



**Rhydycar West,
Merthyr Tydfil**

**Heads of Terms
for a
Conservation
Management
Plan**

Prepared by:
**The Environmental
Dimension
Partnership Ltd**

On behalf of:
Marvel Ltd

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Section 1

Introduction – Purpose of the Plan

- 1.1 This Heads of Terms (HOT) for a Conservation Management Plan (CMP) has been prepared by The Environmental Dimension Partnership Ltd (EDP) for Marvel Ltd and relates to a proposed development at Rhydycar West, Merthyr Tydfil (hereafter ‘the site,’ with its location shown on the Outline Masterplan (HMA, 4170, PL-010 Rev P2 at **Appendix EDP 1**).
- 1.2 This HOT document sets an aspirational framework for a CMP. It is anticipated that, following the grant of outline planning permission for the Rhydycar West planning application, the framework set out within it will form the basis of a planning condition that will request a comprehensive and detailed CMP that will be subject to review and agreement with Cadw and the Council.
- 1.3 If planning permission is not granted, then a CMP will not be developed in respect of the historic assets within the site.
- 1.4 The site contains two scheduled monuments (or parts thereof) and a Grade II listed building, to which the management proposals in this document relate:
- Scheduled monument, Cyfarthfa Balance Pond and Leat (GM608);
 - Scheduled monument, Cwm Pit and Head of Railway (GM607); and
 - Grade II listed building, the Base of Chimney at Cwm Pit (81752).
- 1.5 Additionally, the HMP extends to include a third scheduled monument which is located beyond the site’s boundary but within the applicant’s control:
- Scheduled monument, Black Pins Early Ironstone Workings (GM609).
- 1.6 The HOT has been drawn up with the full cooperation of the landowner and applicant, Marvel Ltd. The future CMP to which it relates will be implemented by the site operator.
- 1.7 The scheduled monuments and listed building in the site will be subject to conservation works and works related to public access and interpretation as a part of the Rhydycar West project. The monument located outwith the site will be subject only to conservation works.
- 1.8 When complete and finalised, the implementation of the proposals within the CMP will be the responsibility of the site operator and Cadw and it is intended that the plan will run in perpetuity, with periodical monitoring and updates as required.
- 1.9 The CMP will set out a list of management aims and objectives that will be agreed to by all parties in relation to the current and future management of the scheduled monuments,

Cyfarthfa Balance Pond and Leat, Cwm Pit and Head of Railway, Black Pins Early Ironstone Workings and the Grade II listed building, the Base of Chimney at Cwm Pit.

- 1.10 The vision for the scheduled monuments and the listed building as part of the planning application area, is to preserve and enhance the significance of these nationally important monuments.

Section 2

Description and History of the Historic Assets

Location

- 2.1 All four assets are located in woodland on slopes to the west of the Taff Valley, on the south-western edge of Merthyr Tydfil. The centre of the town lies approximately 2km to the north-east.

Geology and Topography

- 2.2 All four assets are located on similar geology within the South Wales Coal Field; a syncline covering much of upland South Wales made up of interbedded sedimentary rocks dating from the Carboniferous Period. This underlying geology contains Coal Measures which primarily outcrop on the northern side of the syncline.
- 2.3 The assets are located on the Middle Coal Measures, comprising sandstone, siltstone and mudstone within which are coal seams, bands of Ironstone and Ferricrete which run roughly from south-south-east to north/north-east (British Geological Survey 2022).
- 2.4 Broadly, all of the assets are located on east facing valley sides that slope to the east or south-east. The topography at each asset is described separately below.

Scheduled monument, Cyfarthfa Balance Pond and Leat (GM608)

Current Land Use

- 2.5 The monument is located within privately owned woodland which is managed by Marvel's Land Manager.
- 2.6 Whilst on private land, the eastern edge of the monument is accessible with an informal footpath running along its eastern embankment, passing its pond in its southern part. The western side of the monument abuts dense woodland and is inaccessible.

Description of the Scheduled Monument

- 2.7 The scheduled monument is located at approximately NGR 304928, 204741 and covers an area amounting to circa 0.65 hectares (ha).
- 2.8 As a whole, the scheduled monument comprises the earth and stonework remains of a large reservoir (**Image EDP 1**) and associated former leat (**Image EDP 2**). The reservoir consists of an earth and stone dam built on three sides on to an east facing slope. The inner face of the dam is stone-revetted and there are several features at its edge such as a stone lined sluice and brick lined spillway.

- 2.9 The leat is formed by a linear bank of earth and stone and runs for c.270m along the contour to the north, although its original length would have been greater. At the northern end of the monument, the leat is infilled and badly obscured by later spoil tips and the dumping of waste materials derived from road construction.
- 2.10 Most parts of the monument are colonised by trees and shrubs, including its earthworks and the remains of sluices. Within the leat are several large pits, which may be related to subsidence due to underground mining activity.
- 2.11 The features were collectively designated as a scheduled monument on 12 February 2018. Cadw states the reason for its designation as being:
- “...of national importance for its potential to enhance and illustrate our knowledge of the early 19th century coal mining and iron working industries of Wales. It is the largest and best preserved balance pond that survives on the Cyfarthfa estate, famous for its use of water balance technology in extracting coal and ironstone. The structures may be expected to contain archaeological information in regard to chronology, building techniques and functional detail.”*
- 2.12 The full scheduling report for the monument is included as **Appendix EDP 2**. The structure is known, from historic maps, to probably date from the 1830s when it was constructed as part of a hydrological system used to feed water into water balance mechanisms used at coal and ironstone mining pits in the locality.
- 2.13 Cadw describe how the reservoir and leat were used to supply water via gravity to water balance mechanisms for multiple pits along its length, located on lower ground to the north, south and east, and state that the reservoir was the largest water balance reservoir on the Cyfarthfa mining estate. Mines fed by the system included Cwm Pit to the south, the Glyn-dyrys Pit to the east and a pit situated at Lower Colliers Row to the north.
- 2.14 The Cyfarthfa Canal ran alongside the reservoir and leat and is shown linked to it via a channel on the 1850 Tithe map. This arrangement is clearly shown on Figure EDP 4 in the Archaeological and Heritage Baseline Assessment (EDP, 2022a). As such, it is likely that the reservoir and leat had, at this time, some additional function as a feeder to the canal. Ordnance Survey maps show the reservoir and leat linked into a wider network of water courses, leats and reservoirs, including the adjacent canal, which presumably fed water in or took it away.
- 2.15 Presently, remains of this system are mostly no longer extant. Other reservoirs in the wider landscape do remain but, for the most part, less substantial features, such as leats, are infilled or were over- built by later mining activity. The section of the Cyfarthfa canal adjacent to the monument is entirely infilled, although part of the former canal c.530m to the north is extant and is also designated as a scheduled monument.
- 2.16 The OS map of 1900 shows four sluices along the length of the leat, thereby suggesting a system in which water flow was controlled and tapped. Remains of at least three of the sluices are present and there is evidence for a channel diverting water from the leat to the east created by a deliberate blockage. This is illustrated on the 1876 OS map, reproduced

as Figure EDP 5 in the Archaeological and Heritage Baseline Assessment (EDP, 2022a) and a sluice is identified at this location. It is likely that the arrangement was related to the control of the water flow along the leat. It was probably also related to the provision of water for either the Cyfarthfa Canal or the mine works at Glyn-dyrys, or possibly to a smithy that was located a short distance to the east.

Specialist Surveys Undertaken as part of the Rhydycar West Application

- 2.17 To inform the planning application for Rhydycar West, the monument has been subject to walkover surveys carried out for the Archaeological and Heritage Baseline Assessment in May and June 2017, by experienced archaeologists. These surveys enabled an appreciation of the monument by a heritage professional and facilitated its description and an assessment of its significance.
- 2.18 The delivery of the CMP will be the culmination of an ongoing process of consultation and cooperation between the landowner and Cadw, in respect of the scheduled monument and its future. This included the facilitation of access to the monument as well as a process of engagement and consultation between the landowner and Cadw, which resulted in the archaeological monument's scheduling in 2018.
- 2.19 The monument has also been the subject of a Monument Management Plan produced by Cadw in May 2021 (**Appendix EDP 3**) following a site visit by Cadw and the landowner's heritage consultant. The Plan describes the monument, its present condition and management issues and also gives advice on its future management. Further detail on the Plan is given in **Section 4** of this document. The Monument Management Plan has informed and inspired the conservation and restoration work that will be set out in the CMP.
- 2.20 Subsequent to the issue of the Monument Management Plan, an additional visit to the monument was undertaken in June 2022 to further assess its significance and condition.

Scheduled monument, Cwm Pit and Head of Railway (GM607)

Current Land Use

- 2.21 The monument is located within privately owned woodland which is managed by Marvel's Land Manager.
- 2.22 Whilst it is located on private land, parts of the monument are accessible via a network of informal footpaths running along the higher, southern parts from the north-east to the south-west. These paths connect with other routes to the south-west, south-east, north-west and north-east.
- 2.23 Although it is crossed by paths, most of the monument is under dense woodland including shrubs and understorey, and is not accessible. On its north-western side a former railway trackbed has become occupied by a water course which also restricts access to the north-western edge of the monument.

Description of the Scheduled Monument

- 2.24 The monument is located at approximately NGR 304383, 204305 and extends to cover an area that amounts to c.1.49 ha.
- 2.25 The scheduled monument comprises the earthwork and structural remains of Cwm Pit coal mine and the head of the Cwm Pit Railway.
- 2.26 Cwm Pit was one of the larger coal mining complexes within the Cyfarthfa mining landscape and within the site, and retains some of the best-preserved upstanding remains. The mine dates from the late 18th century, but its deep pit was sunk in 1843 and buildings continued to be constructed at the complex until the early 20th century. Prior to the construction of the Cwm Pit railway in the mid-19th century, the mine was connected to the Cyfarthfa Ironworks by the 18th century Cyfarthfa Canal, which terminated at the complex.
- 2.27 The monument was designated by Cadw as a scheduled monument on 13 July 2017. Cadw state the reason for its designation as follows:
- “Of national importance for its potential to enhance and illustrate our knowledge of the late 18th and early 19th century coal mining industry. The history of the site dates back into the later 18th century and it demonstrates the technological change from a water balance pit to a deep mine with steam power haulage and drainage. It is the most complete coal mine complex in the Merthyr area. The structures may be expected to contain archaeological information in regard to chronology, building techniques and functional detail.”*
- 2.28 The full scheduling report for the monument is included at **Appendix EDP 4**. It encompasses a former railway trackbed which was the head of the Cwm Pit railway. The railway was located adjacent to where Cadw state the colliery’s main shaft was situated.
- 2.29 The ground in this location has now mostly been scoured away by water and is defined by a water course (**Image EDP 3**). Adjacent to this area on the north side of the monument is a ruinous stone wall and former tunnel entrance (**Image EDP 4**) and, to the south, running along the northern side of the monument is a massive stone revetment wall (**Image EDP 5**) with various features such as a plinth, arched mining level and culvert entrances, steps and putlog holes.
- 2.30 The stonework is constructed in coursed Pennant sandstone blocks and it is now in variable condition. It probably dates from the late 19th century, as part of the structure is only shown for the first time on the OS map of 1897. Some parts are well preserved with others ruinous and with considerable invasive vegetation, including whole trees, growing out of the wall.
- 2.31 Located above the revetment wall to the south, and at a higher level, is an area formerly occupied by colliery buildings and associated tramways. The main routes of the tramways are preserved in the informal paths noted above. Buildings are mainly preserved only as wall bases and foundations concealed within the dense woodland understorey. The best-preserved structure is the Grade II listed chimney base (**Image EDP 6**), which is discussed separately in the paragraphs below.

- 2.32 At the western end of the monument are the remains of a reservoir, comprising a water filled pond defined by a u-shaped earth bank set against rising land to the west. Cadw speculate that the pond may be the earliest feature at the monument (probably of the 18th century) and could have had a function related to early scouring, used to exploit mineral deposits located on the ground surface. It probably also had a later use in relation to powering a water balance mechanism for the adjacent pit.

Specialist Surveys Undertaken as part of the Rhydycar West Application

- 2.33 To inform the planning application for Rhydycar West, the monument has been subject to walkover surveys carried out for the Archaeological and Heritage Baseline Assessment in May and June 2017, by experienced archaeologists. These surveys enabled an appreciation of the monument by a heritage professional and facilitated its description and an assessment of its significance. Further visits in 2021 added to an understanding of the situation regarding historic water management at the monument and assessed ongoing water erosion.
- 2.34 The delivery of the CMP will be the culmination of an ongoing process of consultation and cooperation between the landowner and Cadw in respect of the scheduled monument and its future. This included the facilitation of access to the monument, as well as a process of engagement and consultation between the landowner and Cadw, which resulted in the archaeological monument's scheduling in 2017.
- 2.35 The monument has also been the subject of a Monument Management Plan produced by Cadw in May 2021 (**Appendix EDP 5**) following a site visit by Cadw and the landowner's heritage consultant. The Plan describes the monument, its present condition and management issues, and also gives advice on its future management. Further detail on the Plan is given in **Section 4** of this document. The Monument Management Plan has informed and inspired the conservation and restoration work that will be set out in the CMP.
- 2.36 Subsequent to the issue of the Monument Management Plan, an additional visit to the monument was undertaken in June 2022 to further assess its significance and condition.

Scheduled Monument: Black Pins Early Ironstone Workings (GM609)

Current Land Use

- 2.37 The monument is located within privately owned woodland which is managed by Marvel's Land Manager.
- 2.38 Whilst it is located on private land, parts of the monument are accessible via a network of informal footpaths which run mainly from north-west to south-east along the main axis of the monument, and connect with other paths running downslope to the north-east and east. Whilst it is crossed by paths, some of the monument is under dense woodland including shrubs and understorey, and is not accessible.

Description of the Scheduled Monument

- 2.39 The monument is located at approximately NGR 303773, 204419 and covers an area that amounts to c.6.7 ha outside the site's boundary.
- 2.40 The scheduled monument comprises earthworks related to former ironstone workings. The works date from the early 19th century up until the 1870s, where they targeted surface outcrops of ironstone using primitive open cast mining techniques. The works have created a landscape of steep sided finger-tips and opencast excavation pits and shafts, that have a degree of prominence due to their location on the crest of the western hillsides of the Taff Valley, rising above most of the mining archaeology in the Rhydycar West area, which lies downslope to the east (**Image EDP 7**).
- 2.41 The works were accessed via a tramway route from the north-east, which is visible as an earthwork and informal footpath. Other former tram routes are visible in the monument as earthworks and footpaths and the monument formerly also contained buildings, although none are extant.
- 2.42 The asset was designated as a scheduled monument on 12 February 2018. Cadw describe the reason for its designation as it being:
- "...of national importance for its potential to enhance and illustrate our knowledge of the early 19th century iron industry. The monument comprises a particularly clear and well-preserved group of remains of early surface mining techniques of patching and scouring associated with Cyfarthfa Ironworks. They have additional importance in association with the later Iron Ore Scours and Patch Workings at Winch Fawr (Scheduled Ancient Monument GM554), which they preceded."*
- 2.43 The full scheduling report for the monument is included at **Appendix EDP 6**.

Specialist Surveys Undertaken as part of the Rhydycar West Application

- 2.44 To inform the planning application for Rhydycar West, the monument has been subject to walkover surveys carried out for the Archaeological and Heritage Baseline Assessment in May and June 2017, by experienced archaeologists. These surveys enabled an appreciation of the monument by a heritage professional and facilitated its description and an assessment of its significance.
- 2.45 The delivery of the CMP will be the culmination of an ongoing process of consultation and cooperation between the landowner and Cadw in respect of the scheduled monument and its future. This included the facilitation of access to the monument as well as a process of engagement and consultation between the landowner and Cadw, which resulted in the archaeological monument's scheduling in 2018.
- 2.46 The monument has also been the subject of a Monument Management Plan produced by Cadw in May 2021 (**Appendix EDP 7**), following a site visit by Cadw and the landowner's heritage consultant. The Plan describes the monument, its present condition and management issues, and also gives advice on its future management. Further detail on the

Plan is given in **Section 4** of this document. The Monument Management Plan has informed and inspired the conservation and restoration work that will be set out in the CMP.

Grade II listed building, the Base of Chimney at Cwm Pit (81752)

Current Land Use

- 2.47 The listed building is located within privately owned woodland. Whilst it is located on private land, it is accessible using informal footpaths and it is situated adjacent to the junction of several such routes through woodland.

Description of the Listed Building

- 2.48 The listed building is located at approximately NGR 304422, 204312. It (**Image EDP 6**) comprises the base of the colliery chimney at Cwm Pit and is probably of mid-19th century construction. The structure is built from very large rock-faced sandstone blocks, which form a plinth for the now-demolished chimney. On each side is an arched stoking hole, of which three are lined with yellow brick and one with masonry.
- 2.49 The monument was designated by Cadw as a Building of Special Architectural or Historic Interest on 29 July 2003. Cadw describe the reason for its designation as it being:
- “Included as a particularly massively built chimney base, an historically important feature of this earlier C19 pit (Cwm Pit).”*
- 2.50 The full listed building report for the monument is included at **Appendix EDP 8**.
- 2.51 Like many of the surviving structural elements at Cwm Pit, the structure is encroached upon by invasive vegetation.

Specialist Surveys Undertaken as part of the Rhydycar West Application

- 2.52 To inform the planning application for Rhydycar West, the listed building has been visited during a walkover survey for the Archaeological and Heritage Baseline Assessment in May and June 2017, by experienced archaeologists. This survey enabled an appreciation of the structure by a heritage professional and facilitated its description and an assessment of its significance.
- 2.53 The listed building has also been the subject of a Monument Management Plan produced by Cadw in May 2021 for the wider Cwm Pit scheduled monument (**Appendix EDP 5**). The Plan describes the present condition and management issues and gives advice on its future management. Further detail on the Plan is given here in **Section 4** of this document. The Monument Management Plan has informed and inspired the conservation and restoration work that will be set out in the CMP.

- 2.54 Subsequent to the issue of the Monument Management Plan, an additional visit to the listed building was undertaken in June 2022 to further assess its significance and condition.

Section 3

Assessment of Significance

Introduction

- 3.1 The following sets out the values that contribute to the significance of *the historic assets within the site*.
- 3.2 In line with Paragraphs 1.10 – 1.14 of TAN 24 (WG, 2017), ‘Significance’ is assessed with regard to the ‘heritage values’ set out in the guidance document *Conservation Principles for the Sustainable Management of the Historic Environment in Wales* (Cadw, 2011). It is important that the significance of a heritage asset is identified as it is this special interest that needs to be preserved and, where possible, enhanced.
- 3.3 A heritage asset’s setting may also contribute to its significance. A heritage setting assessment (EDP, 2022a, edp2324_r002; Chapter 10 of the Rhydycar West Environmental Statement) has previously been undertaken for all of the assets, in line with the guidance set out in TAN 24 and *The Setting of Historic Assets in Wales* (Cadw, 2017).
- 3.4 The following provides a summary of the significance of the historic assets and summarises the contribution made by their settings.

