



# Assessment of the Significance of Impact of Development on Historic Landscape of Historic Interest in Wales 2

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Pen March Wind  
Farm

May 2023 | Project Ref 06151A

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**Project Number:** 06151A

**File Origin:** \HCUK Group\Projects - Documents\Projects 6001-6500\6101-6200\06151 - Pen March Wind Farm, Wales\AC\Reports\ASIDOHL

| Author with date | Reviewer code, with date |
|------------------|--------------------------|
| JM, 04.10.2022   | RD-0326, 05.10.2022      |
| JM, 06.10.2022   |                          |
| JM, 02.05.2023   |                          |

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# 1. Introduction

## Background

### Project Background

- 1.1** This Assessment of the Significance of Impact of Development on Historic Landscape of Historic Interest in Wales 2 (ASIDOHL2) has been prepared by James Meek of HCUK Group for the proposed Pen March Wind Farm project in southeast Wales within Merthyr Tydfil and Caerphilly County Borough Councils. The proposals are for 6 wind turbines to be located on Pen March mountain northeast of Merthyr Tydfil. The application boundary covers an area of c.460ha centred on SO 08601 10007 (Figure 1). This report covers all stage of the ASIDOHL2 process.
- 1.2** The Pen March Wind Farm lies partly within the Merthyr Tydfil landscape included within the Register of Landscapes of Historic Interests in Wales (Ref number HLW(MGL)2). The development boundary partially covers two character areas within the wider Merthyr Tydfil HLW: Merthyr Common (HLCA 041) and a very small part encroaches into Pengarnddu (HLCA 035).
- 1.3** The wind farm is subject to the preparation of an Environmental Impact Assessment and this ASIDOHL will be used as a supporting document for the Cultural Heritage chapter of the EIA.
- 1.4** The Proposed Scheme will consist of the following principal components:
- Up to six three-bladed horizontal axis wind turbines up to 180m to blade tip height. Each turbine has an internal transformer and aviation lighting.
  - Wind turbine foundations and hardstanding areas which will include crane hardstanding areas and laydown / storage areas.
  - An electrical substation and control building compound.
  - New site access off Common Road and associated bell mouth junction.
  - Battery storage facilities.
  - On-site access tracks, passing places, and turning heads.
  - Two gas pipeline crossings and two watercourse crossings.
  - Underground power cables (and fibre optic communication cables) linking the wind turbines and the on-site electrical substation and control building.

- A main temporary construction and storage compound with associated lay down areas near to the site entrance.
- Construction working areas associated with turbine locations and access tracks which will be restored after construction is complete.
- Off-site works to enable the movement of abnormal loads during construction (such as over-run areas and temporary modifications to street furniture etc).
- Habitat Management Area.

**1.5** A Historic Environment Desk-Based Assessment has also been prepared for the EIA which considers all aspects of the historic environment (excluding the Historic Landscape covered in this ASIDOHL), which for the purposes of planning policy in Wales, is defined as *'All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and deliberately planted or managed'*.

**1.6** The guidance defines a historic asset as *'An identifiable component of the historic environment. It may consist or be a combination of an archaeological site, a historic building or area, historic park and garden or a parcel of historic landscape. Nationally important historic assets will normally be designated (Welsh Government 2017).'*

**1.7** Further guidance on how the planning system considers the historic environment and assets during development planning, preparation and decision making on planning and Listed Building (LBC) applications can be found in. Planning Policy Wales: Technical Advice Note 24: The Historic Environment (Welsh Government 2017; available online).

**1.8** The scope of this ASIDOHL was agreed with Neil Maylan, Senior Historic Environment Planning Officer, Cadw.

**1.9** Cadw agreed that indirect visual impacts be assessed on Registered Historic Landscapes lying within a 3km buffer from the site edge. This buffer is referred to as the HL Study Area.

**1.10** This report should be read in conjunction with the Historic Environment Desk-Based Assessment to provide a full assessment of the impact of the proposed Pen March Wind Farm on the Historic Environment of the area, including designated historic assets (Scheduled Monuments, registered Historic Landscapes, registered Parks and Gardens, Grade I, II\* & II Listed Buildings) and non-designated historic assets recorded on the regional Historic Environment Records and National Monuments Record.

- 1.11** This report concentrates on the impacts of the proposed Pen March Wind Farm on the Merthyr Tydfil Historic Landscape included within the Register of Landscapes of Historic Interests in Wales (Ref number HLW(MGL)2). The Zone of Theoretical Visibility (ZTV) for the Hub Height of the proposed wind turbines has been used within the report has been prepared for the Pen March Wind Farm (Figure 2). Further assessment of the impact of the proposals on the Merthyr Tydfil Historic Landscape has also been informed through site visits.

## The Site

- 1.12** The Site lies to the north of the A465, the Heads of the Valley Road. Rhymney lies to the east and Merthyr Tydfil lies to the southwest. Pontsticill lies to the northwest. The area covered by the Application Boundary is 460ha (Figure 1).
- 1.13** The land is open pasture land in the lower areas with slightly rougher grass on the upland areas. There are patches of bedrock present in some areas including on the western and eastern sides of the proposed area of turbines.
- 1.14** The southern boundary of the site lies at around the 350m Above Ordnance Datum (AOD) contour. The land then rises gradually over the eastern side of the site to around 530m AOD in the centre of the northern boundary. It is around 410m AOD along the western edge, with a gradual drop down to the southwestern corner to around 380m AOD.
- 1.15** Six turbines are proposed, that will likely be of N149 type which are up to 180m to tip.
- 1.16** The access track for the turbines will be located on the eastern side of the application area, running roughly north from the original line of the Heads of the Valleys road (signposted to Fochriw from the west).

