

Full description

Rhymney Railway was opened in 1886 and is shown as Ynys-fach Railway on the 1st edition Ordnance Survey Map. It was previously titled RC7.

Type	Condition	Status
Railway	Unknown	None
Rarity	Group association	Historical association
Medium	Medium	Possible (Medium)
Confidence	Value	Effect
Low	C	Minor

Merthyr Learning Quarter, Merthyr Tydfil: archaeological desk-based assessment

ID 308383
Name Merthyr Bridge **Period** Post-medieval
NGR SO047062

Full description

The site is possibly identical to PRN 308384 and PRN 308385. An aerial photography set (Meridian 71/67, 116 - 118) from July 23, 1967, shows that the two initial bridges on the Taff River have been removed and replaced by a modern, concrete, bridge.

Type	Condition	Status
Bridge	Unknown	None
Rarity	Group association	Historical association
High	Medium	Unknown (Low)
Confidence	Value	Effect
Low	B	None

ID 308384
Name Lattice Girder Bridge
over River Taff **Period** Post-medieval
NGR SO04700618

Full description

The site is possibly identical to PRN 308384 and PRN 308385. An aerial photography set (Meridian 71/67, 116 - 118) from July 23, 1967, shows that the two initial bridges on the Taff River have been removed and replaced by a modern, concrete, bridge.

Type	Condition	Status
Bridge	Unknown	None
Rarity	Group association	Historical association
High	Medium	Unknown (Low)
Confidence	Value	Effect
Low	B	None

Merthyr Learning Quarter, Merthyr Tydfil: archaeological desk-based assessment

ID 308385
Name Bridge over River Taff **Period** Post-medieval
NGR SO04670624

Full description

The site is possibly identical to PRN 308384 and PRN 308385. An aerial photography set (Meridian 71/67, 116 - 118) from July 23, 1967, shows that the two initial bridges on the Taff River have been removed and replaced by a modern, concrete, bridge.

Type	Condition	Status
Bridge	Unknown	None
Rarity	Group association	Historical association
High	Medium	Unknown (Low)
Confidence	Value	Effect
Low	B	None

ID 91561
Name Middle Lock No. 2
 Glamorganshire Canal **Period** Post-medieval
NGR SO04620622

Full description

A lock associated with Ynysfach Ironworks located over the Glamorganshire Canal visible on several Ordnance Survey maps.

Type	Condition	Status
Lock	Unknown	None
Rarity	Group association	Historical association
Medium	High	Possible (Medium)
Confidence	Value	Effect
Low	B	None

Merthyr Learning Quarter, Merthyr Tydfil: archaeological desk-based assessment

ID 91562
Name Canal Square Warehouses **Period** Post-medieval
NGR SO04640616

Full description

Warehouses associated with Ynysfach Ironworks located next to the Glamorganshire Canal visible on several Ordnance Survey maps.

Type	Condition	Status
Warehouse	Unknown	None
Rarity	Group association	Historical association
Medium	High	Possible (High)
Confidence	Value	Effect
Low	C	None

ID 286142
Name Old Ynysfach, 35-36 **Period** Post-medieval
NGR SO04520620

Full description

Workers housing associated with Ynysfach Ironworks visible on several Ordnance Survey maps.

Type	Condition	Status
Workers Housing	Unknown	None
Rarity	Group association	Historical association
Medium	High	Possible (High)
Confidence	Value	Effect
Medium	C	Minor

Merthyr Learning Quarter, Merthyr Tydfil: archaeological desk-based assessment

ID 01089m/LB18504/PGW(GM)1(MER)
Name Cyfartha Castle **Period** Post-medieval
NGR SO04150735

Full description

A castellated mansion in Gothic style designed by Richard Lugar, and built in 1824-5. The southeast portion is now occupied by the Museum, the remainder by the school.

Type	Condition	Status
Country House	Restored	LB
Rarity	Group association	Historical association
Medium	High	Certain (High)
Confidence	Value	Effect
High	B	Minor

ID MLQ1
Name Railway **Period** Post-medieval
NGR SO0459106034

Full description

A network of railway sidings previously unidentified, visible on 1836 Map of Merthyr and later Ordnance Survey Maps. The railway appears to be directly associated with the Ynysfach Ironworks and connects to several structures, including one rectangular building to the east of the boiler house, also associated with the works.

Type	Condition	Status
Railway	Unknown	None
Rarity	Group association	Historical association
Medium	Medium	Possible (Low)
Confidence	Value	Effect
Low	C	Major

Merthyr Learning Quarter, Merthyr Tydfil

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As part of our desire to provide a quality service we would welcome any comments you may wish to make on the content or presentation of this report.



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