Scheduled monument, Cyfarthfa Balance Pond and Leat (GM608)

Evidential Value

- 3.5 The monument derives a large proportion of its significance from the evidential value inherent in its associated structures and any related archaeological remains. In this regard, the monument’s earthworks and discrete features such as sluices and spillways provide evidence on how the pond and leat were used in relation to the surrounding industrial landscape of the 19th century.
- 3.6 These remains provide the primary evidence for when and how the asset was made and what it was used for, with additional features (such as the blocked part of the leat) indicating how its use changed over time.

Historical Value

- 3.7 The monument also has a high degree of historical value. In this respect it is associated with the history of the Cyfarthfa Ironworks and their owners (the Crawshays), representing a key functional component in the mining landscape which supplied coal and ironstone to the works. Moreover, the monument has illustrative historical value. Its presence illustrates the function of part of the hydrological system that supplied the water balance technology, employed extensively across the Cyfarthfa mine working landscape area during the early-mid 19th century and, which is fairly unique to South Wales, as an early mining technology.

Aesthetic Value

- 3.8 The monument has very little aesthetic value. It was not designed to be visually impressive or attractive - being a structure with a specific industrial function. The monument's very limited aesthetic value is derived from the prominence of its earthworks and the attractiveness of views across the pond at its southern end, which is still water filled, although this experience is primarily of its modern setting as a woodland lake defined by trees and vegetation, rather than due to any of the monument's industrial era aspects.

Communal Value

- 3.9 The monument has a small degree of communal value. On its own this value is fairly limited, as the pond and leat are likely to have ceased to function long before the lives of anyone that still lives today.
- 3.10 However, the monument represents a component part of the industrial remains which characterise the West Rhydycar area, an area which was an important part of the lives of local inhabitants until the mid-20th century. As such, it is part of a historic landscape which is closely associated with the recent history of Merthyr Tydfil which, for its 20th century aspects at least, still forms a part of the memory of older people in the wider community.

Setting

- 3.11 The Archaeological and Heritage Assessment (EDP, 2022a) describes the setting of the monument and its contribution to its significance as follows:

"The pond and leat are set within dense woodland crossed by a footpath that follows the edge of the watercourse. The mine is historically closely associated with various elements of the surrounding, former industrial landscape. The wooded environment in which it is now set has little relevance to the monument's historic setting which would have been more open and defined by industrial activity, along with its associated noise, movement, smoke and smells.

As described, the pond fed water to several mines situated along its length. Of these remains exist at Cwm Pit and Lower Colliers Row. These archaeological remains are considered to represent features of the monument's setting which, through their functional and historical association, contribute to its significance. However, the industrial remains in the wider landscape, are, due to the surrounding dense woodland vegetation, and, in places, incursion by water, not readily experienced from or in conjunction with the monument. This difficulty in experiencing the monument within its former industrial setting reduces the degree to which these associated elements contribute to its significance.

The vegetation that surrounds the monument is dense and, as for most of the monuments in the site, the increasing expansion of unmanaged woodland has encroached upon the monument's archaeological remains, damaging and concealing them. The surrounding woodland, in its current state and reflecting nothing of the monument's historic setting, and in which the vegetation is only managed to a limited degree, is considered to represent a negative aspect of the monument's setting; disturbing its fabric and thus reducing its

evidential value as well as (as described above) lessening the degree to which the monument can be experienced as an element of the wider historic environment.

The ground to the east of the monument is heavily waterlogged, which has masked or destroyed any upstanding archaeology in this area related to the former Cyfarthfa Canal, the Cwm Pit railway or to any water courses or leats that may have been formerly associated with the monument. This part of the monument's setting, although not encroaching on the monument or damaging its fabric, has removed a part of the former industrial landscape that was associated with it, reducing the degree to which the monument's function can be understood. As such, this aspect of the monument's setting is considered to be negative, reducing its historical value."

Scheduled monument, Cwm Pit and Head of Railway (GM607)

Evidential Value

- 3.12 The monument derives a large proportion of its significance from the evidential value inherent in its associated structures and any related archaeological remains. In this regard, the monument's stonework, building remains (including buried remains), former mine entrances, pond earthworks and discrete features such as putlog holes and steps, provide evidence on how the mine functioned in relation to its topographic situation and the surrounding industrial landscape of the 18th, 19th and 20th centuries.
- 3.13 These remains provide the primary evidence for when and how the asset was made and what it was used for, with some of the features (such as the reservoir at its western end) indicating how its use changed over time.

Historical Value

- 3.14 The monument also has a high degree of historical value. In this respect it is associated with the history of the Cyfarthfa Ironworks and their owners (the Crawshays), representing a key mining complex that operated over a long period from the 18th to the 20th centuries, supplying coal and ironstone to the works and for trade.
- 3.15 Moreover, the monument possesses illustrative historical value. Its presence illustrates the function of a coal mine in respect of coal extraction, processing and transportation and how these technologies changed over the period in which the mine was in operation.

Aesthetic Value

- 3.16 The monument has a moderate degree of aesthetic value. The upstanding remains, most notably the massive stone walls on its northern edge are well-constructed, imposing stone structures with a degree of decorative quality inherent in the appearance of the stonework, which is dressed and rock-faced and includes arches above entrances.
- 3.17 As such, these features, although compromised to a degree by invasive vegetation, are visually impressive in addition to indicating a specific industrial function. The monument's

moderate aesthetic value is therefore derived from the stonework and prominence of its walls and preserved buildings (notably the chimney base), which are viewed from adjacent spaces.

Communal Value

- 3.18 The monument has a moderate degree of communal value. The mine functioned up until 1924 but mining continued in its immediate vicinity until the mid-20th century. As such, the walls and buildings of the mine would have been familiar features of the experience of people working and living in the area within living memory.
- 3.19 In this regard, the monument represents a component part of the wider industrial remains which characterise the West Rhydycar area, which are closely associated with the recent history of Merthyr Tydfil and, for its 20th century aspects at least, still form a part of the memory of older people in the wider community.

Setting

- 3.20 The Archaeological and Heritage Assessment (EDP, 2022a) describes the setting of the monument and its contribution to its significance as follows:

“Cwm Pit is set within dense woodland crossed by several footpaths that follow the route of former tramways. This setting is a marked contrast to its original historic setting which would have been a much more open landscape defined by intensive industrial activity including noise, movement of people and trains, smoke and smells associated with industry. The monument’s historic setting is vividly illustrated in the historic photograph at Image EDP 6 which shows an entirely different landscape to that around the remains of the works at present, notably lacking in adjacent trees.

A stream flows along the route of the former Cwm Pit railway. The mine is, historically, closely associated with various elements of the surrounding, former industrial landscape. The ground rises to the north where there are large spoil tips and the earthwork remains of an incline railway, formerly used to transport spoil produced by the by mine. Further west an offshoot of the Cwm Pit railway connected to mining levels at Cwmfelin Drift. To the north-east of Cwm Pit, the railway ran along a cutting and out across land that is now heavily waterlogged. Also closely related are the remains of the Cyfarthfa balance pond and leat, located c. 20m from the north-eastern extent of the scheduled monument. This provided water for Cwm Pit as well as other mines in the locality.

These closely related elements of the historic environment are considered to represent features of the monument’s setting which, through their functional and historical association, contribute to its significance. However, the industrial remains in the wider landscape, are, due to the surrounding dense woodland vegetation; and, in places, incursion by water; not readily experienced from or in conjunction with the monument. This difficulty in experiencing the monument within its former industrial setting reduces the degree to which these associated elements contribute to its significance.

The vegetation that surrounds the monument is dense, as for most of the monuments in the site, the increasing expansion of unmanaged woodland has encroached upon their archaeological remains, damaging and concealing them. In this case, it encroaches upon the upstanding earthworks and buildings, shrouding and damaging their stonework. As such, in its current state: in which the vegetation is only managed to a limited degree, it is considered to represent a negative aspect of the monument's setting; disturbing its fabric and thus reducing its evidential value as well as (as described above) lessening the degree to which the monument can be experienced as an element of the wider historic environment.

On the north-west side of the monument the former track-bed of the head of the Cwm Pit railway is now the location of a water course. It is evident that the natural flow of water from the north-west follows this route which was evidently diverted when the mine was in operation most likely through various leats and culverts mainly located upstream to the north-west.

Now, with these drainage systems having been eroded away, water follows the former track bed. This water has resulted in the upper surface of the track bed having been scoured away and runs close to the base of the revetment walls that lie adjacent to the track. In time it is likely that the watercourse will undermine the walls and cause them to collapse or at least become unstable. The track bed is evidently entirely damaged. In this regard the water course is a negative element of the monument's setting that is having an ongoing, physical erosive effect on its fabric and thus is resulting in significant adverse effects to the monument."

Scheduled Monument: Black Pins Early Ironstone Workings (GM609)

Evidential Value

- 3.21 The monument derives a large proportion of its significance from the evidential value inherent in its associated earthworks, tips and any related archaeological remains.
- 3.22 In this regard the monument's former tramways, pits any buried building remains, former mine entrances and substantial finger-tips, provide evidence on how the mine functioned in relation to its topographic situation and the surrounding industrial landscape of the 19th century. These remains provide the primary evidence for when and how the asset was made and what it was used for, with features that demonstrate successive mining activity indicating how its use changed over time.

Historical Value

- 3.23 The monument also has a high degree of historical value. In this respect, it is associated with the history of the Cyfarthfa Ironworks and their owners (the Crawshays) and with the later ironstone mining complex at Winch Fawr which superseded it.
- 3.24 Moreover, the monument has a strong degree of illustrative historical value. Its remains illustrate the function and appearance of an early open-cast mining operation, a contrast

with other remains in the locality which mainly reflect mining by level or shaft. The remains illustrate ironstone extraction from surface deposits and its transportation, and how the landscape was exploited in phases throughout the industrial era.

Aesthetic Value

- 3.25 The monument has a small degree of aesthetic value. Whilst the monument only comprises earthworks and buried remains, the finger-tips are very large and distinct and can be seen from afar, due to their location at the upper part of the slope above the valleys to the east. As such, the tips have a striking appearance and are prominent features of the Rhydycar West site.

Communal Value

- 3.26 The monument has only a small degree of communal value. On its own this value is fairly limited, as the mine working at the Black Pins ceased to function long before the lives of anyone that still lives today.
- 3.27 However, the monument represents a distinctive component part of the industrial remains which characterise the West Rhydycar area, an area which was an important part of the lives of local inhabitants until the mid-20th century and was probably known as a landmark to local people who lived and worked at the 20th century mines.

Setting

- 3.28 The Archaeological and Heritage Assessment (EDP, 2022a) describes the setting of the monument and its contribution to its significance as follows:

“The Black Pins works are mostly covered by dense woodland, although on the eastern side parts are relatively open; in particular on the tops of the spoil heaps. The spoil tips offer a vantage point from which views are possible across the landscape to the east, although vegetation below limits these. Likewise, the spoil tips are visible features of the hillside, although they are shrouded by tree cover and their distinctive form is not especially identifiable. This surrounding wooded environment has little relevance to the monument’s historic setting which would have been more open and defined by industrial activity, with views to other works possible. As such, the wooded environment as noted below, detracts in its current unmanaged state from the monument’s significance.

The Black Pins form a distinct area within the Rhydycar mine workings. They possess a functional association with related extant elements of the former industrial landscape. This includes the former tramway that ran north-east from the mine, ultimately linking the mines with Cyfarthfa, with other related works and tramroads to the south and with the remains of a leat which drained water from the quarries to the north-east. Another association, as noted in the Scheduling description, is the historic link with the Winch Fawr works to the north-west. These associated archaeological sites represent elements of the setting of the Black Pins which contribute to its significance, enhancing its historical value.

The monument's prominent position on this hillside allows for views of its spoil tips from a broad area; a topographic situation that is considered to enhance the monument's limited aesthetic value. However, views of the tips are shrouded in most directions by woodland, thus limiting the degree to which their form can be viewed. Regardless, the tip's aesthetic quality is entirely incidental and represents only a limited aspect of the monument's significance as an historic asset when contrasted with its historical value.

This present setting of the monument, within and surrounded by woodland is in marked contrast with its original, historic setting where the monument would have been set within a highly industrialised, much more open landscape populated by industrial mine workings, buildings and railways along with their associated noise, movement, smoke and smells.

The vegetation that surrounds the monument is dense, as for most of the monuments in the site, the increasing expansion of unmanaged woodland has encroached upon their archaeological remains, damaging and concealing them. Vegetation encroaches upon the earthworks and blocks access to the open cast excavations that make up part of the scheduled monument. The surrounding woodland, in its current state, in which the vegetation is only managed to a limited degree, is considered to represent a negative aspect of the monument's setting; disturbing its fabric and thus reducing its evidential value as well as (as described above) lessening the degree to which the monument can be experienced from the wider landscape."

Grade II listed building, the Base of Chimney at Cwm Pit (81752)

Evidential Value

- 3.29 The listed building derives a large proportion of its significance from the evidential value inherent in its physical remains and any related archaeological remains.
- 3.30 In this regard, the building provides evidence on how the original chimney would have functioned and how it would have looked, as well as on how it related to the surrounding coalmine complex at Cwm Pit, of which it was a part. The physical remains of the building provide the primary evidence for when and how the asset was made and what it was used for, and if its use changed over time.

Historical Value

- 3.31 The listed building also holds a moderate degree of historical value. In this respect it is associated with the history of the Cyfarthfa Ironworks and their owners (the Crawshays), representing an industrial structure within a key mining complex that operated over a long period from the 18th to the 20th centuries. Moreover, the listed building has illustrative historical value, illustrating the appearance of one of the only surviving mine buildings and its function as an industrial chimney, and the process of coal processing over the period in which it was in use.

Aesthetic Value

- 3.32 The listed building holds a moderate degree of aesthetic value. Its remains are well-constructed, imposing stone structures with a degree of decorative quality inherent in the appearance of the stonework which is dressed, rock-faced and employs very large blocks of masonry.
- 3.33 As such, the building, although compromised to a degree by invasive vegetation, is visually impressive as well as indicating the specific industrial function it was constructed to fulfil. The listed building's moderate aesthetic value is therefore derived from its stonework and prominence, which is appreciable from adjacent spaces.

Communal Value

- 3.34 The Grade II listed building holds a small degree of communal value. The mine functioned up to 1924 and then it probably ceased to function.
- 3.35 However, mining continued in its immediate vicinity until the mid-20th century and the chimney would have been a familiar feature of the experience of people working and living in the area within living memory.
- 3.36 In this regard, the listed building represents a component part of the wider industrial remains which characterise the West Rhydycar area, which are closely associated with the recent history of Merthyr Tydfil and, for its 20th century aspects at least, still form a part of the memory of older people in the wider community.

Setting

- 3.37 The Archaeological and Heritage Assessment (EDP, 2022a) describes the setting of the listed building and its contribution to the asset's significance as follows:

"The building is set within dense woodland adjacent to a footpath. It has a close association with the surrounding upstanding and archaeological remains of Cwm Pit, which are a scheduled monument (GM607). The elements of the monument, including the chimney base, have an integrity based on their closely related function and history. The association with the surrounding remains at Cwm Pit is an aspect of the chimney base's setting which contributes highly to its significance, enhancing its historical value.

However, the remains at Cwm Pit, due to the surrounding dense woodland vegetation, are not readily experienced from or in conjunction with the chimney base. The wooded environment has little relevance to the chimney's historic setting which would have been more open and defined by industrial activity. This difficulty in experiencing the monument within its former industrial setting reduces the degree to which these associated elements contribute to its significance.

The vegetation that surrounds the building is dense. It encroaches upon the building, potentially damaging its masonry. The surrounding woodland, in its current state, in which the vegetation is only managed to a limited degree, is considered to represent a negative

aspect of the monument's setting; disturbing its fabric and thus reducing its evidential value as well as (as described above) lessening the degree to which the monument can be experienced as an element of the wider historic environment."

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Section 4

Current Condition and Management

Introduction

- 4.1 This section summarises the current condition of the various historic assets identified in the preceding sections, as well as moving on to discuss the main management issues that will be subject to the Conservation Management Plan in due course.

Scheduled Monument, Cyfarthfa Balance Pond and Leat (GM608)

Current Condition and Management Issues

- 4.2 As noted above in **Section 2**, the monument has been the subject of a Cadw Monument Management Plan (**Appendix EDP 3**) informed by a site visit by Dr Jessica Hughes, Field Monument Warden at Cadw, but it has not been subject to a detailed condition survey. Nevertheless, observations made on-site and then reported in the Monument Management Plan (along with other studies) offer some details on the monument's condition and these are set out below.
- 4.3 The Cadw Monument Management Plan concludes the following overall in respect of the monument:

Condition Trend: Worsened-severe

Current Condition: Unfavourable

Vulnerability: High

At Risk Level: High-immediate

Ownership and Present Land Use

- 4.4 It is presently owned by Marvel Ltd. The monument is located within woodland which is under the supervision of a Land Manager employed by Marvel Ltd. The Land Manager's responsibilities include security, maintenance of tracks and fences, clearance of rubbish and dumped materials and also management of vegetation including removal of invasive trees.

Earthworks

- 4.5 The monument's earthworks are intact but are noted as being subject to several erosive factors:
- Invasive self-seeded tree and scrub growth with roots causing active damage to the earthworks (see vegetation below);

- Pits that are water filled along the course of the leat. These comprise possible areas of subsidence caused by mine working beneath, notably along the course of the leat; and
- Erosion to the top of the bank (**Images EDP 8 and 9**) that is traversed by an informal footpath due to pedestrian and motorbike use. This has created ruts that then retain water, which further erodes the bank.

4.6 It is anticipated that in a ‘do-nothing’ scenario, in which the current development proposals are not consented, these erosive factors would continue and, over time the monument’s earthworks would deteriorate and the monument would gradually lose its evidential value.

4.7 In an extreme scenario, erosion from underground subsidence, tree growth and erosion of the tops of the banks could lead to the collapse of the banks that support the pond, causing water to escape and further reducing the legibility of the monument.

Brickwork

4.8 Brickwork is visible at the spillway and in a fragmented form at several sluices, and in at least three locations along the eastern side of the monument (**Images EDP 10 and 11**). The brickwork on the spillway is the best preserved, but it is covered with vegetation and thus its condition is difficult to assess.

4.9 Evidently, some of the brickwork has become loose due to the impact of invasive vegetation and water erosion. Elsewhere, the brickwork is less well preserved and represented by fragments of brick spillways preserved at some of the sluices.

4.10 Should the current situation continue, it is anticipated that vegetation roots will eventually cause the brickwork on the spillway and parts that remain on sluices to fall apart entirely, resulting in the loss of the evidential value contained in that material.

Ecology and Vegetation

4.11 The monument is partially included by a tree survey which has been carried out in support of the Rhydycar West Application (Tetra-Tech, 2022a).

4.12 This records numerous trees along the eastern edge of the monument, mainly recording a mixture of Category A and Category B specimens. In this area, species are overwhelmingly Sessile Oak (*Quercus petraea*) with some occasional Common Beech (*Fagus Sylvatica*) and Common Ash (*Fraxinus excelsior*).