## 2. Methodology

### Assessment of the Significance of Impact of Development on Historic Landscape of Historic Interest in Wales 2 (ASIDOHL2)

- 2.1** This ASIDOHL was undertaken with reference to and in accordance with the revised second edition of the Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process (Cadw 2007).
- 2.2** This document (ASIDOHL 2) should be consulted in conjunction with this assessment and is available as a pdf at:  
[www.cpat.org.uk/projects/longer/histland/asidohl/asidohl2.pdf](http://www.cpat.org.uk/projects/longer/histland/asidohl/asidohl2.pdf)
- 2.3** The objectives of the project are to complete the ASIDOHL process:
- to undertake work in accordance with national best practice and guidelines;
  - to provide an assessment of the impact of the development proposals on Historic Landscape Character Areas (HLCAs) of the Merthyr Tydfil Historic Landscape within a 3km study area surrounding the Site;
  - to produce a written account to an appropriate level of detail to include drawings,
  - to disseminate the findings of the work in an illustrated report to support the planning application.

## 3. Stage 1 - Historic Landscape Background

### 3.1 The GGAT description of the Merthyr Tydfil Historic Landscape (Figure 3) is as follows:

*“Merthyr Tydfil occupies a natural basin at the head of the Taff valley. High hills and ridges reach 450m above OD on all sides, with development constrained to the basin floor and smaller tributary valleys of the Taff, which itself provides the only natural route out of the basin to the south east. However, it is not topography alone that has shaped the town, but the mineral resources contained within its hinterland. It was probably the largest iron-making town in the world in the early to mid- 19th century, with an output calculated to be a quarter of that of the entire United States of America. The town, and its associated landscape, was rapidly transformed from a modest village in the 1750s to the largest town in Wales by 1801.*

*“Despite extensive recent land reclamation and the sanitisation of the surrounding waste tips, overall Merthyr still retains its industrial landscape character as the most significant Welsh town of the Industrial Revolution. The town and its environs remain a potent example of an internationally renowned industrial landscape of the 18th and 19th centuries and a permanent reminder of man's exploitation of the landscape.*

*“The primarily late 18th to 19th centuries landscape comprises numerous relict elements and foci set within the present landscape. These individual elements consist of the remains of large ironworks, remnants of the associated coal mining industry, water power eats, an early iron bridge, communication systems, including early tramroads, tips, terraced industrial housing, and the ironmasters house, Cyfarthfa Castle. Merthyr Tydfil, however, retains not only its economic significance, but also its importance as a religious, literary and political centre.*

*“The area identified here contains many and diverse elements, which include Merthyr's Dowlais Ironworks, established in 1759, and probably the first such works to use coke in South Wales. It was followed by the foundation of other ironworks such as Plymouth in 1763, Cyfarthfa in 1765 and Penydarren in 1784. Other subsidiary works were created in the early 19th century at Ynysfach by Cyfarthfa, Ivor by Dowlais, Dyffryn by Plymouth, with further forges at Pentrebach, a part of Plymouth. The Outstanding Historic Landscape of Gwent Levels comprises three discrete and extensive areas of alluvial wetlands and intertidal mudflats situated on the north side of the Severn Estuary represent the largest and most significant example in Wales of a 'hand-crafted' landscape. They are entirely the work of man, having been recurrently inundated and reclaimed from the sea from the Roman period onwards. The areas have distinctive patterns of settlement, enclosure and drainage systems belonging to successive periods of use, and a proven and possibly quite vast potential for extensive, well-preserved, buried, waterlogged, archaeological and palaeoenvironmental deposits surviving from earlier landscapes.”*

**3.2** The Merthyr Tydfil Historic Landscape is further divided into Historic Landscape Character Areas (HLCAs), which provide further information regarding the specific historical values of the landscape at a more local level. The Site is partially located across two HLCAs, Pengarnddu (HLCA 035) and Merthyr Common, North (HLCA 041) (Figure 4). Full descriptions are included below and are taken from the GGAT Historic Landscape section of their website.

**3.3** The characteristics of Pengarnddu (HLCA 035), which covers part of the southeastern part of the application area are laid out as follows<sup>1</sup>: *'A transport corridor associated with the limestone quarries at Twynau Gwynion, where mineral railways replaced the 18th-19th century pack-horse route. It also contains extensive remains of the Dowlais Free Drainage System and the former industrial settlement of Pengarnddu, associated with the adjacent limestone quarries.'*

*'Historical background: The historic landscape area of Pengarnddu comprises an area of semi-improved land bordered at the north and east by the Rhymney Limestone Railway of c 1864. The latter served the Twynau-gwynion quarries (HLCA 042), connecting the quarries with the Guest's Ironworks at Rhymney and was connected to the ironworks by the Rhymney Mineral (Limestone) Railway in c 1864. The Twynau Gwynion Tramroad of 1805 to Dowlais Ironworks passed through the area; a Tramroad bridge of 1805/15 survived until 1984. The area also contains the remains of the Brecon & Merthyr (Newport Branch) Railway, dating from between 1860 and 1865.'*

*'Interesting water management features dating from the 19th century, also survive in the area, part of the extensive 'Dowlais Free Drainage System': these remains are primarily Lower (Fish Pond) and Upper Reservoirs (New Pond) with associated leats (with brick and masonry lining) and aqueducts (masonry), and a 19th century red-brick pumping station, below Upper Reservoir. Lower Reservoir was built before 1850, while Upper reservoir dates to between 1850 and 1875.'*

*'The area largely formed part of the Bute Estate during the 1850s and included the farm of Blaen-Morlais. The area contains the small industrial settlement of Pengarnddu, extant in 1814. By 1875, this comprised two isolated rows, one associated with yards, to either side of the existing farmstead, and a school to the southwest. By 1915, the settlement boasted a church, St Michaels south of the school and a public house, among other features. By the 1960s the settlement has been abandoned, the farmstead and one cottage remaining.'*

**3.4** Merthyr Common, North (HLCA 041) lies within the western side of the Site and just over half of it lies within the application area. HLCA 41 is described by GGAT as

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<sup>1</sup> [http://www.ggat.org.uk/cadw/historic\\_landscape/Merthyr\\_Tydfil/English/Merthyr\\_035.htm](http://www.ggat.org.uk/cadw/historic_landscape/Merthyr_Tydfil/English/Merthyr_035.htm)

follows<sup>2</sup>: *'An area of common land containing characteristic water-management features, including part of the 19th century Dowlais Free Drainage System associated with the Dowlais and later the Ivor Iron Works; individual components include the Saints and Pitwellt Ponds and numerous associated features.*

*'Historical background: The historic landscape area of Merthyr Common, North comprises an area of traditionally open mountain grazing, part of the extensive Merthyr Common east of Twynau-gwynion Quarries and its associated limestone railway. The area's characteristics extend beyond the eastern boundary of the Merthyr Tydfil and the historic landscape. The watershed of the area dissected by various natural watercourses such as Nantmorlais and Torgwyn, has been subsequently exploited for water management purposes: the area contains the most northerly part of the Dowlais Free Drainage System, a system of reservoirs and leats, which evolved over a period of over 70 years to serve the Dowlais Ironworks and associated workings.*

*'The area contains Pitwellt Pond, shown on the 1850 tithe map, known to have been complete by 1862. The other reservoir in the area is the Saints Pond, which had been added by 1891. Pitwellt (Pitwellt) Pond is shown as drained and 'disused' on the 1919 OS map, but is described as in use in Dowlais documents of 1920.*

*'In addition to these industrial features, the area has a reservoir built by the Merthyr Tydfil Corporation in c 1902 as part of sanitation improvements; other features are mainly stone quarries, regular landscape of medieval/post-medieval date in low-lying back-fen.'*

### 3.5

The application area also just encroaches into the Pengarnddu (HLCA 035), though less than 1% of its area lies within the Site. Pengarnddu is described as *'A transport corridor associated with the limestone quarries at Twynau Gwynion, where mineral railways replaced the 18th-19th century pack-horse route. It also contains extensive remains of the Dowlais Free Drainage System and the former industrial settlement of Pengarnddu, associated with the adjacent limestone quarries.*

*'The historic landscape area of Pengarnddu comprises an area of semi-improved land bordered at the north and east by the Rhymney Limestone Railway of c 1864. The latter served the Twynau-gwynion quarries (HLCA 042), connecting the quarries with the Guest's Ironworks at Rhymney and was connected to the ironworks by the Rhymney Mineral (Limestone) Railway in c 1864. The Twynau Gwynion Tramroad of 1805 to Dowlais Ironworks passed through the area; a Tramroad bridge of 1805/15 survived until 1984. The area also contains the remains of the Brecon & Merthyr (Newport Branch) Railway, dating from between 1860 and 1865.'*

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<sup>2</sup> [https://www.ggat.org.uk/cadw/historic\\_landscape/Merthyr\\_Tydfil/English/Merthyr\\_041.htm](https://www.ggat.org.uk/cadw/historic_landscape/Merthyr_Tydfil/English/Merthyr_041.htm)

*'Interesting water management features dating from the 19th century, also survive in the area, part of the extensive 'Dowlais Free Drainage System': these remains are primarily Lower (Fish Pond) and Upper Reservoirs (New Pond) with associated leats (with brick and masonry lining) and aqueducts (masonry), and a 19th century red-brick pumping station, below Upper Reservoir. Lower Reservoir was built before 1850, while Upper reservoir dates to between 1850 and 1875.*

*'The area largely formed part of the Bute Estate during the 1850s and included the farm of Blaen-Morlais. The area contains the small industrial settlement of Pengarnddu, extant in 1814. By 1875, this comprised two isolated rows, one associated with yards, to either side of the existing farmstead, and a school to the southwest. By 1915, the settlement boasted a church, St Michaels south of the school and a public house, among other features. By the 1960s the settlement has been abandoned, the farmstead and one cottage remaining.'*<sup>3</sup>

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<sup>3</sup> [https://www.ggat.org.uk/cadw/historic\\_landscape/Merthyr\\_Tydfil/English/Merthyr\\_035.htm](https://www.ggat.org.uk/cadw/historic_landscape/Merthyr_Tydfil/English/Merthyr_035.htm)

## 4. ASIDOHL Process

### Introduction

- 4.1** As the development will have a direct physical impact upon the Merthyr Tydfil Registered Historic Landscape area the ASIDOHL process is required.
- 4.2** The first stage is to determine which assets are to be assessed and it specifically targets the HLCA areas within Merthyr Tydfil Historic Landscape. Assessment of designated assets including listed buildings and scheduled monuments included within the desk-based assessment prepared for the proposed Pen March Wind Farm. The process of identifying which assets would be assessed is included as an Appendix to that report, using the Zones of Theoretical Visibility prepared for the proposed turbines as well as an assessment of the character of the designated historic assets and distance from the Site.
- 4.3** The process of determining which of the HLCAs that form the Merthyr Tydfil Historic Landscape has been undertaken using the Pen March Wind Farm red line boundary and a 3km buffer zone projected out from this. Although there will be intervisibility with other HLCAs beyond 3km, the overall impacts at such a distance would be far less. To include them within the ASIDOHL process would dilute the overall results and so the arbitrary 3km buffer has been used. Those HLCA areas which cross beyond the 3km buffer have been clipped to assess only those parts within the buffer. The methodology has been agreed with Cadw (5<sup>th</sup> June 2022 via email with Neil Maylan).
- 4.4** The ZTV used within the process of identifying which HLCA areas should be assessed is the day time hub height ZTV. This has been used rather than the blade height ZTV, as the hub heights will be permanently visible features (unlike the rotating blades) and are a larger feature.
- 4.5** Table 1 lists the HLCAs that have been identified with the 3km study area surrounding the Site (Figure 4).