4.13 The monument is not recorded as being within a Woodland Tree Preservation Order (TPO). It is anticipated that similar species are located around the southern and western edges of the monument.

- 4.14 The monument is located within a Site of Importance for Nature Conservation (SINC) and its western boundaries are within the Cwm Glo and Glyndyrys Site of Special Scientific Interest (SSSI). The pond at the southern end of the monument was found to contain Greater Crested Newt (GCN), during surveys carried out between 2015 and 2021 by Bioscan (2022). The Great Crested Newt is a protected species under the *Conservation of Habitats and Species Regulations 2017* (as amended), and the *Wildlife and Countryside Act 1981* (as amended). They are also Species of Principal Importance under Section 7 of the *Environment (Wales) Act 2016*.

The Pond's Water

- 4.15 A Hydrogeology and Hydrology Desk Top Assessment (HHDTA) carried out in support of the Rhydycar West Application (Tetra-Tech, 2022b) references the pond as part of water catchment Area 4 (Page. 31).
- 4.16 It assesses that the pond's historic water mechanism, which diverted water from the Nant Melin Cannaid to the west, has ceased to function and that the pond now receives water from the base of a tip located to the west and from surface water run-off.
- 4.17 The pond's water has not been tested for its content or quality and its precise depth is not understood.

The Experience of the Monument and its Interpretation

- 4.18 The primary experience of the monument is as a large, embanked pond or reservoir, lined with trees and scrub vegetation that is located within woodland. The northern part of the monument, comprising the leat, is experienced as an earthwork depression defined on its eastern side by a steep bank also colonised by trees and shrubs and set within woodland.
- 4.19 Litter is a common sight at the monument and on the western bank parts of a car have been dumped (**Image EDP 12**).
- 4.20 The monument is only experienced from adjacent woodland areas. A private forestry track passes it to the south but is not a public right of way.
- 4.21 There is nothing on the adjacent route, or anywhere in the monument's surroundings, that identifies the monument as a constituent part of the historic environment, interprets its heritage significance or explains its history. Indeed, if the monument is noticed at all, it is simply experienced as earthworks and a pond located within woodland.
- 4.22 A key issue at the monument, as it currently exists, is the absence of any interpretive or visual aids to identify its historic extent or to convey its history and significance. As such, there is nothing that provides a sense of place or indeed a sense of pride in relation to the scheduled monument and its relationship to the history of the locality.

Scheduled Monument, Cwm Pit and Head of Railway (GM607)

Current Condition and Management Issues

- 4.23 As noted above in **Section 2**, the monument has been the subject of a Cadw Monument Management Plan (**Appendix EDP 5**) informed by a site visit by Dr Jessica Hughes, Field Monument Warden at Cadw, but it has not been subject to a detailed condition survey.
- 4.24 Nevertheless, observations made on-site and then reported in the Monument Management Plan (along with other studies) offer some details on the monument's condition and these are set out below.
- 4.25 The Cadw Monument Management Plan concludes the following overall in respect of the monument:

Condition Trend: Worsened-severe

Current Condition: Unfavourable

Vulnerability: High

At Risk Level: High-immediate

Ownership and Present Land Use

- 4.26 It is presently owned by Marvel Ltd. The monument is located within woodland which is under the supervision of a Land Manager employed by Marvel Ltd. The Land Manager's responsibilities include security, maintenance of tracks and fences, clearance of rubbish and dumped materials, and also the management of vegetation.
- 4.27 In addition to ongoing management of invasive trees, in 2021 works took place to remove invasive trees from the Grade II listed Base of Chimney at Cwm Pit (81752). These works were commissioned and paid for by Rhydycar West as an emergency response following on directly from the issue of the Cadw Monument Management Plan for the Cwm Pit monument. In this respect, the works responded as swiftly as possible to one of the most critical issues at the monument. The work was carried out by Pitchford Tree Services in the autumn of 2021. The works removed trees that were growing from the top of the chimney base and leaning against its side, thus alleviating any risk of damage to the structure's fabric from this vegetation.

Stonework on the Northern side of the Monument

- 4.28 The monument's stonework in the revetment wall and wall to the north of the trackbed is damaged in places and subject to various erosive pressures, including:
- Damage from invasive self-seeded tree and scrub growth with roots causing active damage to the stonework, including a mature tree emerging through the revetment wall (**Images EDP 13 and 14**) (see vegetation below);
 - Stonework becoming loose due to weathering; and

- Potential for the revetment wall being undercut by the water course that has adopted the course of the former trackbed (**Images 15 and 16**)

4.29 It is anticipated that in a 'do-nothing' scenario, in which the current development proposals are not consented, these erosive factors would continue and over time, the monument's stonework would deteriorate and the monument would gradually lose its evidential value and its aesthetic value if sections of the wall collapse.

4.30 The most likely scenario would be for the revetment wall to suffer localised collapse in areas where vegetation roots push apart stonework, with the process exacerbated by weathering. It is also likely that eventually the water flowing past the monument will lead to localized collapse of parts of the wall as it is undermined.

Building Remains

4.31 Building remains are largely hidden by dense scrub vegetation, but it is assumed that they are subject to active root damage. Issues in relation to the listed chimney base are dealt with separately below.

Former Trackbed

4.32 The former trackbed running through the asset is now occupied and characterised by an active watercourse; a diverted channel of the Nant Canaid that is named in the HHDTA as the Nant Melin Cannaid. This watercourse has naturally adopted this course, where it flows from the west and meanders as it passes the revetment walls.

4.33 This has had a profound scouring effect on the ground and resulted in the trackbed being eroded away and tipped material being cut into at the edges, potentially undermining the important stonework of the revetment wall.

4.34 As noted above, if the present situation persists, erosion associated with this water course will continue and will further remove material from the monument that contributes to its evidential value, and potentially cause localized collapse of the revetment wall as it is then undermined.

Pond/Reservoir

4.35 The pond is defined by earthwork banks. The banks and internal area of the pond are heavily colonised by scrub and semi-mature broadleaf vegetation, which restricts all access to the banks and interior.

4.36 At wet times of year, the pond evidently still holds water, although when it was visited during dry conditions it was seen to be empty. The encroaching vegetation is causing active root damage to the fabric of the monument's earthworks.

4.37 Under a 'do-nothing' scenario, this root damage will continue and eventually may cause the pond's earthworks to collapse and the pond will lose its definition, reducing the legibility and evidential value of the monument.

Footpaths

- 4.38 The monument is crossed by footpaths which broadly follow the routes of former tramways. On some of these, ruts and depressions are apparent that are caused by motorbike activity.
- 4.39 If the present situation persists, rutting will increase and the fabric of the footpaths will be damaged; this would result in a gradual minor loss of the monument's evidential value.

Ecology and Vegetation

- 4.40 The monument is partially included in a tree survey carried out in support of the Rhydycar West Application (Tetra-Tech, 2022a). Only a single category B tree was recorded individually on the north-western edge of the monument (a European Larch - *Larix decidua*), however much of the western end of the monument and its eastern and north-western edges were recorded as being part of a Woodland Area TPO. Additionally, part of the western end of the monument is recorded as Ancient Woodland.
- 4.41 The monument is located within a Site of Importance for Nature Conservation (SINC). The pond located at the western end of the monument was found to contain Great Crested Newts (GCN), during surveys carried out between 2015 and 2021 by Bioscan (2022).
- 4.42 The Great Crested Newt is a protected species under the *Conservation of Habitats and Species Regulations* 2017 (as amended), and also under the *Wildlife and Countryside Act 1981* (as amended). It is also a Species of Principal Importance under Section 7 of the *Environment (Wales) Act* 2016.

The Experience of the Monument and its Interpretation

- 4.43 The primary experience of the monument is of its revetment wall, to the north of the former trackbed, and its building remains (the listed chimney base). These are seen from the footpaths which cross the monument, but they are not public rights of way. They are experienced as ruinous structures within woodland and, for the revetment wall, as a structure that lies adjacent to a stream. Litter is a common sight at the monument.
- 4.44 The monument is only experienced from the adjacent woodland areas and there is dense woodland screening views of its structural remains from beyond their immediate vicinity. A private forestry track passes it to the north that is not a public right of way. There is nothing on the adjacent route, or anywhere in the monument's surroundings, that identifies the monument as part of the historic environment, sets out to interpret its heritage significance or explains its history. If the monument is noticed at all, it is experienced as ruinous but impressive stonework structure in private woodland.
- 4.45 A key issue with the monument, as it currently exists, is the absence of any interpretive or visual aids to identify its historic extent or to convey its history and significance. As such, there is nothing that provides a sense of place or indeed a sense of pride in relation to the scheduled monument and its relationship to the history of the locality.

Black Pins Early Ironstone Workings (GM609)

Current Condition and Management Issues

- 4.46 As noted above in **Section 2**, the monument has been the subject of a Cadw Monument Management Plan (**Appendix EDP 7**) informed by a site visit by Dr Jessica Hughes, Field Monument Warden at Cadw, but it has not been subject to a detailed condition survey.
- 4.47 Nevertheless, observations made on-site and then reported in the Monument Management Plan (along with other studies) offer some details on the monument's condition and these are set out below.
- 4.48 The Cadw Monument Management Plan concludes the following overall in respect of the monument:

Condition Trend: Worsened-moderate

Current Condition: Unfavourable

Vulnerability: High

At Risk Level: High

Ownership and Present Land Use

- 4.49 It is presently owned by Marvel Ltd. The monument is located within woodland which is under the supervision of a Land Manager employed by Marvel Ltd. The Land Manager's responsibilities include security, maintenance of tracks and fences, clearance of rubbish and dumped materials, and also the management of vegetation.

Earthworks

- 4.50 The monument's earthworks are substantial and thus fairly resilient to erosion. Cadw note that the various footpaths crossing the monument are not causing any problematic erosion. However, there is a key issue with scrambler motorbikes accessing the monument illegally. Where the bikes ride along paths, ruts have been created that have cut into the underlying archaeological fabric of the monument. This effect has caused localised deterioration and collapse of parts of the monument's earthworks, reducing slightly its evidential value. Under a 'do-nothing' scenario, this misuse will continue, and further parts of the monument will be destabilised and will collapse, causing further loss of evidential value.
- 4.51 In addition, much of the scheduled monument is subject to the spread of scrub and semi-mature deciduous vegetation (defined by Cadw as unmanaged re-wilding). This causes active root damage across most of the monument's earthworks and therefore potentially affects the condition of buried archaeological deposits. Root damage causes a gradual slight loss of evidential value, which would continue under a 'do-nothing' scenario.

Ecology and Vegetation

- 4.52 Being located outside of the site boundary, the monument is not included within the tree survey carried out in support of the Rhydycar West Application (Tetra-Tech, 2022a).

However, the monument is partially within a Woodland Area TPO which covers the western and south-eastern parts of the monument. The peaks of the tips to the east and the southern part of the monument are not located within this designation.

- 4.53 The monument is located within a Site of Importance for Nature Conservation (SINC) and the Cwm Glo and Glyndyrys Site of Special Scientific Interest (SSSI).

The Experience of the Monument and its Interpretation

- 4.54 The primary experience of the monument is of a series of steep undulating earthworks and basins which are seen from the footpaths that cross it, but which are not themselves public rights of way. For the most part they are experienced within woodland, where vegetation is particularly dense in some of the depressions (former mining areas) that characterise the designated area. Once again, litter is a common sight at the monument.
- 4.55 Once again (in common with the other monuments), there is nothing on the footpaths that cross this asset or on the approach to it (or anywhere in the monument's surroundings) to identify it as part of the historic environment, interpret its heritage significance or explain its history. Typically, the asset is experienced as an area of steep mounds and depressions which are situated within an expanse of private woodland.

Grade II listed Building, the Base of Chimney at Cwm Pit (81752)

Current Condition and Management Issues

- 4.56 The Grade II listed building was considered within the Cadw Monument Management Plan prepared for the Cwm Pit scheduled monument (**Appendix EDP 5**) and was viewed during the site visit by Dr Jessica Hughes, Field Monument Warden at Cadw, even if (once again) it has not been subject to a detailed condition survey. Observations made on-site and reported in the Monument Management Plan (along with other studies) provide some details on the structure's condition. These are set out below.

Ownership and Present Land Use

- 4.57 It is presently owned by Marvel Ltd. The listed building is located within woodland which is under the supervision of a Land Manager employed by Marvel Ltd. The Land Manager's responsibilities include security, maintenance of tracks and fences, clearance of rubbish and dumped materials, and also the management of vegetation.
- 4.58 As described previously, works were carried out in 2021 by the landowner to remove trees from the top and sides of the chimney base, to halt ongoing damage to the listed structure.

Building Remains

- 4.59 The building is subject to the same erosive effect of invasive vegetation, causing active root damage and weathering identified above for the wider Cwm Pit scheduled monument.

The Cadw Monument Management Plan identifies a specific problem with mature trees growing out from the top of the building.

- 4.60 It was noted that one of these trees had fallen and was lying against the side of the monument, displacing parts of its stonework and at the same time placing force on to the sides of the historic structure.
- 4.61 In response to the receipt of the Cadw Monument Management Plan, works were carried out to remove invasive trees from the Grade II listed Base of Chimney at Cwm Pit (81752). These works were commissioned and paid for by Marvel Ltd, following on directly from the issue of the Cadw Monument Management Plan for the Cwm Pit monument.
- 4.62 In this respect, the management works responded as swiftly as possible to one of the most critical issues at the monument. The work was carried out by Pitchford Tree Services in the autumn of 2021 under Scheduled Monument Consent (SMC).
- 4.63 The works successfully removed trees that were growing from the top of the chimney base and leaning against its sides, in the process reducing the risk of damage to the structure's historic built fabric from this vegetation.

The Experience of the Listed Building and its Interpretation

- 4.64 The primary experience of the listed building is from the adjacent footpaths which cross the Cwm Pit monument, but (as set out above) these are not public rights of way. The building is a locally prominent feature and is experienced from adjacent areas as a ruinous structure situated within dense woodland.
- 4.65 The Grade II listed building is only experienced from adjacent areas, with dense woodland serving to screen views from beyond its immediate vicinity. There is nothing on the adjacent footpath or anywhere in the listed building's wider surroundings to identify this structure as being part of the historic environment, interpret its heritage significance or explain its history. Indeed, if it is noticed at all, the nationally designated listed building is experienced as ruinous but impressive stonework structure within private woodland.

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Section 5

Aims, Management Proposals and Timescales

5.1 This section sets out the CMP's aims in respect of the management of the historic assets, a framework for further surveys required to inform the CMP, possible future conservation and interpretation works and suggested timescales for delivery.

5.2 The proposed aims of the CMP will be as follows:

Aim 1: In the first instance, after planning permission for the Rhydycar West development has been granted, to carry out detailed surveys in order to fully understand the nature and state of preservation of the three scheduled monuments and listed building considered by this document. The results of these surveys would inform the baseline of the CMP and its recommendations in respect of conservation, restoration and future management for the historic assets in question;

Aim 2: Based on the results of the initial surveys, implement works that will halt the ongoing threats to the significance of the three scheduled monuments and listed building;

Aim 3: Based on recommendations made by the initial surveys, implement works that will improve the condition of the historic fabric of the three scheduled monuments and listed building that are sensitive to the significance of the assets;

Aim 4: Where appropriate, to provide and afford formal public access to the historic assets and to manage that in a sustainable way, making sure that the increased access in itself does not then cause or exacerbate erosion of or damage to the scheduled monuments and listed building;

Aim 5: Where appropriate, to enhance the scheduled monuments and the listed building through the provision of interpretive materials, to enable the cultural and heritage significance of these nationally designated historic assets to be conveyed to and then both understood and appreciated by a larger and wider audience; and

Aim 6: Put in place a set of management prescriptions providing for the conservation of the four historic assets in perpetuity, and building in a process for the review of the prescribed management actions to determine their effectiveness and to implement alternative prescriptions, where that is both necessary and appropriate.

5.3 Hence, the stated aims of the CMP will accord with the relevant overarching objectives of PPW 11 (Welsh Government, 2021) to:

"..protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations;

conserve archaeological remains, both for their own sake and for their role in education, leisure and the economy; and

safeguard the character of historic buildings and manage change so that their special architectural and historic interest is preserved."

- 5.4 The aims of the CMP will also accord with Strategic Objective 9 of the Merthyr Tydfil Replacement Local Development Plan 2016-2031 which aims to: *"protect, enhance and promote all heritage, historic and cultural assets"*.
- 5.5 They will also accord with Objective 16 of the *Sustainability Appraisal Report* which forms a part of the LDP: *"To protect and enhance heritage assets that defines the County Borough as the most significant Welsh town of the Industrial Revolution"*.
- 5.6 The development proposals for the Rhydycar West project will include conservation works across all four of these historic assets.
- 5.7 In addition, for the two scheduled monuments and one Grade II listed building located within or partially within the site, the works will seek to incorporate them into a Heritage Trail which seeks to enhance their presentation and interpretation to the public.
- 5.8 The four historic assets' indicative relationships with the outline development proposals are illustrated on the Illustrative Masterplan (HMA, 4170, PL-020 Rev 2), included here at **Appendix EDP 9**.

A Framework for Initial Surveys and Management Proposals

- 5.9 The positive determination of the Rhydycar West outline planning application would secure the delivery of the CMP through the imposition of a suitably worded planning condition or conditions.

Scheduled Monument, Cyfarthfa Balance Pond and Leat (GM608)

Phase One – Initial Surveys

- 5.10 It is anticipated that the first phase of works will commence after the grant of outline planning permission, with survey duration dependent on the availability of specialists and appropriate timescales. All survey reports will form an appendix to the CMP.

Topographic Survey

- 5.11 The first input will be to complete a detailed 1:200 topographic survey of the monument, which will define its boundary on the ground. The survey will require measures to be made on the depth of the pond at the southern end of the monument.

Tree/Vegetation Survey

- 5.12 Secondly, a survey will be carried out by a conservation specialist, in order to identify trees and shrub vegetation in the scheduled area, leading to the creation of a detailed plan based on the topographic survey data of the trees and large shrubs on the monument.

Geotechnical Assessment

- 5.13 The Phase 1 *Geoenvironmental Assessment Desk Top Study and Coal Mining Risk Assessment* (Tetra-Tech, 2022c) recommends that, following the approval of the planning application, a detailed site-specific geotechnical survey should be carried out.
- 5.14 It is anticipated that this survey would include the monument in its remit and thus address Cadw's request for a geotechnical assessment of possible subsidence within the leat, as shown by the series of unexplained pits.

Masonry Assessment

- 5.15 Following on from the clearance of localised vegetation from the monument's masonry elements (sluices and spillway), a suitably qualified and experienced conservation architect or builder/mason will conduct a condition survey of the masonry.
- 5.16 Their remit will be to assess the extent and condition of the monument's masonry and produce a Masonry Conservation Plan, including a schedule of repairs.