Table 1: Merthyr Tydfil HLCA areas and intervisibility

| HLCA Number | Site name                                           | Within Site Boundary / within working area? | Total percentage in ZTV |
|-------------|-----------------------------------------------------|---------------------------------------------|-------------------------|
| HLCA 004    | Penydarren Iron Works Area                          | No / No                                     | 46.77%                  |
| HLCA 005    | Penydarren                                          | No / No                                     | 98.88%                  |
| HLCA 007    | Dowlais                                             | No / No                                     | 69.22%                  |
| HLCA 008    | Dowlais Iron Works Area                             | No / No                                     | 90.39%                  |
| HLCA 027    | Taff Fechan                                         | No / No                                     | 28.49%                  |
| HLCA 029    | Ivor Iron Works Area                                | No / No                                     | 83.59%                  |
| HLCA 030    | Pantcadifor, Rhyd-y-bedd and Caeracca               | No / No                                     | 97.07%                  |
| HLCA 031    | Merthyr Common, Central                             | No / No                                     | 37.70%                  |
| HLCA 032    | Cwm Bargoed Washery                                 | No / No                                     | 14.37%                  |
| HLCA 035    | Pengarnddu                                          | Yes / No                                    | 97.32%                  |
| HLCA 036    | Thomas Town (East)                                  | No / No                                     | 98.54%                  |
| HLCA 039    | Ffos-y-fran                                         | No / No                                     | 58.19%                  |
| HLCA 040    | Incline Top                                         | No / No                                     | 75.72%                  |
| HLCA 041    | Merthyr Common, North                               | Yes / Yes                                   | 99.77%                  |
| HLCA 042    | Twynau Gwynion Quarries                             | No / No                                     | 62.04%                  |
| HLCA 043    | Garth and Blaen-y-Garth                             | No / No                                     | 92.86%                  |
| HLCA 044    | Morlais Castle Quarries                             | No / No                                     | 71.42%                  |
| HLCA 045    | Morlais Hill Castle                                 | No / No                                     | 86.20%                  |
| HLCA 046    | Bryniau Quarries                                    | No / No                                     | 99.00%                  |
| HLCA 047    | Dowlais Top                                         | No / No                                     | 96.96%                  |
| HLCA 049    | Bon-y-maen                                          | No / No                                     | 99.92%                  |
| HLCA 050    | Gurnos and Galon-Uchaf                              | No / No                                     | 0.00%                   |
| HLCA 052    | Gurnos Farm and Bunker's Hill                       | No / No                                     | 40.08%                  |
| HLCA 056    | A465(T) Heads of the Valley Road                    | No / No                                     | 81.93%                  |
| HLCA 075    | Garth Fawr Improved Common                          | No / No                                     | 25.19%                  |
| HLCA 076    | Bargoed Taf                                         | No / No                                     | 3.03%                   |
| HLCA 078    | Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun | No / No                                     | 84.25%                  |

## ASIDOHL Stage 2: Assessment of Direct, Physical Impacts on Historic Character Area(s)

**4.6** As shown in Table 1 above the two HLCAs of Pengarnddu (HLCA 035) and Merthyr Common North (HLCA 041) of the Merthyr Tydfil Registered Historic Landscape lie within or partly within the Site.

**4.7** The areas identified and calculated below are those covered by the application area and also those parts which lie within the actual proposed development area and associated infrastructure for the scheme. The areas have been calculated using QGIS.

Table 2: Illustrating the total areas of the HLCAs affected by the proposed scheme (in absolute terms)

| HLCA Name                                       | Pengarnddu<br>HLCA 035 | Merthyr Common<br>North<br>HLCA 041 |
|-------------------------------------------------|------------------------|-------------------------------------|
| <b>Total area of HLCA ha</b>                    | 89.03ha                | 224.96ha                            |
| <b>Total area within application area, ha</b>   | 0.23ha                 | 224.45ha                            |
| <b>% age of HLCA in app area</b>                | 0.26%                  | 99.77%                              |
| <b>Total area affected by Scheme direct, ha</b> | 0ha                    | 2.40ha                              |
| <b>% age of HLCA</b>                            | 0%                     | 1%                                  |
| <b>Magnitude</b>                                | Very slight            | Very slight                         |
| <b>Score</b>                                    | <b>1</b>               | <b>1</b>                            |

**4.8** The percentage of the HLCA affected has been calculated and the magnitude of the impact (in absolute terms) assessed based on Table 2 within ASIDOHL 2, p17.

Table 3: Calculations of the total area of key characteristics identified for each HLCA

| HLCA No. | Key characteristics of HLCA                                                          | Total Area of Landscape features visible on aerial imagery AND affected by scheme (ha) |
|----------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 035      | Transport corridor, mineral railways, pack horse route, former Pengarnddu settlement | 0ha                                                                                    |
| 041      | Drainage features, water management, reservoirs, leats, common land                  | 4.72ha                                                                                 |

**4.9** Table 3 provides calculations of the total area of key characteristics identified for each HLCA affected by the scheme, as per the HLCA descriptions (GGAT). The total areas have been identified using aerial imagery and Lidar data prepared for the site.

Table 4: The Assessment of Direct, Physical Impacts on the Historic Character Areas (Stage 2).

| HLCA                                  | Percentage of loss                             | Category | Magnitude       | Landscape Value                                                           | Landscape Value Effect    |
|---------------------------------------|------------------------------------------------|----------|-----------------|---------------------------------------------------------------------------|---------------------------|
| <b>Pengarnddu HLCA 035</b>            | 0%                                             | C – 2    | Very slight – 1 | Visible landscape features contributing to character and significance - 2 | Very slightly reduced – 1 |
| <b>Merthyr Common North, HLCA 041</b> | 4.72% - drainage features and water management | C – 2    | Slight – 2      | Visible landscape features contributing to character and significance - 3 | Slightly Reduced – 2      |
|                                       | b) In relative terms                           |          |                 | c) in landscape terms                                                     |                           |

**4.10** The percentage of landscape features affected by the development has been calculated from the total area of the HLCA and key landscape features contributing to the character areas have been considered 'lost' for the duration of the development when assessing the overall score. Pengarnddu (HLCA 035) will not be impacted directly by the development, but is included as it still lies within the application area. For Merthyr Common North (HLCA 041) the identified area of features of importance within the development site have been included for assessment although it is very likely the actual percentage will be less. Scores are based on Table 2 and Table 3 of ASIDOHL2, p17 & 18.

Table 5: Overall Magnitude of Direct Impacts for each HLCA affected.

| HLCA                           | Scores:<br>Category + Magnitude<br>+Landscape Value +<br>Landscape Value Effect | Overall Magnitude of Direct<br>Impacts |
|--------------------------------|---------------------------------------------------------------------------------|----------------------------------------|
| Pengarnddu HLCA 035            | $2 + 1 + 2 + 1 = 4$                                                             | Slight                                 |
| Merthyr Common North, HLCA 041 | $2 + 2 + 3 + 2 = 9$                                                             | Moderate                               |

**4.11** The overall magnitude of direct impacts for the two HLCA areas can then be determined using the calculation of adding the scores for each HLCA area: Category + Magnitude + Landscape Value + Landscape Value Effect.

**4.12** The overall magnitude of direct impacts is then determined based on Table 5 of ASIDOHL2, p19. For Pengarnddu HLCA 035 the overall magnitude of direct impacts is assessed as **Slight**, although this will in effect be negligible (but based on the scoring in the ASIDOHL guide, the score is 4). For Merthyr Common North HLCA 041 it is assessed as **Moderate**.

## ASIDOHL Stage 3: Assessment of indirect impacts of development

- 4.13** The development proposals are for a Wind Farm, to comprise six turbines and associated infrastructure to include access roads, construction areas, contractor's compound, substations and grid connection. The six turbines will be tall and very visible features in the landscape, whereas the remaining activities will be low lying and far less visible.
- 4.14** The extent of indirect impacts on the two HLCAs to be directly affected by the proposals have been assessed as follows, taking into account both indirect physical impacts and non-physical impacts. This has been supplemented with an assessment of visual impacts on the surrounding HLCA areas (expanded on further in Stage 4 of the ASIDOHL process).
- 4.15** A zone of theoretical visibility has been prepared for the scheme determine the extent of visibility of the proposed wind farm separated into six categories based on the number of turbines theoretically visible from the wider area, 1 – 6 turbines (Figure 2 and Figure 5).
- 4.16** As discussed, the proposed Pen March Wind Farm scheme lies within The Merthyr Tydfil Historic Landscape of Outstanding Historic Interest in Wales, as cited in Part 2:1 of the Register of Landscapes, Parks and Gardens of Outstanding Historic Interest in Wales, 1998 (Ref number HLW(MGL)2). The boundary of the Site covers a small part of the Pengarnddu HLCA 035 and almost all of the Merthyr Common, South HLCA 041.
- 4.17** The extent of the ZTV for the wind farm also covers 25 further HLCA areas within the 3km study area. The identified HLCAs have been considered in relation to their likely intervisibility with the wind farm and the in terms of the significant elements of the HLCAs and whether a change would occur to this significance from the proposals. The magnitude of visibility is based on the ZTV and the number of turbines visible that cover the HLCA areas (Figure 5). Appendix 1 includes full descriptions of each of the 25 HLCA areas.

Table 6: Indirect impacts on the historic character of the HLCAs.

| Name                                           | Impact                                                                                                                                                                        | Status | Magnitude Indirect physical impacts | Status | Magnitude Indirect (non-physical) visual impacts | Total Score |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------|--------|--------------------------------------------------|-------------|
| Penydarren Iron Works Area HLCA 004            | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | C – 2  | Slight – 2                                       | 4           |
| Penydarren HLCA 005                            | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | C – 2  | Moderate - 3                                     | 5           |
| Dowlais HLCA 007                               | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | B – 3  | Moderate – 3                                     | 6           |
| Dowlais Iron Works Area HLCA 008               | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | B – 3  | Moderate – 3                                     | 6           |
| Taff Fechan HLCA 027                           | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | C – 2  | Slight – 2                                       | 4           |
| Ivor Iron Works Area HLCA 029                  | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | C – 2  | Moderate – 3                                     | 5           |
| Pantcadifor, Rhyd-y-bedd and Caeracca HLCA 030 | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | C - 2  | Moderate - 3                                     | 5           |

| Name                             | Impact                                                                                                                                                                                                                                                                                                 | Status       | Magnitude Indirect physical impacts | Status       | Magnitude Indirect (non-physical) visual impacts | Total Score |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------------|--------------|--------------------------------------------------|-------------|
| Merthyr Common, Central HLCA 031 | Indirect physical impact due to severance from Merthyr Common North (HLCA 041); Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs                                                                       | <b>B – 3</b> | <b>Slight - 2</b>                   | <b>B – 3</b> | <b>Slight - 2</b>                                | <b>10</b>   |
| Cwm Bargoed Washery HLCA 032     | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs                                                                                                                          | <b>n / a</b> | <b>0</b>                            | <b>D – 1</b> | <b>Very Slight – 1</b>                           | <b>2</b>    |
| Pengarnddu HLCA 035              | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs                                                                                                                          | <b>n / a</b> | <b>0</b>                            | <b>C - 2</b> | <b>Moderate - 3</b>                              | <b>5</b>    |
| Ffos-y-fran HLCA 039             | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs                                                                                                                          | <b>n / a</b> | <b>0</b>                            | <b>C – 2</b> | <b>Moderate – 3</b>                              | <b>5</b>    |
| Incline Top HLCA 040             | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs                                                                                                                          | <b>n / a</b> | <b>0</b>                            | <b>C – 2</b> | <b>Moderate - 3</b>                              | <b>5</b>    |
| Merthyr Common, North HLCA 041   | Indirect physical impact will occur where there is severance, fragmentation and dislocation from other associated HLCA areas (specifically HLCA 031); Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | <b>B – 3</b> | <b>Severe - 5</b>                   | <b>B – 3</b> | <b>Severe - 5</b>                                | <b>16</b>   |
| Twynau Gwynion Quarries HLCA 042 | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs                                                                                                                          | <b>n / a</b> | <b>0</b>                            | <b>C - 2</b> | <b>Moderate - 3</b>                              | <b>5</b>    |

| Name                                      | Impact                                                                                                                                                                        | Status | Magnitude Indirect physical impacts | Status | Magnitude Indirect (non-physical) visual impacts | Total Score |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------|--------|--------------------------------------------------|-------------|
| Garth and Blaen-y-Garth HLCA 043          | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | C – 2  | Moderate - 3                                     | 5           |
| Morlais Castle Quarries HLCA 044          | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | D – 1  | Moderate - 3                                     | 4           |
| Morlais Hill Castle HLCA 045              | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | B – 3  | Considerable - 4                                 | 7           |
| Bryniau Quarries HLCA 046                 | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | D – 1  | Considerable - 4                                 | 5           |
| Dowlais Top HLCA 047                      | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | C – 2  | Considerable – 4                                 | 6           |
| Bon-y-maen HLCA 049                       | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | C – 2  | Considerable - 4                                 | 6           |
| Gurnos and Galon-Uchaf HLCA 050A          | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | n / a  | 0                                                | 0           |
| Gurnos Farm and Bunker's Hill HLCA 052    | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | C – 2  | Slight – 2                                       | 4           |
| A465(T) Heads of the Valley Road HLCA 056 | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | D – 1  | Moderate - 3                                     | 4           |