Earthwork Condition Survey

- 5.17 An appropriately qualified heritage professional will be employed to assess the condition of the scheduled monument's earthworks and to make recommendations regarding their consolidation and future conservation in an Earthworks Conservation Plan.

Write and Agree the CMP and Apply for any Scheduled Monument Consent (SMC)

- 5.18 The surveys will inform the writing of the CMP, providing baseline information for the monument upon which recommendations for Phases Two, Three and Four will be based. The document will then be reviewed by Cadw, who will input at this stage leading to the agreement of the scheme for Phases Two, Three and Four.
- 5.19 The information and agreed CMP will then form the basis for any SMC applications required for the works in Phases Two and Three.

Phase Two – Conservation Works

- 5.20 It is anticipated that the second stage will occur following the grant of planning permission and completion of the Phase One surveys.
- 5.21 Works within this second phase will be based on the information and recommendations generated by Phase One and the recommendations made by Cadw in the Monument

Management Plan, implementing works related to the preservation of the scheduled monument and the negation of ongoing erosive impacts on its evidential value.

5.22 The agreed works will be carried out with respect to relevant conservation constraints at the monument (such as set out in paragraph 4.14 above) and may require SMC.

5.23 The following works are likely to take place during this period:

- Vegetation clearance – Comprising the removal of damaging trees and other vegetation from the monument;
- Masonry conservation - The recommended repairs in the Masonry Conservation Plan will be carried out by a suitably qualified and experienced specialist;
- Earthwork conservation – The recommended consolidation works set out in the Earthworks Conservation Plan will be carried out by a suitably qualified and experienced specialist;
- Ground stabilisation - In tandem with other works elsewhere within the site, appropriate measures can be implemented in order to address any subsidence issues that might have implications for the future conservation of the scheduled monument; and
- Removal of dumped materials – Dumped material and litter will be carefully removed.

Phase Three – Improvements Including Access and Interpretation

5.24 It is anticipated that the third stage will take place after the second phase is completed.

5.25 Works will aim to ensure that further erosion does not occur at the monument and will seek to enhance the monument's significance through the provision of formal public access and appropriate interpretation. Works may require SMC which will be determined during Phase One. The following is proposed within this phase:

Vegetation Management

5.26 A programme will be developed by a conservation specialist to manage the spread of vegetation at the monument, which will then be implemented as an ongoing concern by a contractor.

Access and Interpretation

5.27 The development aspires to incorporate the monument into a Heritage Trail that will cross parts of the site. The concept and initial design of the trail was discussed with and advised by Cadw in January 2022. Precise details on the trail have not yet been formulated, although the indicative and illustrative route that was formulated after consultation with Cadw is set out on the Outline Masterplan (HMA, 4170, PL-010 Rev P2) where it is shown

to utilise the existing footpath that runs along the eastern edge of the monument and provides opportunities for heritage interpretation.

- 5.28 Following the grant of outline planning permission, an initial input will be to engage an appropriately qualified heritage professional to advise on effective interpretation and public engagement strategies that can be applied to the design of the Heritage Trail.
- 5.29 This assessment, along with the results of Phases One and Two above in respect of the practicalities of design and implementation, will feed into a detailed design of the trail, its construction methodology and of the accompanying heritage interpretation materials.
- 5.30 Key principles in respect of the trail and interpretation will be:
- The avoidance of direct impacts on the fabric of the monument that would reduce its evidential value;
 - A bilingual approach to interpretation in both English and Welsh; and
 - Incorporation of the interpretation of the monument with the wider heritage interpretation of the site, display within the wider site and buildings of the proposed development and accordance with other heritage interpretation projects within Merthyr Tydfil, such as that at Cyfarthfa Castle and Park.

Phase Four – Long term Management and Maintenance

- 5.31 This phase will take place after Phase Three and the completion of the proposed development.
- 5.32 It proposes measures and works that will take place during the operation of the proposed development and which are designed and intended to prevent any adverse effects on the monument's significance.
- 5.33 The works will be carried out in tandem with an ongoing, wider programme of site management under the control of the site operator and probably carried out by a specifically appointed contractor.
- 5.34 The ongoing monitoring and management of the monument will be influenced by the recommendations made by Cadw and by the surveys and works carried out in Phases One, Two and Three. Some of these works may require SMC, which will be applied for as and when required. It is anticipated that they will include the following considerations:
- Site security – The site will be secured so that motorbikes can no longer access the monument and persons using the Heritage Trail do not access other parts of the monument;
 - Vegetation management – Trees and vegetation will be monitored and controlled as part of a general approach to groundskeeping;

- Maintenance of infrastructure – The infrastructure of the Heritage Trail including paths, any handrails etc. and the information boards will be cleaned and kept in good repair;
- Litter clearance - The monument shall be kept clear of litter; and
- Maintenance of earthwork stability and upkeep of masonry – Monitoring will take place at regular intervals to be defined in the CMP (as determined by the Phase One condition surveys) by a relevant specialist of the monument earthworks and masonry, in order to assess their condition. Any recommendations for repair or consolidation shall be addressed by a suitably qualified professional.

Scheduled Monument, Cwm Pit and Head of Railway (GM607) and Grade II listed Building, the Base of Chimney at Cwm Pit (81752)

Phase One – Initial Surveys

- 5.35 It is anticipated that the first phase of works will commence after the grant of outline planning permission, with survey duration dependent on the availability of specialists and appropriate timescales. All survey reports will form an appendix to the CMP.

Topographic Survey

- 5.36 The first input will be to complete a detailed 1:200 topographic survey of the monument which will define its boundary on the ground.

Tree/Vegetation Survey

- 5.37 Secondly, a survey will be carried out by a conservation specialist, in order to identify trees and shrub vegetation in the scheduled area, leading to the creation of a detailed plan based on the topographic survey data of the trees and large shrubs on the monument.

Masonry Assessment

- 5.38 A suitably qualified and experienced conservation architect or builder/mason will conduct a condition survey of the masonry across the revetment wall and at the Grade II listed Chimney Base.
- 5.39 Their remit will be to assess the extent and condition of the monument's masonry and then to draw up and submit a Masonry Conservation Plan, containing a schedule of repairs which includes recommendation for vegetation management insofar as it relates to the invasive vegetation that is impacting the monument's stonework.

Earthwork Condition Survey

- 5.40 An appropriately qualified heritage professional shall be employed to assess the condition of the monument's earthworks (notably those around the former reservoir) and make

recommendations in advance of their consolidation and future conservation in an Earthworks Conservation Plan.

Write and Agree the CMP and Apply for any Scheduled Monument Consent (SMC)

- 5.41 The surveys will inform the writing of the CMP, providing baseline information for the monument upon which recommendations for Phases Two, Three and Four will be based. The document will then be reviewed by Cadw, who will input at this stage leading to the agreement of the scheme for Phases Two, Three and Four.
- 5.42 The information and agreed CMP will then form the basis for any SMC applications required for the works in Phases Two and Three.

Phase Two – Conservation Works

- 5.43 It is anticipated that the second stage will occur following the grant of planning permission and completion of the Phase One surveys.
- 5.44 Works within this phase will be based on the information and recommendations generated by Phase One and by the recommendations made by Cadw in the Monument Management Plan, implementing works related to the preservation of the scheduled monument and the negation of ongoing erosive impacts on its evidential value.
- 5.45 The agreed works will be carried out with respect of relevant conservation constraints at the monument (such as set out in paragraphs 4.40 – 4.42 above) and may require SMC.
- 5.46 The following works are likely to take place during this period:
- Vegetation clearance – Comprising the removal of damaging trees and other vegetation from the monument and listed building;
 - Masonry conservation - The recommended repairs in the Masonry Conservation Plan will be carried out by a suitably qualified and experienced specialist;
 - Earthwork conservation – The recommended consolidation works set out in the Earthworks Conservation Plan will be carried out by a suitably qualified and experienced specialist; and
 - Removal of litter – Dumped materials and litter will be carefully removed.

Detailed Design of the Drainage Works

- 5.47 In order to address the problems associated with water erosion on the north-west side of the monument, appropriate drainage works are proposed.
- 5.48 An indicative proposal for these works is detailed in the plan Watercourse Mitigation Measures (Tetra Tech, 2021, 011-P01) and will result in water that currently passes the

monument to the north-west being canalised into a ditch. This will follow the edge of the present course, with a buffer built up with upcast material to form a barrier between the water and the edge of the monument's stone revetment wall.

- 5.49 It is anticipated that during Phase Two a detailed design for this scheme of mitigation will be developed. This design will be informed by the surveys carried out during Phase One in respect of recommendations for vegetation removal and in respect of the condition of the adjacent revetment wall, as set out in the Masonry Conservation Plan.

Phase Three – Improvements Including Access and Interpretation

- 5.50 It is anticipated that the third stage will take place after the second phase is completed.
- 5.51 Works will ensure that further erosion does not occur at the monument and will also seek to enhance the monument's significance through the provision of formal public access and interpretation. Works may require SMC, which will be determined during Phase One. The following is proposed within this phase:

Vegetation Management

- 5.52 An appropriate programme will be developed by a suitably qualified and experienced conservation specialist to manage the spread of vegetation at the monument. This will then be implemented as an ongoing concern by a specialist contractor.

Hydrological Management

- 5.53 The detailed design developed for the drainage ditch, in order to divert water away from the revetment wall, will be implemented and the ditch constructed.

Access and Interpretation

- 5.54 The development aspires to incorporate the monument and listed building into a Heritage Trail that will cross parts of the site. The concept and initial design of the trail was discussed with and advised by Cadw in January 2022.
- 5.55 Precise details on the trail have not yet been formulated, but an indicative and illustrative route that was formulated after consultation with Cadw is set out on the Outline Masterplan (HMA, 4170, PL-010 Rev P2), where it is shown to utilise the existing footpath that runs to the south-west along the bank of the monument and then drops to the north down slope, to cross the water course adjacent to the revetment wall. This will provide opportunities for heritage interpretation.
- 5.56 Following the grant of outline planning permission, an initial input will be to engage an appropriately qualified heritage professional to advise on effective interpretation and public engagement strategies that can be applied to the design of the Heritage Trail.

5.57 This assessment, along with the results of Phases One and Two above in respect of the practicalities of design and implementation, will feed into a detailed design of the trail, its construction methodology and of the accompanying heritage interpretation materials.

5.58 Key principles in respect of the trail and interpretation will be:

- The avoidance of direct impacts on the fabric of the monument and listed building that would reduce their evidential value;
- A bilingual approach to interpretation in both English and Welsh; and
- Incorporation of the interpretation of the monument with the wider heritage interpretation of the site, display within the wider site and buildings of the proposed development and accordance with other heritage interpretation projects within Merthyr Tydfil, such as that at Cyfarthfa Castle and Park.

Phase Four – Long-term Management and Maintenance

5.59 This phase will take place after the completion of Phase Three and the proposed development.

5.60 It proposes measures and works that will take place during the operation of the proposed development and which are designed and intended to prevent any adverse effects on the monument's significance.

5.61 The works will be carried out in tandem with an ongoing, wider programme of site management under the control of the site operator and probably carried out by a specialist contractor appointed in this connection.

5.62 The ongoing monitoring and management of the monument will be influenced by the recommendations made by Cadw and by the surveys and works carried out in Phases One, Two and Three. Some of these works may require SMC, which will be applied for as and when required. It is anticipated that they will include the following considerations:

- Site security – The site will be secured so that motorbikes can no longer access the monument and persons using the Heritage Trail do not access other parts of the monument;
- Vegetation management – Trees and vegetation will be monitored and controlled as part of a general approach to groundskeeping;
- Maintenance of infrastructure – The infrastructure of the Heritage Trail including paths, any handrails etc.. and the information boards will be cleaned and kept in good repair;
- Litter clearance - the monument shall be kept clear of litter; and

- Maintenance of earthwork stability and upkeep of masonry – Monitoring will take place at regular intervals to be defined in the CMP (as determined by the Phase One condition surveys) by a relevant specialist of the monument earthworks and masonry, in order to assess their condition. Any recommendations for repair or consolidation shall be addressed by a suitably qualified professional.

Black Pins Early Ironstone Workings (GM609)

Phase One – Initial Surveys

- 5.63 It is anticipated that the first phase of works will commence after the grant of outline planning permission, with survey duration dependent on the availability of specialists and appropriate timescales. All survey reports will form an appendix to the CMP.

Topographic Survey

- 5.64 The first input will be to complete a detailed 1:200 topographic survey of the monument which will define its boundary on the ground.

Tree/vegetation Survey

- 5.65 Secondly, a survey will be carried out by a conservation specialist, in order to identify trees and shrub vegetation in the scheduled area, leading to the creation of a detailed plan based on the topographic survey data of the trees and large shrubs on the monument.

Earthwork Condition Survey

- 5.66 An appropriately qualified heritage professional shall be employed to assess the condition of the monument's earthworks, and to make recommendations in respect of consolidation and future conservation in an Earthworks Conservation Plan.

Monument Security Survey

- 5.67 An appropriately qualified professional shall assess where motorbike access to the monument is taking place and make recommendations as to how to best restrict access so as to secure the monument.

Write and Agree the CMP and Apply for any Scheduled Monument Consent (SMC)

- 5.68 The surveys will inform the writing of the CMP, providing baseline information for the monument upon which recommendations for Phases Two, Three and Four will be based. The document will then be reviewed by Cadw who will input at this stage, leading to the agreement of the scheme for Phases Two, Three and Four.
- 5.69 The information and agreed CMP will then form the basis for any SMC applications required for the works in Phase Two.

Phase Two – Conservation Works

- 5.70 It is anticipated that the second phase will occur following the grant of planning permission and completion of the Phase One surveys.
- 5.71 Works within this phase will be based on the information and recommendations generated by Phase One and the recommendations made by Cadw in the Monument Management Plan, implementing works related to the preservation of the scheduled monument and the negation of ongoing erosive impacts on its evidential value.
- 5.72 The agreed works will be carried out with respect of relevant conservation constraints at the monument (such as set out in paragraphs 4.52 – 4.53 above) and may require SMC.
- 5.73 The following works are likely to take place during this period:
- Vegetation clearance – Comprising the removal of damaging trees and other vegetation from the monument;
 - Earthwork conservation – The recommended consolidation works set out in the Earthworks Conservation Plan will be carried out by a suitably qualified and experienced specialist;
 - Removal of dumped materials – Dumped material and litter will be carefully removed; and
 - Implementation of security measures to restrict access – The recommendations of the Phase One survey will be implemented.

Phases Three and Four – Improvements and Long-term Management

- 5.74 As the Black Pins monument is located outwith the site and will not be subject to any works related to access and interpretation, Phases Three and Four are combined into an ongoing programme of conservation and management.
- 5.75 This phase will take place after the completion of the Phase One and Two works and throughout the operation of the proposed development. It proposes measures and works that are designed to stop any adverse effects on the monument's significance. It will be implemented by the site operator, probably via a contractor. Some of these works may require SMC, which will be applied for as and when required. The following is proposed within this phase:
- Site security – Measures taken to restrict access to the monument will be monitored and, where necessary, reinforced and/or repairs made so that motorbikes can no longer access the monument;

- Vegetation Management – A programme will be developed by a conservation specialist to manage the spread of vegetation at the monument. Trees and vegetation will be monitored and controlled as part of a general approach to groundskeeping;
- Litter clearance - the monument shall be kept clear of litter; and
- Maintenance of earthwork stability– Monitoring will take place at regular intervals to be defined in the CMP (as determined by the Phase One condition surveys) by a relevant specialist of the monument earthworks, in order to assess their condition. Any recommendations for repair or consolidation shall be addressed by a suitably qualified professional.

Section 6

Monitoring and Review of the CMP

- 6.1 It is recommended that the CMP is reviewed, on behalf of the site operator, by a suitably qualified heritage consultant and by Cadw after Phases One, Two and Three for each asset. This will include a review of the reports produced by surveys and of any works carried out at the historic assets.
- 6.2 During Phase Four, the CMP will be reviewed by Cadw at five-year intervals. This is anticipated to include visits to the historic assets to record their condition, and to identify and update any management issues that may have arisen in the previous years.
- 6.3 In the event that Cadw are of an opinion that the CMP is not being adhered to, a meeting will be convened between all relevant stakeholders (e.g. the site operator and/or their heritage consultant, Cadw and any relevant contractors), with the purpose being to review the CMP and assess the reasons why it is not being followed or why its content is no longer relevant, and then to determine a more appropriate and effective course of action. In such circumstances it is assumed that the CMP would be updated and implemented.

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Section 7

References

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Images



Image EDP 1: The pond at the southern end of the Pond and Leat scheduled monument.



Image EDP 2: View of part of the leat at the Pond and Leat scheduled monument, noting its dense vegetation cover.



Image EDP 3: General view of the watercourse at Cwm Pit which occupies the former trackbed.



Image EDP 4: The northern wall section at Cwm Pit.



Image EDP 5: The south-western part of the massive stone revetment wall at Cwm Pit.



Image EDP 6: The Grade II listed chimney base at Cwm Pit.



Image EDP 7: View to the east from the open part of the spoil tips at the Black Pins.



Image EDP 8: Example of one of the many water-filled ruts which line the footpath at the top of the bank at the Pond and Leat.



Image EDP 9: Example of one of the many water-filled ruts which line the footpath at the top of the bank at the Pond and Leat.



Image EDP 10: The brick spillway at the Pond and Leat scheduled monument.



Image EDP 11: Brickwork preserved at one of the sluices at the Pond and Leat.



Image EDP 12: General view illustrating the littering found commonly at the Pond and Leat monument.



Image EDP 13: Illustration of typical tree damage at the Cwm Pit revetment wall.



Image EDP 14: Image illustrating invasive vegetation at Cwm Pit.