| Name                                                         | Impact                                                                                                                                                                        | Status | Magnitude Indirect physical impacts | Status | Magnitude Indirect (non-physical) visual impacts | Total Score |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------|--------|--------------------------------------------------|-------------|
| Garth Fawr Improved Common HLCA 075                          | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | C - 2  | Slight - 1                                       | 3           |
| Bargoed Taf HLCA 076                                         | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | C - 2  | Very Slight - 1                                  | 3           |
| Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun HLCA 078 | No indirect physical impact; Indirect (non-physical) visual impacts will where the development can be seen from the HLCA and impact on visual connections between other HLCAs | n / a  | 0                                   | C - 2  | Moderate - 3                                     | 5           |
|                                                              |                                                                                                                                                                               |        |                                     |        |                                                  | 135         |

**4.18** Table 7 assesses the indirect, physical impacts on the historic character of the HLCAs. It refers to Stage 3, p.20 of ASIDOHL2 document<sup>4</sup>.

Table 7: Summary of overall magnitude of direct physical impacts on historic character areas

| HLCA No.                       | Total Score                                                                             | Magnitude        |
|--------------------------------|-----------------------------------------------------------------------------------------|------------------|
| Pengarnddu HLCA 035            | 4                                                                                       | Slight           |
| Merthyr Common, North HLCA 041 | 9                                                                                       | Moderate         |
|                                | <b>Absolute overall magnitude of direct impact on combined historic character areas</b> |                  |
|                                | <b>13 / 2 = 6.5</b>                                                                     | <b>Magnitude</b> |
|                                | 7                                                                                       | Slight           |

Table 8: Summary of overall magnitude of indirect impact on historic character areas

| HLCA No.                                       | Total Score | Magnitude    |
|------------------------------------------------|-------------|--------------|
| Penydarren Iron Works Area HLCA 004            | 4           | Slight       |
| Penydarren HLCA 005                            | 5           | Slight       |
| Dowlais HLCA 007                               | 6           | Slight       |
| Dowlais Iron Works Area HLCA 008               | 6           | Slight       |
| Taff Fechan HLCA 027                           | 4           | Slight       |
| Ivor Iron Works Area HLCA 029                  | 5           | Slight       |
| Pantcadifor, Rhyd-y-bedd and Caeracca HLCA 030 | 5           | Slight       |
| Merthyr Common, Central HLCA 031               | 10          | Moderate     |
| Cwm Bargoed Washery HLCA 032                   | 2           | Very Slight  |
| Pengarnddu HLCA 035                            | 5           | Slight       |
| Ffos-y-fran HLCA 039                           | 5           | Slight       |
| Incline Top HLCA 040                           | 5           | Slight       |
| Merthyr Common, North HLCA 041                 | 16          | Considerable |
| Twynau Gwynion Quarries HLCA 042               | 5           | Slight       |
| Garth and Blaen-y-Garth HLCA 043               | 5           | Slight       |

<sup>4</sup> Cadw 2007

|                                                              |                                                                                         |                    |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------|
| Morlais Castle Quarries HLCA 044                             | <b>4</b>                                                                                | <b>Slight</b>      |
| Morlais Hill Castle HLCA 045                                 | <b>7</b>                                                                                | <b>Slight</b>      |
| Bryniau Quarries HLCA 046                                    | <b>5</b>                                                                                | <b>Slight</b>      |
| Dowlais Top HLCA 047                                         | <b>6</b>                                                                                | <b>Slight</b>      |
| Bon-y-maen HLCA 049                                          | <b>6</b>                                                                                | <b>Slight</b>      |
| Gurnos and Galon-Uchaf HLCA 050A                             | <b>0</b>                                                                                | <b>Very Slight</b> |
| Gurnos Farm and Bunker's Hill HLCA 052                       | <b>4</b>                                                                                | <b>Slight</b>      |
| A465(T) Heads of the Valley Road HLCA 056                    | <b>4</b>                                                                                | <b>Slight</b>      |
| Garth Fawr Improved Common HLCA 075                          | <b>3</b>                                                                                | <b>Very Slight</b> |
| Bargoed Taf HLCA 076                                         | <b>3</b>                                                                                | <b>Very Slight</b> |
| Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun HLCA 078 | <b>5</b>                                                                                | <b>Slight</b>      |
|                                                              | <b>Absolute overall magnitude of direct impact on combined historic character areas</b> |                    |
|                                                              | <b>135 / 26 = 5.19</b>                                                                  | <b>Magnitude</b>   |
|                                                              | <b>5</b>                                                                                | <b>Slight</b>      |

**4.19** Tables 7 and 8 summarise the direct and indirect impact scores for the HLCAs lying within the Site and provides the overall (averaged) scores. For Pengarnddu HLCA 035 the overall magnitude of direct impact is assessed to be 4 and for Merthyr Common North HLCA 041 it is 9. This gives a combined score of 13: thus the absolute overall magnitude of direct impact on the two combined historic character areas would be **7**, defined as **Slight** in Table 8 of ASIDOHL2, p22.

**4.20** For indirect impacts the total combined scores for the 26 HLCA areas is 137: thus the absolute overall magnitude of Absolute overall magnitude of indirect impact on the combined historic character areas would be **5**, defined as **Slight** in Table 8 of ASIDOHL2, p22.