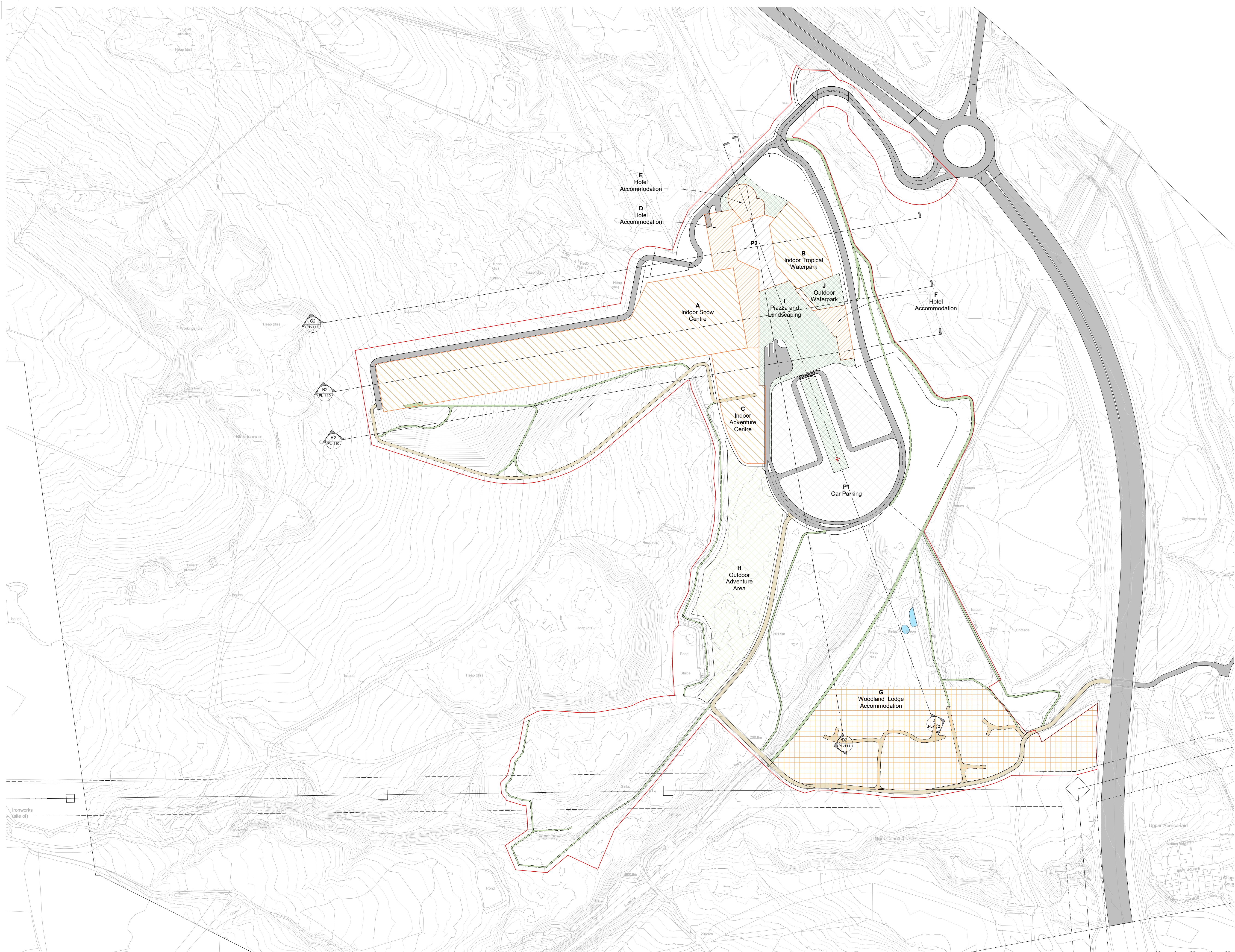
Image EDP 15: Image showing the water course at Cwm Pit running directly past the revetment wall.



Image EDP 16: Image showing the water course at Cwm Pit running directly past the revetment wall.

Appendix EDP 1
Outline Masterplan
(HMA, 4170, PL-010 Rev P2)

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A Indoor Snow Centre Use Class Land take Footprint Gross Building Area Length / Width (min) Length / Width (max) Level (min / max) Height (min / max)	D2: Assembly and Leisure 27,600m ² 39,200m ² 400.0m / 90.0m 424.0m / 93.5m 283.5m AOD / 287.5m AOD 15.0m / 17.0m
B Indoor Tropical Waterpark Use Class Land take Footprint Gross Building Area Length / Width (min) Length / Width (max) Level (min / max)	D2: Assembly and Leisure 4,900m ² 7,500m ² 91.3m / 57.2m 97.1m / 61.3m 203.0m AOD / 213m AOD (localised high point for ride tower up to 218m AOD) 8m / 20.5m
C Indoor Adventure Centre Use Class Land take Footprint Gross Building Area Length / Width (min) Length / Width (max) Level (min / max)	D2: Assembly and Leisure 5,800m ² 8,700m ² 129.6m / 47.5m 134.5m / 54.7m 206.5m AOD / 212.5m AOD (with localised high point for rides of 220m AOD) 11.5m / 20.0m
D Hotel Accommodation Use Class Land take Footprint Gross Building Area Max Rooms: Length / Width (min) Length / Width (max) Level (min / max) Height (min / max)	C1: Hotel plus ancillary uses 4,900m ² 15,500m ² up to 198 154.8m / 25.2m 161.6m / 28.5m 217.0m AOD / 224.5m AOD 22.0m / 32.0m
E Hotel Accommodation Use Class Land take Footprint Gross Building Area Maximum Rooms: Length / Width (min) Length / Width (max) Level (min / max) Height (min / max)	C1: Hotel plus ancillary uses 1,275m ² 7,000m ² up to 100 39.8m / 27.0m 42.8m / 40.3m 223.4m AOD / 230.9m AOD 28.4m / 39.4m
F Hotel Accommodation Use Class Land take Footprint Gross Building Area Maximum Lodges: Lodges: Length / Width (min) Length / Width (max) Height (min / max)	C1: Hotel plus ancillary uses 1,400m ² 4,900m ² up to 120 58.7m / 31.5m 61.7m / 37.3m 209.8m AOD / 214.8m AOD 16.8m / 21.3m 7.5m / 8.0m 13.0m / 8.0m 3.5m / 4.5m
G Woodland Lodge Accommodation Use Class Land take Footprint Gross Building Area Maximum Lodges: Lodges: Length / Width (min) Length / Width (max) Height (min / max)	C1: Hotel plus ancillary uses 32,000m ² 2,300m ² up to 30 15.5m / 12.0m 23.0m / 16.5m 4.0m / 7.0m
H Outdoor Adventure Area Use Class Land take Footprint	Outdoor Activity / Amenity Space 15,000m ²
I Plaza and Landscaped Approach Use Class Land take Footprint	Outdoor Activity / Amenity Space 8,900m ²
J Outdoor Waterpark Use Class Land take Footprint	Outdoor Activity / Amenity Space 1,500m ²

Note that the layout of tracks and lodges within the woodland is indicative, subject to detail design taking into account detailed local topographical and ecological features following a full arboricultural survey

P1 Surface Car Parking Areas Land take Footprint Parking Spaces Level (min / max)	18,500m ² 650 197m AOD / 199m AOD
P2 Covered Parking, Service Areas and Ancillary Uses to Hotel and Leisure uses Land take Footprint Gross Building Area Car Parking Spaces Max Length / Width Level (min / max) Height (min / max)	19,00m ² 8,500m ² 180 53.5m / 50.5m 201.0m AOD / 206.0m AOD 6.0m AOD / 13.5m
H Outdoor Adventure Area Use Class Land take Footprint	Outdoor Activity / Amenity Space 15,000m ²
I Plaza and Landscaped Approach Use Class Land take Footprint	Outdoor Activity / Amenity Space 8,900m ²
J Outdoor Waterpark Use Class Land take Footprint	Outdoor Activity / Amenity Space 1,500m ²

P3	S0	07/12/22	WS	ISSUED FOR PLANNING
P2	S0	11/09/22	WS	Minor adjustments
P1	S0	14/02/22	WS	ISSUED FOR PAC
Rev.	Status Date	Check	Description	

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Title
Outline Masterplan

Job No Scale at A1 Status Rev. Ext. Int.
4170 1 : 2000 S0 P3

Project	Originator	Zone	Level	Type	Role Sheet
RHDR	HMA	LE	ZZ	DR	A - PL-010

ISO 14001 : 2015 ISO 9001 : 2015 RIBA Chartered Practice
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Appendix EDP 2
Cyfarthfa Balance Pond and Leat (GM608):
Scheduling Description

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This Monument has been scheduled under the Ancient Monuments & Archaeological Areas Act 1979

Scheduled Ancient Monument: Report for Scheduled Ancient Monument Only

Reference Number :	GM608	Name :	Cyfarthfa balance pond and leat
Status :	Proposed	Number of Archaeological Items :	1
In Guardianship :	No	Date of Designation :	30 Nov 2016

Location

Unitary Authority :	Merthyr Tydfil	Community :	Troed-y-Rhiw
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Landscape Designation :	Landscape Designation Name :
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National Grid Ref. :	SO 045 045
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Easting :	304550	Northing :	204660
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Description

Broadclass :	Industrial	Site type :	Water Power System	Period :	Post Medieval
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Summary Description and Reason for Designation

The monument comprises the remains of a major balance pond and leat serving a number of deep mines. Coal and ironstone were extracted from land leased by the Cyfarthfa Works by surface and patch workings until 1826. From that date deep mines were dug and worked with water balances. A line of these pits was supplied with water from this balance pond by the leat, which ran along the contour to the north, from which water was taken for each pit. The system probably dates from the 1830s and is shown complete on the Tithe Map for Merthyr Tydfil of 1850. This site is the largest water balance reservoir surviving on the former Cyfarthfa Estate and the only one which served a number of pits from a single leat. Morris and Williams, in their book *The South Wales Coal Industry 1841 - 1875* (1958), note that "The water balance pit, used where there was an abundant supply of water, was peculiar to South Wales... In 1862, in Glamorgan alone, there were about sixty of these machines at work, all the great pits of the Cyfarthfa works being operated on this basis." The pond was created on a steep E-facing slope by building an earth and stone dam on three sides. The dam encloses an area of about 65m from N to S by 38m transversely and remains water-filled. There are the remains of a stone-lined sluice near the SE corner and a brick-lined spillway on the N side. The inner face of the dam is stone revetted. A leat runs from the NW corner of the pond. This leat is formed by a linear bank of earth and stone up to 4m in height, which creates a channel up to 3m in width between it and the slope to the W. The leat runs N for about 270m along the contour.

The monument is of national importance for its potential to enhance and illustrate our knowledge of the early 19th century coal mining and iron working industries of Wales. It is the largest and best preserved balance pond that survives on the Cyfarthfa estate, famous for its use of water balance technology in extracting coal and ironstone. The structures may be expected to contain archaeological information in regard to chronology, building techniques and functional detail.

The area to be scheduled comprises the remains described and an area around it within which related evidence may be expected to survive. It is irregular in shape on plan and measures 358m from N to S by up to 44m transversely.

Appendix EDP 3
Cyfarthfa Balance Pond and Leat (GM608):
Monument Management Plan

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Scheduled Monument Management Plan May 2021

Cyfarthfa Balance Pond & Leat (GM608)



Fig. 1. General view of the southern end of the balance pond (20/05/21)



This management plan has been produced within the Historic Environment Branch of Cadw to inform management of the Scheduled Monument.

Cadw, Welsh Government

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Cadw yw gwasanaeth amgylchedd hanesyddol Llywodraeth Cymru, yn gweithio i sicrhau amgylchedd hanesyddol hygyrch a ddiogelir yn dda i Gymru.

Cadw is the Welsh Government's historic environment service, working for an accessible and well-protected historic environment for Wales.

www.cadw.llyw.cymru

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SM name and reference number	Cyfarthfa Balance Pond & Leat (GM608)
Grid reference	SO 045 045
Current Cadw funded schemes (MA /AM Grant)	n/a
Cadw FMW and contact details	Dr Jessica Hughes Field Monument Warden Cadw Welsh Government Tel: 02920 625352 Mobile: 07580 313839 E-mail: jessica.hughes@gov.wales

I. Site Description

The monument comprises the remains of a major balance pond and leat serving a number of deep mines. Coal and ironstone were extracted from land leased by the Cyfarthfa Works by surface and patch workings until 1826. From that date deep mines were dug and worked with water balances. A line of these pits was supplied with water from this balance pond by the leat, which ran along the contour to the north, from which water was taken for each pit. The system probably dates from the 1830s and is shown complete on the Tithe Map for Merthyr Tydfil of 1850. This site is the largest water balance reservoir surviving on the former Cyfarthfa Estate and the only one which served a number of pits from a single leat. Morris and Williams, in their book *The South Wales Coal Industry 1841 - 1875* (1958), note that "The water balance pit, used where there was an abundant supply of water, was peculiar to South Wales... In 1862, in Glamorgan alone, there were about sixty of these machines at work, all the great pits of the Cyfarthfa works being operated on this basis." The pond was created on a steep E-facing slope by building an earth and stone dam on three sides. The dam encloses an area of about 65m from N to S by 38m transversely and remains water-filled. There are the remains of a stone-lined sluice near the SE corner and a brick-lined spillway on the N side. The inner face of the dam is stone revetted. A leat runs from the NW corner of the pond. This leat is formed by a linear bank of earth and stone up to 4m in height, which creates a channel up to 3m in width between it and the slope to the W. The leat runs N for about 270m along the contour.

The monument is of national importance for its potential to enhance and illustrate our knowledge of the early 19th century coal mining and iron working industries of Wales. It is the largest and best preserved balance pond that survives on the Cyfarthfa estate, famous for its use of water balance technology in extracting coal and ironstone. The structures may be expected to contain archaeological information in regard to chronology, building techniques and functional detail.

The scheduled area comprises the remains described and areas around them within which related evidence may be expected to survive.

2. Current Condition

Last Cadw site visit: 20/05/2021

At the time of the Cadw site visit the monument was found to be in a worsened-severe condition. This is partly due to the invasive tree and scrub growth growing on the earthworks and masonry of the pond and leat. The majority of the scheduled area is now difficult to access due to regenerating scrub and young trees. These tree and scrub roots have penetrated the earthworks of the pond and leat and are causing active damage. However, there are other areas of concern, notably: areas of subsidence have opened up along the course of the leat – possibly old mine workings; erosion to the top of the leat and pond earthwork bank through the retention of ground surface water and pedestrian access as well as anti-social behaviour in the form of littering and fire-setting.

Condition Trend: Worsened-severe

Current Condition: Unfavourable

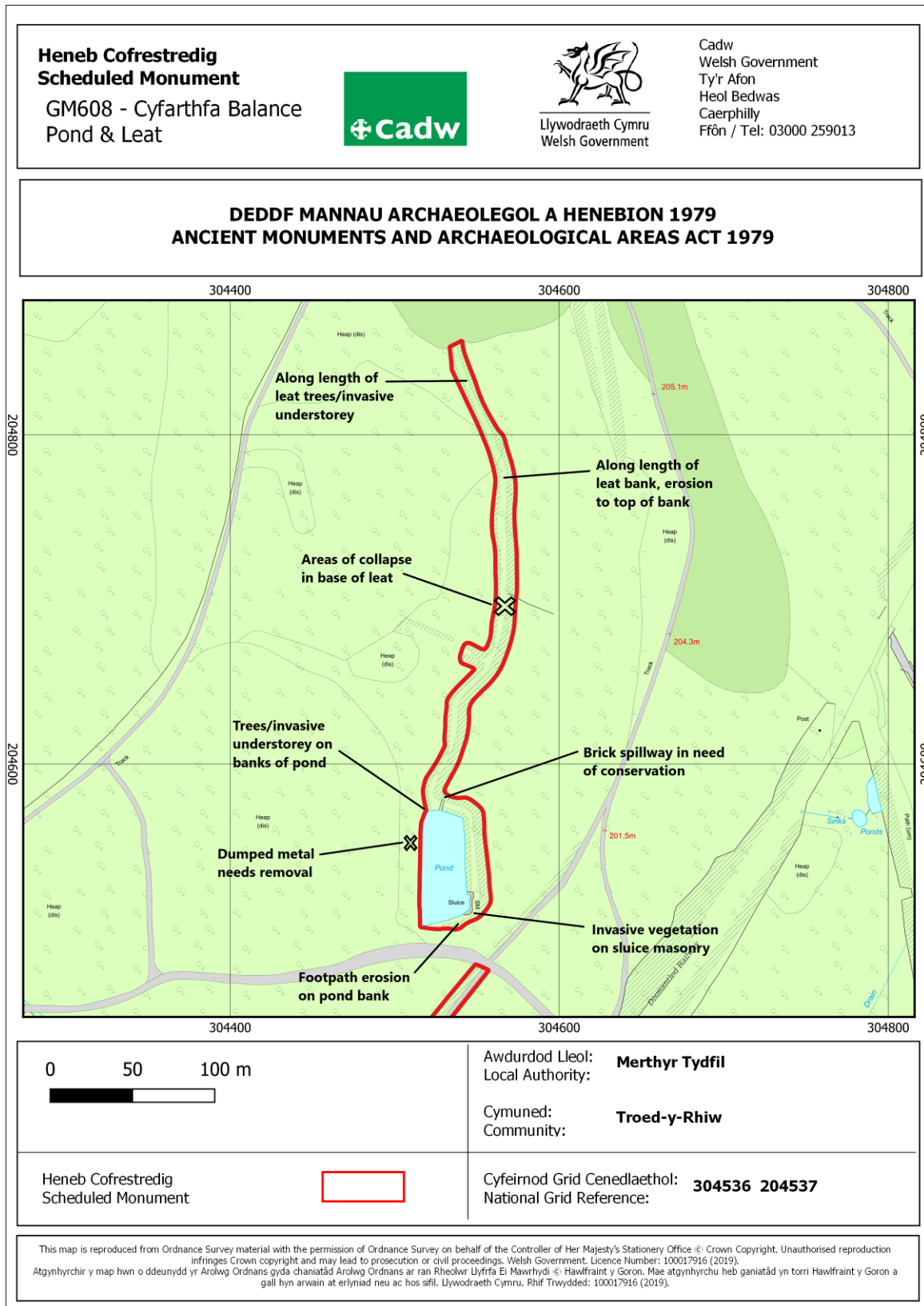
Vulnerability: High

At Risk Level: High-immediate

Management Issues

- Invasive trees/vegetation growing on the earthworks of the pond and leat.
- A number of areas of subsidence (possible earlier mining activity) have collapsed within the course of the leat.
- Specific leat features such as the south-eastern masonry sluice are covered in vegetation.
- The top of the earthen pond/leat bank holds standing water which is contributing to bank erosion. This is exacerbated by pedestrian erosion.
- Loose brickwork (spillway) in need of repair.
- Anti-social behaviour: fire-setting; littering; dumping.

3. Map of the Scheduled Area Highlighting Management Issues



4. Management Advice

The following works are recommended to improve the condition of the scheduled monument. Cadw Field Monument Wardens are available to provide help and advice, and can be contacted via details shown on page 4.

Prioritised list of management works:

- Tree management – assess and deal with problematic trees growing on the earthworks and sluice areas of the pond/leat.
- Regularly cut back *invasive* under-storey vegetation such as bramble/bracken/scrub growing on earthworks/masonry and treat with herbicide to prevent re-growth.
- Monitor the erosion on the tops of the leat/pond banks. This appears to be exacerbated by standing water and pedestrian access to the earthworks. If it gets worse, contact Cadw for further advice.
- When earthworks/masonry are cleared of invasive vegetation, employ a suitably qualified & experienced conservation architect to assess the monument and produce a conservation plan for repairs to the pond/leat (including the brick spillway & masonry sluices).
- When earthworks/masonry are cleared of invasive vegetation, employ a suitably qualified geotechnical engineer to assess the area of subsidence within the leat. The area in which the monument is situated is very dynamic with what appear to be old mining shafts/pits opening up within the course of the leat. Getting a baseline survey of the monument will inform future decisions regarding monitoring and dealing with these areas of subsidence.
- A quantity of metal has been dumped on the western banks of the pond – this should be removed carefully.
- Undertake regular litter picks to prevent the build-up of rubbish.

The table below summarises the necessary works and required consent procedures.

4.1 Works not requiring SMC These works can be undertaken without scheduled monument consent if they are carried out according to the guidance specified in section 4.1 below.	4.2 Works requiring SMC These works require scheduled monument consent under the Ancient Monuments and Archaeological Areas Act 1979. The works may only be undertaken following written consent from Cadw. The works must then be carried out according to conditions specified in the consent.
• Assess trees in scheduled area and remove those growing on pond/leat earthworks/sluices. • Regularly cut back & then herbicidally treat invasive/scrubby understorey vegetation. • Keep pond and leat free from trees/invasive scrub. • Remove any dens; firepits; rubbish. • Periodically survey/manage trees within the scheduled area as appropriate. • Obtain a conservation management plan from conservation architect.	• Any repairs to earthworks/ masonry remains. • Installing/renewing any fencing; steps; benches; footpaths; interpretation panels; signage etc. • Any installation/renewal of safety railings. • Any other activities which necessitate ground disturbance and/or disturbance to stonework. • Any tree/vegetation management on which requires specialist access/techniques or where there is a risk of damage to stonework and/or ground disturbance. • Any geotechnical investigations where there is a risk of damage to stonework and/or ground disturbance.

4.1 Works not requiring Scheduled Monument Consent (SMC)

These works can be undertaken without scheduled monument consent provided that they are carried out according to the guidance specified below:

Tree management within the scheduled area

- A number of mature and semi-mature trees are growing within the scheduled area – especially on the pond and leat earthworks. Tree roots cause damage to below-ground and upstanding archaeological remains.
- Any trees which pose a threat of wind throw/shedding limbs, should be assessed and the appropriate steps taken (see below).
- Regular maintenance is important with tree management. Dealing with trees whilst they are at seedling/sapling stage is much easier and cost efficient than with large, mature trees.
- The aim is to keep the earthworks of the pond/leat free from trees/scrub, whilst maintaining an appropriate shading tree canopy outside of these areas.
- This guidance does not convey any approval or consent required under any enactment, bylaw, order or regulation other than the Ancient Monuments and Archaeological Areas Act 1979. It is the responsibility of the landowner/manager to obtain any such approval or consent where necessary.
- In areas where problematic trees are encountered and/or where there is a risk to the underlying/nearby stonework/archaeological features through tree removal, please contact Cadw before proceeding with any works.
- Access for tree removal and tree removal methods should be considered carefully as damage to the scheduled monument can be caused through the tracking of heavy machinery/trailers and felling of trees onto scheduled monuments. Contact Cadw to discuss and agree access/tree-felling methodology.

Guidance on tree management within the scheduled area

- **Access within the scheduled area is difficult due to dense vegetation, waterlogged ground, old mining activity and lack of trackways. Prior to commencing tree removal works, a methodology should be developed regarding accessing the various parts of the pond/leat and how the timber/brush will be removed. This will need to be approved by Cadw prior to any works starting.**
- Dead, diseased and/or unstable trees that could be susceptible to wind throw/shedding limbs should be carefully felled and removed from site.
- Trees should, by hand, be sectioned and felled carefully - where possible, trees/tree limbs should be directionally felled/winched away from the monument.
- Arbour/brush mats can be used to minimize the impact of falling timber.
- Trees should be felled above ground level with stumps treated with herbicide to prevent regeneration and left to rot in-situ. No grubbing up of stumps should occur.
- Any trees growing out of walls/masonry should be carefully cut back flush with the masonry. The stumps should be left in situ and treated with herbicide. No stonework should be disturbed.
- Any access/cutting equipment should not come in to contact with walls etc.
- Any seedling/sapling regeneration needs to be cut and removed on a regular basis so as to prevent the re-wilding of the scheduled area.
- Work on trees should be carried out in dry weather so as to minimise ground disturbance.
- All cut timber/brush should be removed from the scheduled area and no burning should take place within it.
- No timber should be stored within the scheduled area.
- No vehicular tracking within the scheduled area.
- All contractors should be made aware of the location of the scheduled area, its sensitivity and constraints.

Cut back vegetation on masonry walls

- A number of sluices on the pond/leat are made of stone. This stonework is covered in many places with invasive vegetation growth such as clumped ivy, broadleaf saplings, bramble etc.
- Vegetation roots penetrate mortar joints in walls/masonry remains expanding the joints which separate stonework letting in eroding forces such as water, frost and wind.
- Bushy/clumped vegetation (for example, trees, clumped ivy, bramble) moves in the wind which in turn moves roots that are embedded within the masonry remains. This contributes to the loosening of stonework.

Guidance on cutting back vegetation growing on walls

- Any vegetation growing out of walls/masonry should be carefully cut back flush with the masonry. The stumps should be left in situ and treated with herbicide to prevent regeneration. No stonework should be disturbed.
- In areas where problematic vegetation is encountered and/or where there is a risk to the underlying stonework through vegetation removal, please contact Cadw before proceeding with any works.
- Only clumped ivy should be cut back and the brash removed. Close growing ivy should be left in place and not pulled off the masonry. Pulling close growing ivy off stonework can cause damage.
- Any access/cutting equipment should not come in to contact with walls etc.
- Work such as vegetation cutting should be carried out in dry weather so as to minimise ground disturbance.
- All brash should be removed from the scheduled area and no burning should take place within it.
- All contractors should be made aware of the location of the scheduled area, its sensitivity and constraints.

4.2 Category 2 Works

Significant or Intrusive Works such as these require full Scheduled Monument Consent to be granted in writing by Cadw prior to the works being undertaken. Application form available at:

<http://cadw.wales.gov.uk/historicenvironment/help-advice-and-grants/makingchanges/schedmonconsent/?lang=en>

Upon receipt of scheduled monument consent the works outlined below must then be carried out according to the conditions specified in the consent.

Not applicable.

4.3 Long-term Management Recommendations / Best Practice

- To maintain the monument by the timely removal of any seedling/sapling trees/scrub vegetation on the leat/pond areas whilst maintaining a suitable shading tree canopy where appropriate outside of these features.
- To carefully remove any vegetation growing on masonry (as per guidance above).
- To undertake any necessary tree management (as per guidance above).
- To monitor the erosion on the tops of the leat/pond earthwork banks – consult Cadw if it gets worse.
- To monitor the subsidence within the scheduled area – consult Cadw if it gets worse.
- Employ a suitably qualified conservation architect to produce a conservation management plan for the site.
- In consultation with Cadw (and by prior Scheduled Monument Consent from Cadw) design a long term plan to conserve the monument.

5. Photographs



Fig 2. Damage to brick spillway (20/05/21)



Fig. 3. Erosion to pond/leat top of earthwork bank & standing water (20/05/21)

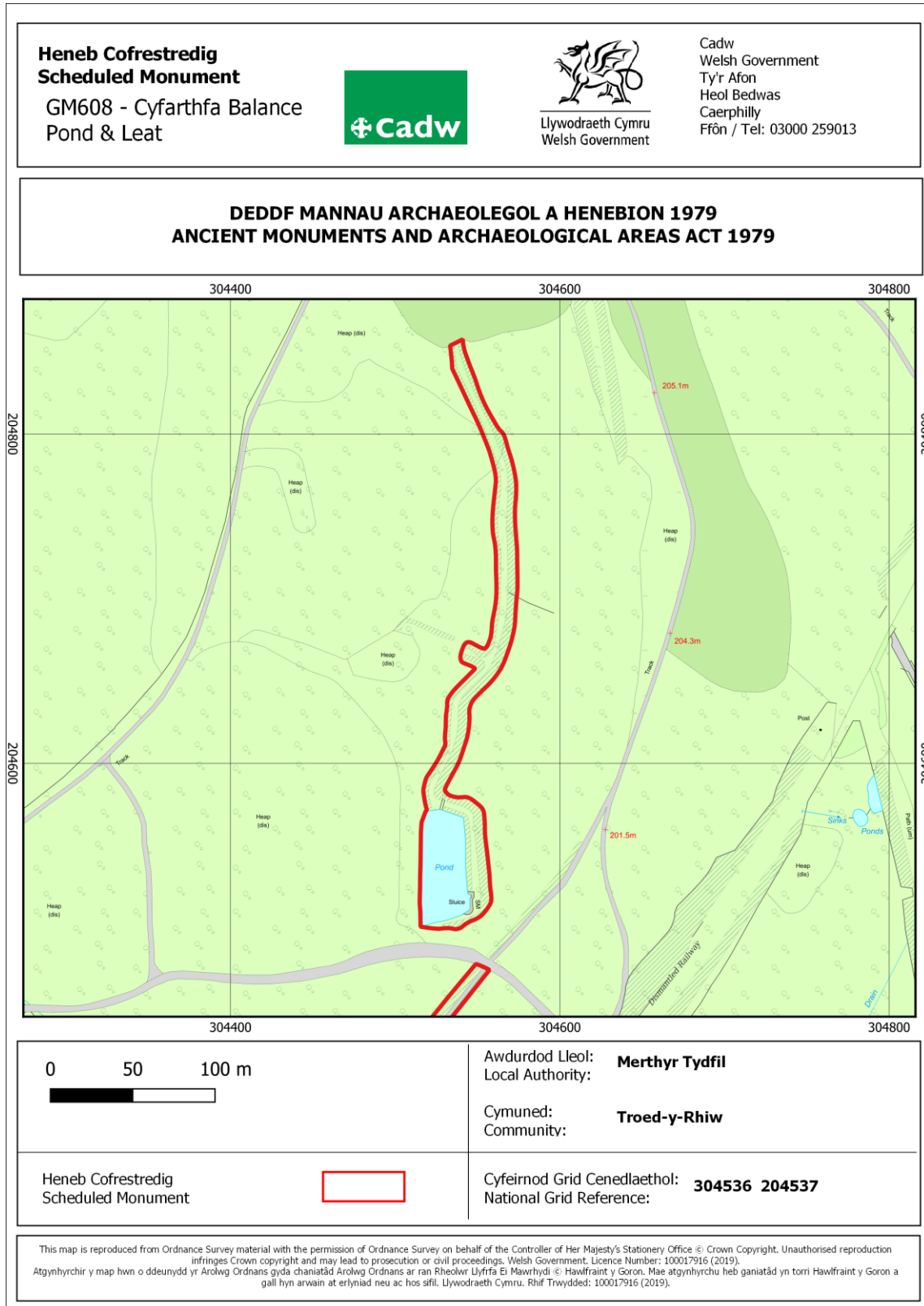


Fig. 4. Area of subsidence within leat & invasive tree/scrub growth (20/05/21)



Fig. 5. Path erosion on southern end of pond dam earthwork (20/05/21)

6. Definitive Map of the Scheduled Area



7. Requirements

7.1 Ancient Monuments and Archaeological Areas Act, 1979 & Historic Environment (Wales) Act 2016

Scheduled Monuments (SMs) are monuments deemed to be of national importance and as such are protected under the Ancient Monuments and Archaeological Areas Act, 1979 as amended by the Historic Environment (Wales) Act 2016. It is an offence under the legislation to cause damage or disturbance to a SM.

Damage or disturbance would include – any unauthorised works that involve ground disturbance (including fencing), but also importing material into the scheduled area, metal detecting, rewetting, burning etc.

Any operations involving ground disturbance, the importation of material or rewetting require Scheduled Monument Consent (SMC) to have been approved by Cadw prior to the works being undertaken.

Appendix EDP 4
Cwm Pit and Head of Railway (GM607):
Scheduling Description

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This Monument has been scheduled under the Ancient Monuments & Archaeological Areas Act 1979

Scheduled Ancient Monument: Report for Scheduled Ancient Monument Only

Reference Number :	GM607	Name :	Cwm Pit and head of railway
Status :	Proposed	Number of Archaeological Items :	2
In Guardianship :	No	Date of Designation :	30 Nov 2016

Location

Unitary Authority :	Merthyr Tydfil	Community :	Troed-y-Rhiw
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Landscape Designation :	Landscape Designation Name :
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National Grid Ref. :	SO 044 043
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Easting :	304400	Northing :	204300
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Description

Broadclass :	Site type :	Period :
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Summary Description and Reason for Designation

The monument comprises the remains of Cwm Pit and the head of the Cwm Pit Railway. The site lies near the terminus of the Cyfarthfa Canal built from 1765 to connect a number of surface workings of coal to the furnace complex. The water balance pond at the west end of the site is on the site of a pond shown on the draft Ordnance Survey Map of 1814. This may have been used for scouring. Cwm Pit was not sunk as a deep mine until 1843 when it was a balance pit, eventually reaching a depth of 150 yards. The head of the railway and the site of the pit are bounded on the north side by a massive revetment wall of coursed Pennant sandstone blocks. The raking railway embankment wall rises to a height of about 4m under a heavy flat coping. It kicks out at a point where there are stone steps carried on a pair of semi-circular arches. The revetment wall continues at full height on a stepped base. There are lines of putlog holes, bigger sockets and remains of iron brackets. Within the revetment wall is a semi-circular arch opening into an adit tunnel running back under the site. The base of the tunnel includes a drainage channel. Above and behind the revetment wall are the remains of the colliery buildings. These are reduced and buried except for the base of the engine house chimney made of massive stone blocks with yellow brick details. The end of the railway is easily followed as a modern track. The earliest feature on the site is the water balance or even earlier scouring pond. It was constructed by building a U-shaped earth and stone dam on the hill slope. This still contains a water-filled pond that measures some 40m from NNW to SSE by 22m transversely.

The monument is of national importance for its potential to enhance and illustrate our knowledge of the late 18th and early 19th century coal mining industry. The history of the site dates back into the later 18th century and it demonstrates the technological change from a water balance pit to a deep mine with steam power haulage and drainage. It is the most complete coal mine complex in the Merthyr area. The structures may be expected to contain archaeological information in regard to chronology, building techniques and functional detail.

The area to be scheduled comprises the remains described and an area around them within which related evidence may be expected to survive. It is irregular and measures up to 350m from NE to SW by up to 130m transversely.

Appendix EDP 5
Cwm Pit and Head of Railway (GM607):
Monument Management Plan

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Scheduled Monument Management Plan May 2021

Cwm Pit and head of railway (GM607)



Fig. 1. General view of the retaining wall (20/05/21)

This management plan has been produced within the Historic Environment Branch of Cadw to inform management of the Scheduled Monument.

Cadw, Welsh Government

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Cadw is the Welsh Government's historic environment service, working for an accessible and well-protected historic environment for Wales.

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SM name and reference number	Cwm Pit and head of railway (GM607)
Grid reference	SO 044 043
Current Cadw funded schemes (MA /AM Grant)	n/a
Cadw FMW and contact details	Dr Jessica Hughes Field Monument Warden Cadw Welsh Government Tel: 02920 625352 Mobile: 07580 313839 E-mail: jessica.hughes@gov.wales

I. Site Description

The monument comprises the remains of Cwm Pit and the head of the Cwm Pit Railway. The site lies near the terminus of the Cyfarthfa Canal built from 1765 to connect a number of surface workings of coal to the furnace complex. The water balance pond at the west end of the site is on the site of a pond shown on the draft Ordnance Survey Map of 1814. This may have been used for scouring. Cwm Pit was not sunk as a deep mine until 1843 when it was a balance pit, eventually reaching a depth of 150 yards. The head of the railway and the site of the pit are bounded on the north side by a massive revetment wall of coursed Pennant sandstone blocks. The raking railway embankment wall rises to a height of about 4m under a heavy flat coping. It kicks out at a point where there are stone steps carried on a pair of semi-circular arches. The revetment wall continues at full height on a stepped base. There are lines of putlog holes, bigger sockets and remains of iron brackets. Within the revetment wall is a semi-circular arch opening into an adit tunnel running back under the site. The base of the tunnel includes a drainage channel. Above and behind the revetment wall are the remains of the colliery buildings. These are reduced and buried except for the base of the engine house chimney made of massive stone blocks with yellow brick details. The end of the railway is easily followed as a modern track. The earliest feature on the site is the water balance or even earlier scouring pond. It was constructed by building a U-shaped earth and stone dam on the hill slope. This still contains a water-filled pond that measures some 40m from NNW to SSE by 22m transversely.

The monument is of national importance for its potential to enhance and illustrate our knowledge of the late 18th and early 19th century coal mining industry. The history of the site dates back into the later 18th century and it demonstrates the technological change from a water balance pit to a deep mine with steam power haulage and drainage. It is the most complete coal mine complex in the Merthyr area. The structures may be expected to contain archaeological information in regard to chronology, building techniques and functional detail.

The scheduled area comprises the remains described and areas around them within which related evidence may be expected to survive

2. Current Condition

Last Cadw site visit: 20/05/2021

At the time of the Cadw site visit the monument was found to be in a worsened-severe condition. The majority of the scheduled area is difficult to access due to the growth of trees and invasive scrub – with the stone footings of all buildings now covered in vegetation. The masonry remains of the chimney and retaining wall are being damaged by trees and scrub that are now growing out of them. Notably, a fallen tree has toppled from the top of the chimney and is now resting against it. This has displaced a number of stones and is placing a great force upon the side of the chimney. The retaining wall has a number of trees and woody scrub growing from it – especially along the wall top. This is contributing to the loose stonework.

What was once the railway trackbed is now a watercourse (source of water undetermined). At the time of the visit the water was deep and flowing fast and made it impossible to inspect the adit on the north side of the scheduled area as well as the adits and culvert within the retaining wall. The scouring effect of this water can be seen along the length of the trackbed and sides – tipped material is being cut into on the trackbed sides – the trackbed itself has been scoured away.

The pond at the western end of the scheduled area was cloaked in scrub and semi-mature broadleaf regeneration. The banks of the pond could not be traversed and scrub has taken hold within the pond itself. Due to the wet conditions during the site visit, the pond was containing a large amount of water. There were signs of scrambler bike activity on the paths which criss-cross the monument – these were contributing to path erosion.