## 5. Stage 4 - Evaluation of Relative Importance

- 5.1** In this stage the relative importance of HLCAs that are directly and/or indirectly affected are assessed.
- 5.2** The following summaries provide basic information on the 26 HLCA areas within the 3km study area for the ASIDOHL.
- 5.3** Penydarren Iron Works Area HLCA 004: *Penydarren Iron Works were founded in 1784, but were in ruins by the 1870s. The area was later developed as the depot for the tramway system and as workers' housing. A few of the ironworks structures still survive, but otherwise the area is mainly characterised by industrial terraced housing.*
- 5.4** Penydarren HLCA 005: *Penydarren originated during the early 19th century as an industrial settlement associated with the Penydarren Iron Company and its core consisted of a small cluster of cottages extended by ribbon development, later forming a more or less regular grid. Buildings are mainly regular linear terraces and the public buildings which served them, including a church, chapels, public houses and schools'.*
- 5.5** Dowlais HLCA 007: *The settlement associated with the Dowlais and later Ivor Works. Although it initially started in the second half of the 18th century as a dispersed scatter of cottages, it evolved via several phases of ribbon development to a grid system, which was already partly in place by 1814. Areas of industrial housing survive, but the area as a whole is dominated by imposing public and religious buildings, such as the Dowlais Ironworks Stables and the Memorial Library.*
- 5.6** Dowlais Iron Works Area HLCA 008: *Dowlais Ironworks was founded in 1759, and went on in the 19th century to become the largest ironworks in the world. The area now forms an industrial park with significant standing remains, such as the Blast Engine House, together with buried remains including the base of the Blast Furnaces.*
- 5.7** Taff Fechan HLCA 027: *A transport corridor based on the Taff Fechan Valley, characterised by public rail networks of the latter half of the 19th century, including the B&M/LNWR Joint Railway and the impressive structure of the Glais Viaduct at Pontsarn.*
- 5.8** Ivor Iron Works Area HLCA 029: *An industrial landscape, the site of the Ivor Iron Works, opened in 1839, and now characterised by early 20th century disused industrial buildings.*
- 5.9** Pantcadifor, Rhyd-y-bedd and Caeracca HLCA 030: *A roadside settlement of late 18th century to early 19th century and later date, associated with local quarries. The*

*settlement, which now also contains 20th century social housing and executive housing, is dominated by its mid 19th century cemetery with two chapels.*

- 5.10** Merthyr Common, Central HLCA 031: *The central area of Merthyr Common is strongly associated with the development of the iron industry of Merthyr, and indeed of South Wales. It is primarily characterised by water management features associated with the Dowlais Free Drainage System, which single out this landscape as being one of unique importance within the Merthyr Tydfil Historic Landscape, and also of national importance. The area also contains extractive features and transport networks.*
- 5.11** Cwm Bargoed Washery HLCA 032: *A modern industrial area overlying the site of Cwm Bargoed Pit, and characterised by extensive waste tips and lagoons, with surviving rail features along its northern edge. Most other historic features in the area have been largely removed by continues industrial use.*
- 5.12** Pengarnddu HLCA 035: *A transport corridor associated with the limestone quarries at Twynau Gwynion, where mineral railways replaced the 18th-19th century pack-horse route. It also contains extensive remains of the Dowlais Free Drainage System and the former industrial settlement of Pengarnddu, associated with the adjacent limestone quarries.*
- 5.13** Ffos-y-fran HLCA 039: *An extensive and nationally important landscape of industrial sites associated with the Dowlais Iron Works, mainly comprising features associated with iron ore extraction and, to a lesser extent, coal, and in use between the late 18th and early 19th century. The area is characterised by extractive features (mainly waste tips), the Dowlais Free Drainage System associated with the Dowlais and later the Ivor Iron Works, and mineral railways and tramways as well as public rail (now disused).*
- 5.14** Incline Top HLCA 040: *A major industrial transport corridor, characterised by the route of the Penydarren Incline and the Dowlais Railway. New roads in the area primarily serving the area's industrial estates continue the transport corridor characteristics. The settlement of Incline Top contains early industrial housing as well as the now more prominent recent industrial estate.*
- 5.15** Merthyr Common, North HLCA 041: *An area of common land containing characteristic water-management features, including part of the 19th century Dowlais Free Drainage System associated with the Dowlais and later the Ivor Iron Works; individual components include the Saints and Pitwellt Ponds and numerous associated features.*
- 5.16** Twynau Gwynion Quarries HLCA 042: *A series of 19th century quarries associated with the Dowlais Iron Works and later the Rhymney Iron Works.*

- 5.17** Garth and Blaen-y-Garth HLCA 043: *An agricultural landscape characterised by an area of surviving medieval or post-medieval irregular enclosures, traditional field boundaries, and vernacular domestic and agricultural buildings. There are also localised evidence for small-scale extraction, and water-management features associated with public health improvements of the late 19th century.*
- 5.18** Morlais Castle Quarries HLCA 044: *An industrial extractive landscape of early 19th century date characterised by limestone quarries with associated tips, a lime kiln, and the tram roads which linked the quarries with the Penydarren and Plymouth Ironworks.*
- 5.19** Morlais Hill Castle HLCA 045: *A nationally important relict landscape of pre-industrial date, dominated by the medieval stronghold of Morlais Castle. The area contains defensive, domestic and funerary features dating to the prehistoric and medieval periods, including a relict field system, prehistoric enclosures and a Bronze Age ring cairn. There are also post-medieval agricultural features and a fieldscape of large but irregularly shaped fields associated with Castle Farm. Industrial features are limited in extent, although the early 19th century tramroad associated with the adjacent limestone quarries does pass through the area.*
- 5.20** Bryniau Quarries HLCA 046: *An industrial extractive landscape associated with Dowlais and Ivor Iron Works, containing quarries and an associated tramroad.*
- 5.21** Dowlais Top HLCA 047: *An area of largely reclaimed industrial land, now redeveloped for modern commercial, retail and light industrial use.*
- 5.22** Bon-y-maen HLCA 049: *A modern industrial estate built on the site of former agricultural land with a fieldscape of large but irregular fields, associated with the holding of Bon-y-maen.*
- 5.23** Gurnos and Galon-Uchaf HLCA 050A: *A mid-20th century urban landscape characterised by council housing estates with associated commercial, educational and health facilities, built on former agricultural land with some industrial features.*
- 5.24** Gurnos Farm and Bunker's Hill HLCA 052: *A late 18th century agricultural landscape characterised mainly by planned medium-large regular enclosures walled in dry stone, centred on the model estate farm at Gurnos. A deserted settlement at Pantton seems to have been removed to make way for the agricultural improvements. The area is also characterised by a transport corridor which includes a tramroad to Morlais Castle Quarries, and the possible route of a Roman road associated with the crossing of the Taff Fechen at Pont Sarn.*
- 5.25** A465(T) Heads of the Valley Road HLCA 056: *A transport corridor with important examples of mid-20th century bridge design.*