Condition Trend: Worsened-severe

Current Condition: Unfavourable

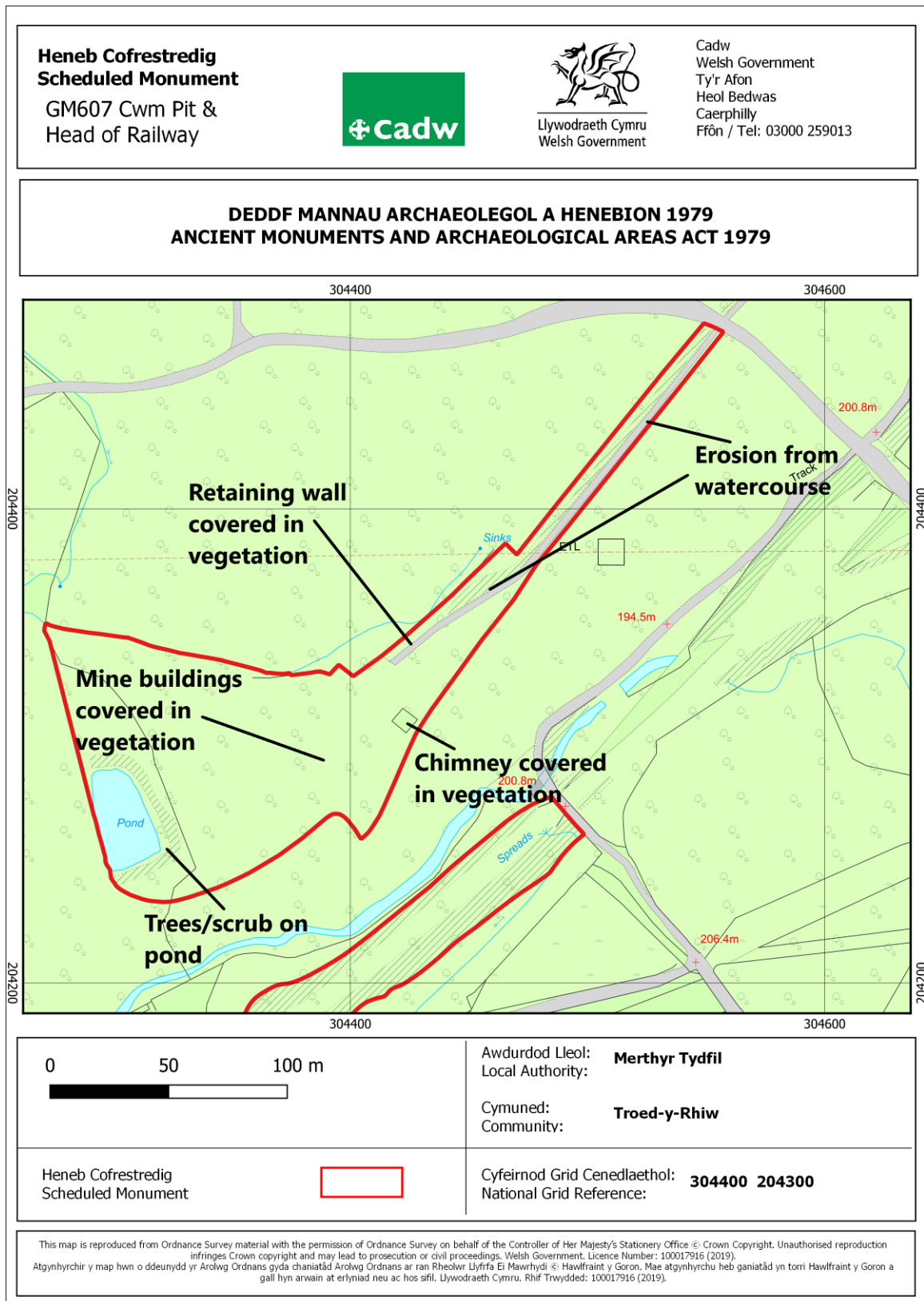
Vulnerability: High

At Risk Level: High-immediate

Management Issues

- Lack of vegetation management has led to all masonry remains becoming cloaked in scrub and semi-mature trees.
- Loose/collapsing stonework throughout monument.
- Fallen tree resting against chimney stack.
- Invasive trees/vegetation growing on the earthworks of the pond.
- Watercourse through monument scouring away archaeological remains.
- Anti-social behaviour: scrambler bikes; littering.

3. Map of the Scheduled Area Highlighting Management Issues



4. Management Advice

The following works are recommended to improve the condition of the scheduled monument. Cadw Field Monument Wardens are available to provide help and advice, and can be contacted via details shown on page 4.

Prioritised list of management works:

- Tree management – assess and deal with problematic trees growing on the masonry remains – particularly the chimney stack and retaining walls.
- Regularly cut back *invasive* under-storey vegetation such as bramble/bracken/scrub growing on earthworks/masonry and treat with herbicide to prevent re-growth.
- Monitor the erosion being caused by the watercourse running along the former railway trackbed. In very dry conditions – undertake a photographic record of this area so that the degree of erosion can be monitored.
- When masonry remains are cleared of invasive vegetation, employ a suitably qualified & experienced conservation architect to assess the monument and produce a conservation plan.
- Secure access points into the monument to prevent scrambler motorbike activity.
- Undertake regular litter picks to prevent the build-up of rubbish.

The table below summarises the necessary works and required consent procedures.

4.1 Works not requiring SMC These works can be undertaken without scheduled monument consent if they are carried out according to the guidance specified in section 4.1 below.	4.2 Works requiring SMC These works require scheduled monument consent under the Ancient Monuments and Archaeological Areas Act 1979. The works may only be undertaken following written consent from Cadw. The works must then be carried out according to conditions specified in the consent.
• Assess trees in scheduled area and remove those growing on masonry remains/pond earthworks. • Regularly cut back & then herbicidally treat invasive/scrubby understorey vegetation. • Keep masonry remains & pond free from trees/invasive scrub. • Remove any dens; firepits; rubbish. • Photographic survey of the railway trackbed (in dry conditions). • Obtain a conservation management plan from conservation architect.	• Any repairs to earthworks/ masonry remains. • Installing/renewing any fencing; steps; benches; footpaths; interpretation panels; signage etc. • Any installation/renewal of safety railings. • Any other activities which necessitate ground disturbance and/or disturbance to stonework. • Any tree/vegetation management on which requires specialist access/techniques or where there is a risk of damage to stonework and/or ground disturbance. • Any geotechnical investigations where there is a risk of damage to stonework and/or ground disturbance.

4.1 Works not requiring Scheduled Monument Consent (SMC)

These works can be undertaken without scheduled monument consent provided that they are carried out according to the guidance specified below:

Tree management within the scheduled area

- A number of mature and semi-mature trees are growing within the scheduled area – especially on the masonry remains and pond earthworks. Tree roots cause damage to below-ground and upstanding archaeological remains.
- Any trees which pose a threat of wind throw/shedding limbs, should be assessed and the appropriate steps taken (see below).
- Regular maintenance is important with tree management. Dealing with trees whilst they are at seedling/sapling stage is much easier and cost efficient than with large, mature trees.
- The aim is to keep the masonry remains and earthworks of the pond free from trees/scrub, whilst maintaining an appropriate shading tree canopy outside of these areas.
- This guidance does not convey any approval or consent required under any enactment, bylaw, order or regulation other than the Ancient Monuments and Archaeological Areas Act 1979. It is the responsibility of the landowner/manager to obtain any such approval or consent where necessary.
- In areas where problematic trees are encountered and/or where there is a risk to the underlying/nearby stonework/archaeological features through tree removal, please contact Cadw before proceeding with any works.
- Access for tree removal and tree removal methods should be considered carefully as damage to the scheduled monument can be caused through the tracking of heavy machinery/trailers and felling of trees onto scheduled monuments. Contact Cadw to discuss and agree access/tree-felling methodology.

Guidance on tree management within the scheduled area

- **Access within the scheduled area is difficult due to dense vegetation, waterlogged ground, old mining activity and lack of trackways. Prior to commencing tree removal works, a methodology should be developed regarding accessing the various parts of the monument and how the timber/brash will be removed. This will need to be approved by Cadw prior to any works starting.**
- Dead, diseased and/or unstable trees that could be susceptible to wind throw/shedding limbs should be carefully felled and removed from site.
- Trees should, by hand, be sectioned and felled carefully - where possible, trees/tree limbs should be directionally felled/winched away from the monument.
- Arbour/brash mats can be used to minimize the impact of falling timber.
- Trees should be felled above ground level with stumps treated with herbicide to prevent regeneration and left to rot in-situ. No grubbing up of stumps should occur.
- Any seedling/sapling regeneration needs to be cut and removed on a regular basis so as to prevent the re-wilding of the scheduled area.
- Work on trees should be carried out in dry weather so as to minimise ground disturbance.
- All cut timber/brash should be removed from the scheduled area and no burning should take place within it.
- No timber should be stored within the scheduled area.
- No vehicular tracking within the scheduled area.
- All contractors should be made aware of the location of the scheduled area, its sensitivity and constraints.

Cut back vegetation on masonry walls

- There are multiple masonry features within the scheduled area. The stonework of these remains are covered in many places with invasive vegetation growth such as clumped ivy, broadleaf saplings, bramble etc.

- Vegetation roots penetrate mortar joints in walls/masonry remains expanding the joints which separate stonework letting in eroding forces such as water, frost and wind.
- Bushy/clumped vegetation (for example, trees, clumped ivy, bramble) moves in the wind which in turn moves roots that are embedded within the masonry remains. This contributes to the loosening of stonework.

Guidance on cutting back vegetation growing on walls

- Any vegetation growing out of walls/masonry should be carefully cut back flush with the masonry. The stumps should be left in situ and treated with herbicide to prevent regeneration. No stonework should be disturbed.
- In areas where problematic vegetation is encountered and/or where there is a risk to the underlying stonework through vegetation removal, please contact Cadw before proceeding with any works.
- Only clumped ivy should be cut back and the brash removed. Close growing ivy should be left in place and not pulled off the masonry. Pulling close growing ivy off stonework can cause damage. Trim back the clumped ivy – do not cut the main growing stems as this will encourage the ivy to grow into the masonry.
- Any access/cutting equipment should not come in to contact with walls etc.
- Work such as vegetation cutting should be carried out in dry weather so as to minimise ground disturbance.
- All brash should be removed from the scheduled area and no burning should take place within it.
- All contractors should be made aware of the location of the scheduled area, its sensitivity and constraints.

4.2 Category 2 Works

Significant or Intrusive Works such as these require full Scheduled Monument Consent to be granted in writing by Cadw prior to the works being undertaken. Application form available at:

<http://cadw.wales.gov.uk/historicenvironment/help-advice-and-grants/makingchanges/schedmonconsent/?lang=en>

Upon receipt of scheduled monument consent the works outlined below must then be carried out according to the conditions specified in the consent.

Not applicable.

4.3 Long-term Management Recommendations / Best Practice

- To carefully remove any vegetation growing on masonry (as per guidance above). To maintain masonry remains with no scrub/tree growth on them.
- To maintain the monument by the timely removal of any seedling/sapling trees/invasive scrub vegetation whilst maintaining a suitable shading tree canopy where appropriate.
- To undertake any necessary tree management (as per guidance above) including removing dead trees resting on masonry remains.
- To prevent access to the monument by scrambler bikes.
- To monitor footpath erosion/scrambler bike activity – consult Cadw if it gets worse.
- To monitor the water scour along the railway trackbed.
- Employ a suitably qualified conservation architect to produce a conservation management plan for the site.
- In consultation with Cadw (and by prior Scheduled Monument Consent from Cadw) design a long term plan to conserve the monument.

5. Photographs



Fig 2. Scour on railway trackbed and erosion from scrambler bikes (20/05/21)



Fig. 3. Vegetation/tree growth on retaining wall and railway trackbed & watercourse (20/05/21)



Fig. 4. Chimney stack showing vegetation/tree growth; loose stonework and tree resting on it (20/05/21)

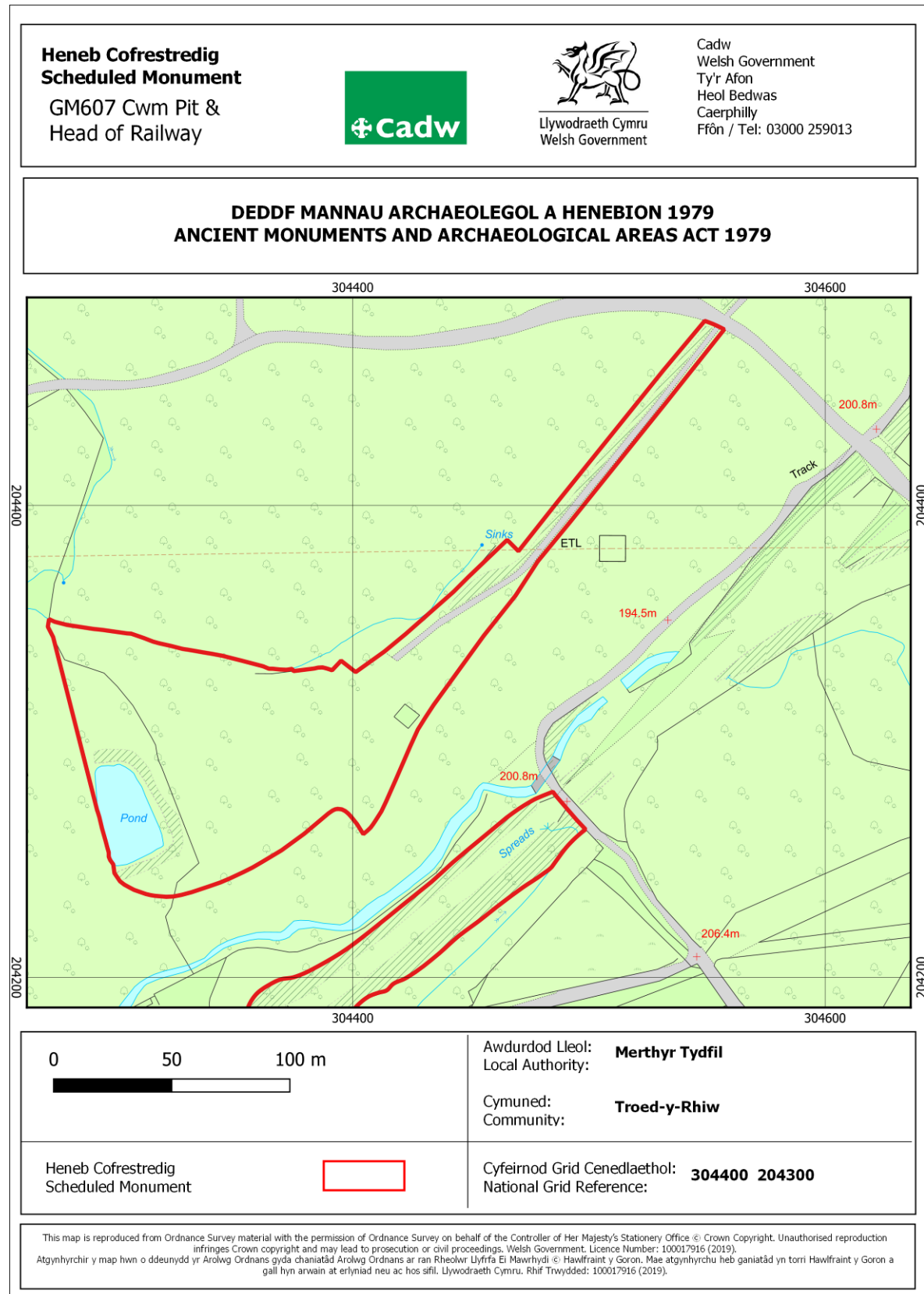


Fig. 5. Path erosion next to chimney (20/05/21)



Fig. 6. Pond showing scrub/tree growth within interior and on banks (20/05/21)

6. Definitive Map of the Scheduled Area



7. Requirements

7.1 Ancient Monuments and Archaeological Areas Act, 1979 & Historic Environment (Wales) Act 2016

Scheduled Monuments

Scheduled monuments are archaeological sites and unoccupied historic ruins that have been recognised as being of national importance and selected for protection under the Ancient Monuments and Archaeological Areas Act 1979.

Scheduled monuments are selected to represent all human activities from earliest times through to today. They range from large castles, abbeys and prehistoric burial sites to limekilns, medieval settlements and remains of the iron, coal and slate industries. Some scheduled monuments are buildings or ruins, others have no visible remains above ground but their buried archaeology is of national importance. There are currently around 4,200 scheduled monuments in Wales.

Finding out about your scheduled monument

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Cadw officers can provide guidance on how to manage and care for your scheduled monument. Contact us by email: CadwPlanning@gov.wales or telephone: 03000 256000.

Cadw has produced guidance such as *Understanding Scheduling* and *Managing Scheduled Monuments* as well as booklets explaining different types of monument and the periods from which they date. These include *Caring for Prehistoric Funerary and Ritual Monuments*, *Caring for Hillforts and Homesteads* and *Caring for Lost Farmsteads*. All can be downloaded for free from our website <https://cadw.gov.wales>

Scheduled Monument Consent

The aim of scheduling is to preserve the archaeological evidence that survives within sites and monuments. This includes the physical fabric of the monument and any associated artefacts and environmental evidence, such as pollen or seeds. It is a criminal offence to carry out works that would disturb a scheduled monument or the ground within a scheduled monument without first obtaining scheduled monument consent.

Information on Scheduled Monument Consent is available on our website <https://cadw.gov.wales/advice-support/historic-assets/scheduled-monuments/scheduled-monument-consent>

It is easy to damage a monument unintentionally so if you are not sure if you need consent for any work, please contact Cadw for advice at CadwPlanning@gov.wales.

Appendix EDP 6
Black Pins Early Ironstone Workings (GM609):
Scheduling Description

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This Monument has been scheduled under the Ancient Monuments & Archaeological Areas Act 1979

Scheduled Ancient Monument: Report for Scheduled Ancient Monument Only

Reference Number : GM609 **Name :** Black Pins early ironstone workings
Status : Proposed **Number of Archaeological Items :** 1
In Guardianship : No **Date of Designation :** 30 Nov 2016

Location

Unitary Authority : Merthyr Tydfil **Community :** Cyfarthfa
Landscape Designation : **Landscape Designation Name :**
National Grid Ref. : SO 040 047
Easting : 303940 **Northing :** 204930

Description

Broadclass : Industrial **Site type :** Quarry **Period :** Post Medieval

Summary Description and Reason for Designation

The monument comprises the remains of ironstone workings in the area around Black Pins on the Cyfarthfa estate, developed when the surface workings alongside the Cyfarthfa Canal became exhausted. The uneven landscape was left by small scale open casting: a mixture of patching at the outcrops and scouring with water was used to excavate seams of ironstone as they emerged on the valley side. The eastern edge of the area has a number of finger spoil tips formed by running out barrows of waste. Leading north-east from the area is the head of a tramroad, showing as a low earthwork. Substantial working seems to have post-dated 1814 and been abandoned by 1870 for works to the north at Winch Fawr (Scheduled Monument GM554).

The monument is of national importance for its potential to enhance and illustrate our knowledge of the early 19th century iron industry. The monument comprises a particularly clear and well preserved group of remains of early surface mining techniques of patching and scouring associated with Cyfarthfa Ironworks. They have additional importance in association with the later Iron Ore Scours and Patch Workings at Winch Fawr (Scheduled Ancient Monument GM554), which they preceded.

The area to be scheduled comprises the remains described and an area around them within which related evidence may be expected to survive. It is irregular in shape on plan and measures about 420m from NW to SE by up to 270m transversely.

Appendix EDP 7
Black Pins Early Ironstone Workings (GM609):
Monument Management Plan

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Scheduled Monument Management Plan

June 2021

Black Pins early ironstone workings (GM609)



Fig. 1. The eastern tips (20/05/21)



This management plan has been produced within the Historic Environment Branch of Cadw to inform management of the Scheduled Monument.

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Cadw is the Welsh Government's historic environment service, working for an accessible and well-protected historic environment for Wales.

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Contained within this report:

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3. Map of the Scheduled Area Highlighting Management Issues	8
4. Management Advice	9
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4.3 Long-term Management Recommendations / Best Practice	14
5. Photographs	15
6. Definitive Map of the Scheduled Area	18
7. Requirements	19
7.1 Ancient Monuments and Archaeological Areas Act, 1979	19

SM name and reference number	Black Pins early ironstone workings (GM609)
Grid reference	SO 040 047
Current Cadw funded schemes (MA /AM Grant)	n/a
Cadw FMW and contact details	Dr Jessica Hughes Field Monument Warden Cadw Welsh Government Tel: 02920 625352 Mobile: 07580 313839 E-mail: jessica.hughes@gov.wales

I. Site Description

The monument comprises the remains of ironstone workings in the area around Black Pins on the Cyfarthfa estate, developed when the surface workings alongside the Cyfarthfa Canal became exhausted. The uneven landscape was left by small scale open casting: a mixture of patching at the outcrops and scouring with water was used to excavate seams of ironstone as they emerged on the valley side. The eastern edge of the area has a number of finger spoil tips formed by running out barrows of waste. Leading north-east from the area is the head of a tramroad, showing as a low earthwork. Substantial working seems to have post-dated 1814 and been abandoned by 1870 for works to the north at Winch Fawr (Scheduled Monument GM554).

The monument is of national importance for its potential to enhance and illustrate our knowledge of the early 19th century iron industry. The monument comprises a particularly clear and well preserved group of remains of early surface mining techniques of patching and scouring associated with Cyfarthfa Ironworks. They have additional importance in association with the later Iron Ore Scours and Patch Workings at Winch Fawr (Scheduled Ancient Monument GM554), which they preceded.

The scheduled area comprises the remains described and an area around them within which related evidence may be expected to survive. It is irregular in shape on plan and measures about 420m from NW to SE by up to 270m transversely.

2. Current Condition

Last Cadw site visit: 20/05/2021

The early ironstone workings sit at the centre of the Rhydycar area to the west of Merthyr. The ground slopes from west to east and the tips and workings represent a long period of iron ore extraction and tipping. The eastern side of the scheduled area is characterised by grassed, open tips which have expansive views over Merthyr Tydfil town. At the base of these eastern tips a deciduous scrub/semi-mature woodland has established itself.

The central and western sections of the scheduled area are characterised by a series of workings, pits, shafts (some incredibly deep) and smaller tips. The ground surface is now very undulating with the area rapidly re-wilding with scrub and semi-mature trees. The more open southern and western sides of the scheduled area contain bracken and bramble. Due to the undulating nature of the site, scrambler bikes are using the monument as a bike park. Fences are regularly broken down to access the monument whilst the northern and eastern areas are open to pedestrian and bike traffic. A number of footpaths criss-cross the monument and these are not causing any erosion. However, wherever the scrambler bikes ride, erosion to the monument in the form of a loss of ground vegetation and ruts have cut into the underlying archaeology.

The main concerns at the monument comprise: the uncontrolled access to scrambler motorbikes and the re-wilding of the monument.

Condition Trend: Worsened-moderate

Current Condition: Unfavourable

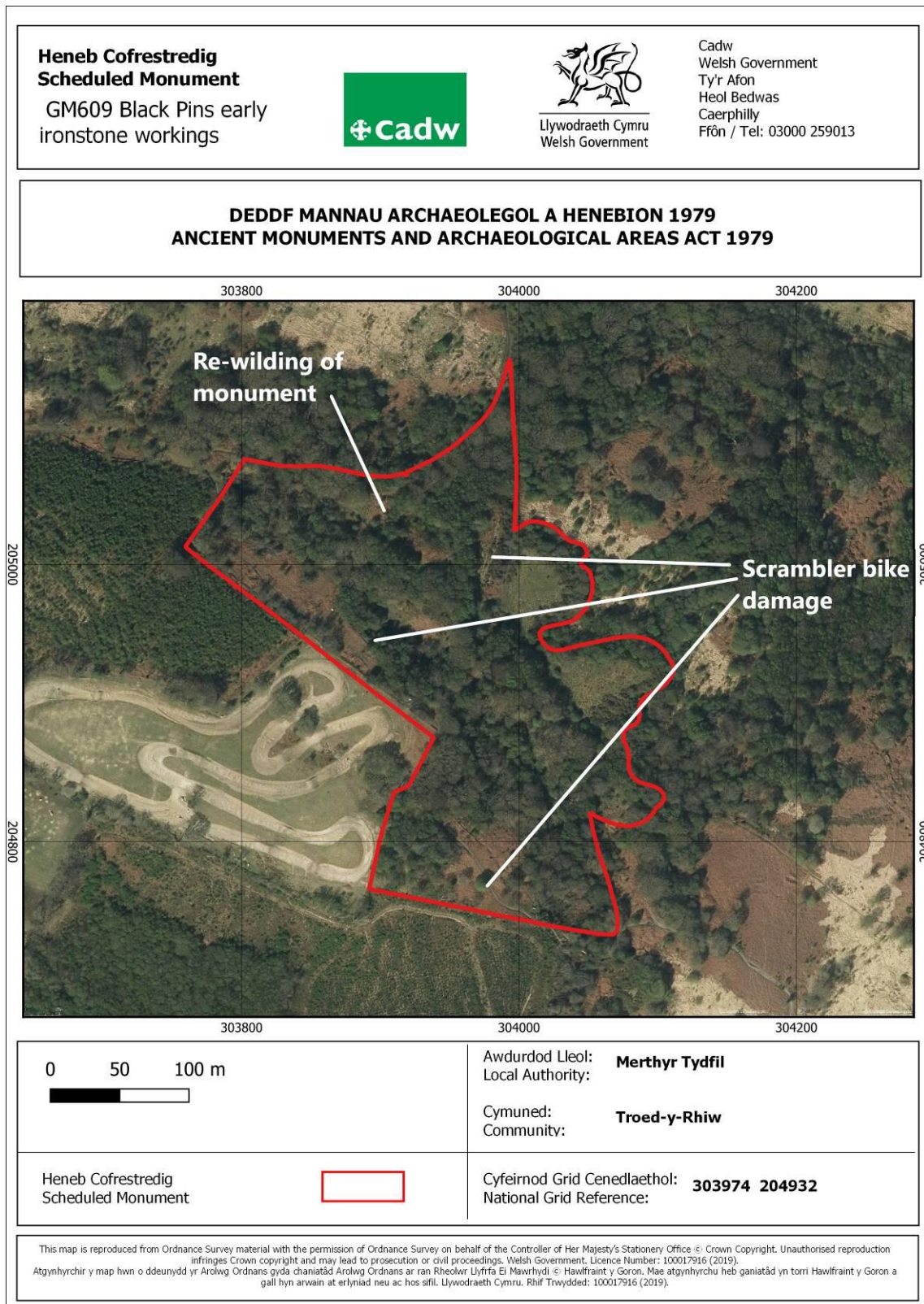
Vulnerability: High

At Risk Level: High

Management Issues

- Lack of vegetation management has led to many areas of the monument re-wilding.
- Scrambler bikes using the undulating earthworks creating areas of rutting/erosion.
- No secure fencing around the monument.
- Littering

3. Map of the Scheduled Area Highlighting Management Issues



4. Management Advice

The following works are recommended to improve the condition of the scheduled monument. Cadw Field Monument Wardens are available to provide help and advice, and can be contacted via details shown on page 4.

Prioritised list of management works:

- Tree management – assess and deal with problematic trees.
- Regularly cut back *invasive* under-storey vegetation such as bramble/bracken/scrub whilst maintaining a suitable shading tree canopy.
- Monitor the erosion being caused by footpaths/scrambler bike activity.
- Secure access points into the monument to prevent scrambler motorbike activity.
- Undertake regular litter picks to prevent the build-up of rubbish.

The table below summarises the necessary works and required consent procedures.

4.1 Works not requiring SMC These works can be undertaken without scheduled monument consent if they are carried out according to the guidance specified in section 4.1 below.	4.2 Works requiring SMC These works require scheduled monument consent under the Ancient Monuments and Archaeological Areas Act 1979. The works may only be undertaken following written consent from Cadw. The works must then be carried out according to conditions specified in the consent.
• Assess trees in scheduled area and remove any that are problematic. • Regularly cut back & then herbicidally treat invasive/scrubby understorey vegetation. • Remove any dens; firepits; rubbish. • Secure perimeter fencing (outside of scheduled area) to prevent scrambler bike access.	• Any earthwork repairs. • Installing/renewing any fencing; steps; benches; footpaths; interpretation panels; signage etc. • Any installation/renewal of safety fencing. • Any other activities which necessitate ground disturbance. • Any tree/vegetation management on which requires specialist access/techniques or where there is a risk of damage to the monument and/or ground disturbance. • Any geotechnical investigations where there is a risk of damage to the monument and/or ground disturbance.

4.1 Works not requiring Scheduled Monument Consent (SMC)

These works can be undertaken without scheduled monument consent provided that they are carried out according to the guidance specified below:

Tree management within the scheduled area

- A number of mature and semi-mature trees are growing within the scheduled area. Tree roots cause damage to below-ground and upstanding archaeological remains.
- Any trees which pose a threat of wind throw/shedding limbs, should be assessed and the appropriate steps taken (see below).
- Regular maintenance is important with tree management. Dealing with trees whilst they are at seedling/sapling stage is much easier and cost efficient than with large, mature trees.
- This guidance does not convey any approval or consent required under any enactment, bylaw, order or regulation other than the Ancient Monuments and Archaeological Areas Act 1979. It is the responsibility of the landowner/manager to obtain any such approval or consent where necessary.
- In areas where problematic trees are encountered and/or where there is a risk to the underlying/nearby archaeological features through tree removal, please contact Cadw before proceeding with any works.
- Access for tree removal and tree removal methods should be considered carefully as damage to the scheduled monument can be caused through the tracking of heavy machinery/trailers and felling of trees onto scheduled monuments. Contact Cadw to discuss and agree access/tree-felling methodology.

Guidance on tree management within the scheduled area

- **Access within the scheduled area is difficult due to dense vegetation, waterlogged ground, old mining activity and lack of trackways. Prior to commencing tree removal works, a methodology should be developed regarding accessing the various parts of the monument and how the timber/brush will be removed. This will need to be approved by Cadw prior to any works starting.**
- Dead, diseased and/or unstable trees that could be susceptible to wind throw/shedding limbs should be carefully felled and removed from site.
- Trees should, by hand, be sectioned and felled carefully - where possible, trees/tree limbs should be directionally felled/winched away from the monument.
- Arbour/brush mats can be used to minimize the impact of falling timber.
- Trees should be felled above ground level with stumps treated with herbicide to prevent regeneration and left to rot in-situ. No grubbing up of stumps should occur.
- Any seedling/sapling regeneration needs to be cut and removed on a regular basis so as to prevent the re-wilding of the scheduled area.
- Work on trees should be carried out in dry weather so as to minimise ground disturbance.
- All cut timber/brush should be removed from the scheduled area and no burning should take place within it.
- No timber should be stored within the scheduled area.
- All contractors should be made aware of the location of the scheduled area, its sensitivity and constraints.

Control weeds/scrub within the scheduled area

- Gorse, brambles and other scrub are beginning to encroach within the scheduled area. This needs careful management to stop these species spreading. The aim is to maintain the monument with open grassland areas (finger tips) and open understorey areas within the woodland.

- Some understorey areas within the trees are quite thick with invasive vegetation such as scrub/bramble etc – these areas need cutting and clearing away so as to encourage an open understorey.

Guidance on controlling scrub/weeds within the scheduled area

- Twice annual cut of all invasive scrub such as blackthorn, bramble, bracken and weeds.
- Explore targeted use of herbicide on rapidly regenerating species.
- Establish a woodland grassland species understorey through regular cutting.
- When using a brushcutter be careful not to disturb any archaeological features.
- Remove all brash from the scheduled area.
- No burning to occur within the scheduled area.

4.2 Category 2 Works

Significant or Intrusive Works such as these require full Scheduled Monument Consent to be granted in writing by Cadw prior to the works being undertaken. Application form available at:

<http://cadw.wales.gov.uk/historicenvironment/help-advice-and-grants/makingchanges/schedmonconsent/?lang=en>

Upon receipt of scheduled monument consent the works outlined below must then be carried out according to the conditions specified in the consent.

Not applicable.

4.3 Long-term Management Recommendations / Best Practice

- To maintain the monument by the timely removal of any seedling/sapling trees/invasive scrub vegetation whilst maintaining a suitable shading tree canopy where appropriate.
- To undertake any necessary tree management (as per guidance above).
- To prevent access to the monument by scrambler bikes.
- To monitor footpath erosion/scrambler bike activity – consult Cadw if it gets worse.

5. Photographs



Fig 2. Example of woodland in central part of scheduled area with shading canopy and suitable woodland species understorey (20/05/21)



Fig. 3. Scrambler bike damage in central part of scheduled area (20/05/21)

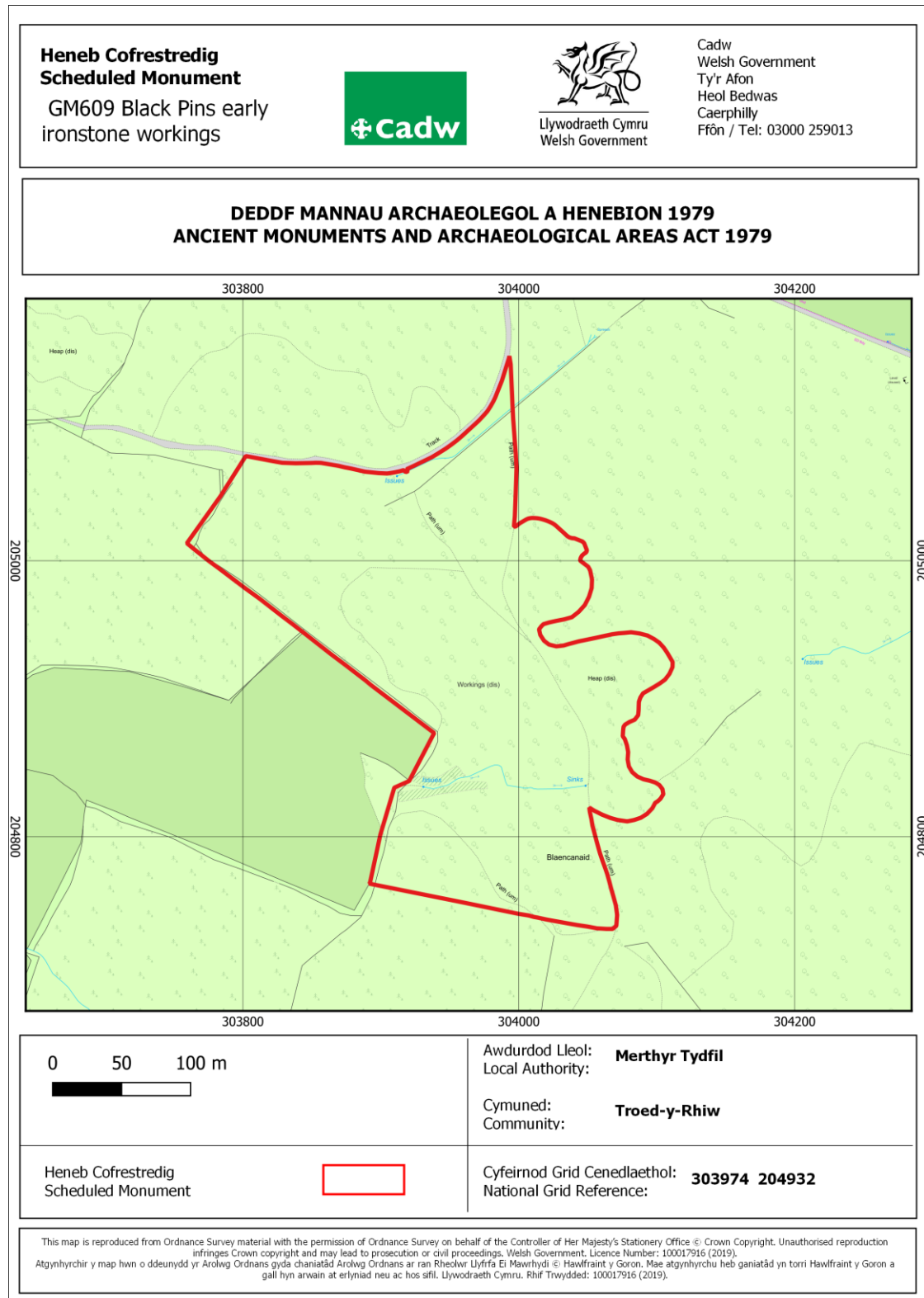


Fig. 4. Scrambler bike damage in NE part of scheduled area (20/05/21)



Fig. 5. Open grassed habitat of the eastern finger tips (20/05/21)

6. Definitive Map of the Scheduled Area



7. Requirements

7.1 Ancient Monuments and Archaeological Areas Act, 1979 & Historic Environment (Wales) Act 2016

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Appendix EDP 8
Grade II listed building, the Base of Chimney at Cwm Pit (81752):
Listing Description

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Full Report for Listed Buildings



Summary Description of a Listed Buildings

Reference Number	Building Number	Grade	Status	Date of Designation	Date of Amendment
81752		II	Designated	29/07/2003	29/07/2003

Name of Property	Address
Base of Chimney at Cwm Pit	

Location

Unitary Authority	Community	Town	Locality	Easting	Northing
Merthyr Tydfil	Troed-y-Rhiw		Blaen Canaid	304422	204312

Street Side	Location
	In forestry on the W side of the Taf valley reached by a track some 1km NW from the Gethin Forest picnic site.

Description

Broad Class	Period
Industrial	

History

Chimney base of colliery chimney of the Cwm Pit colliery, a complex now overgrown in woodland but still with surviving massive stone revetment walls to stream and arched entries into the levels. Cwm Pit was sunk between 1820 and 1840, the boom years of the deep pits in the area such as Collier's Row, Glyndyrys and Rhyd-y-car. The chimney stands on a rise to the S of the main remains. Old photographs show a very tall square stack standing S of a 3-storey engine house on the revetment wall, a hipped building SW of the chimney and various buildings to W.

Exterior

Chimney base built of exceptionally large rock-faced stone squared blocks rising to heavy similar raised band and then stepped back in three steps of similar blocks to site of demolished shaft. Each side has a large arched stoking hole, three lined with yellow brick but perhaps originally all of masonry as one survives with cut stone voussoirs and no yellow brick.

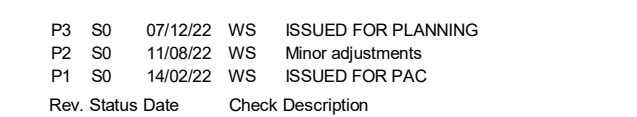
Interior

Reason for designation

Included as a particularly massively built chimney base, an historically important feature of this earlier C19 pit.

Appendix EDP 9
Illustrative Masterplan
(HMA, 4170, PL-020 Rev P2)

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Job No	Scale at A1	Status	Rev.	Ext.	Int.
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Project	Originator	Zone	Level	Type	Role	Sheet
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