**5.26** Blaen-y-Dyffryn HLCA 059: *Another post-medieval enclosed agricultural landscape.*

**5.27** Garth Fawr Improved Common HLCA 075: *An area of improved and enclosed common land characterise by regular large enclosures of resent date.*

**5.28** Bargoed Taf HLCA 076: *An enclosed agricultural landscape along the Taff Bargoed valley, characterised by irregular field patterns, dry stone walls and stone-faced banks, with minor industrial features (mining and associated transport).*

**5.29** Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun HLCA 078: *A reclaimed industrial landscape typified by open-cast and landfill operations. It contains nothing of historic interest above ground.*

**5.30** The character areas can be separated into six broad types:

- **Extraction areas and spoil tips**

- o Cwm Bargoed Washery HLCA 032
- o Ffos-y-fran HLCA 039
- o Twynau Gwynion Quarries HLCA 042
- o Morlais Castle Quarries HLCA 044
- o Bryniau Quarries HLCA 046
- o Dowlais Top HLCA 047
- o Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun HLCA 078

- **Iron Works and associated workers housing**

- o Penydarren Iron Works Area HLCA 004
- o Penydarren HLCA 005
- o Dowlais Iron Works Area HLCA 008
- o Ivor Iron Works Area HLCA 029
- o Pantcadifor, Rhyd-y-bedd and Caeracca HLCA 030

- **Dowlais Free Drainage System**

- o Merthyr Common, Central HLCA 031
- o Merthyr Common, North HLCA 041

- **Transportation routes**

- o Taff Fechan HLCA 027

- o Pengarnddu HLCA 035
- o Incline Top HLCA 040
- o A465(T) Heads of the Valley Road HLCA 056
- ***Agricultural Land or former agricultural land***
  - o Garth and Blaen-y-Garth HLCA 043
  - o Morlais Hill Castle HLCA 045 (includes the medieval Castle)
  - o Bon-y-maen HLCA 049
  - o Gurnos and Galon-Uchaf HLCA 050A
  - o Gurnos Farm and Bunker's Hill HLCA 052
  - o Blaen-y-Dyffryn HLCA 059
  - o Garth Fawr Improved Common HLCA 075
  - o Bargoed Taf HLCA 076

**5.31** In Steps 1 and 2 below, criteria are scored according to that laid out in Table 9. The criteria considered are as laid out ASIDOHL2, p24-25 comprising:

- Rarity;
- Representativeness;
- Documentation;
- Group Value;
- Survival;
- Condition;
- Coherence;
- Integrity;
- Potential;
- Amenity; and
- Associations.

Table 9: Overall Magnitude of Indirect Impact

| Criterion value | Score |
|-----------------|-------|
| Very High/good  | 5     |
| High/good       | 4     |
| Moderate/medium | 3     |
| Low             | 2     |
| Very low/poor   | 1     |
| None            | 0     |

Table 10: An evaluation of the relative importance of the historic character areas concerned in the wider context

| HLCA No.                                              | Rarity | Representativeness | Documentation | Group Value | Survival | Condition | Coherence | Integrity | Potential | Amenity | Associations | Sum & relative importance score |
|-------------------------------------------------------|--------|--------------------|---------------|-------------|----------|-----------|-----------|-----------|-----------|---------|--------------|---------------------------------|
| <b>Penydarren Iron Works Area HLCA 004</b>            | 2      | 4                  | 3             | 4           | 4        | 3         | 4         | 4         | 2         | 2       | 3            | <b>35</b>                       |
| <b>Penydarren HLCA 005</b>                            | 2      | 4                  | 3             | 4           | 4        | 3         | 4         | 4         | 2         | 2       | 3            | <b>35</b>                       |
| <b>Dowlais HLCA 007</b>                               | 2      | 4                  | 4             | 5           | 4        | 3         | 4         | 5         | 3         | 2       | 3            | <b>39</b>                       |
| <b>Dowlais Iron Works Area HLCA 008</b>               | 3      | 4                  | 4             | 4           | 3        | 2         | 4         | 3         | 4         | 3       | 3            | <b>37</b>                       |
| <b>Taff Fechan HLCA 027</b>                           | 2      | 2                  | 3             | 4           | 3        | 3         | 3         | 3         | 3         | 4       | 3            | <b>33</b>                       |
| <b>Ivor Iron Works Area HLCA 029</b>                  | 3      | 4                  | 3             | 4           | 3        | 2         | 3         | 3         | 4         | 2       | 3            | <b>34</b>                       |
| <b>Pantcadifor, Rhyd-y-bedd and Caeracca HLCA 030</b> | 3      | 4                  | 3             | 4           | 4        | 4         | 4         | 4         | 3         | 2       | 3            | <b>38</b>                       |

| HLCA No.                                         | Rarity | Representativeness | Documentation | Group Value | Survival | Condition | Coherence | Integrity | Potential | Amenity | Associations | Sum & relative importance score |
|--------------------------------------------------|--------|--------------------|---------------|-------------|----------|-----------|-----------|-----------|-----------|---------|--------------|---------------------------------|
| <b>Merthyr Common, Central HLCA 031</b>          | 4      | 3                  | 4             | 4           | 4        | 4         | 4         | 4         | 4         | 3       | 4            | <b>42</b>                       |
| <b>Cwm Bargoed Washery HLCA 032</b>              | 3      | 3                  | 3             | 3           | 3        | 3         | 3         | 3         | 2         | 2       | 3            | <b>31</b>                       |
| <b>Pengarnddu HLCA 035</b>                       | 3      | 3                  | 3             | 4           | 3        | 3         | 4         | 3         | 3         | 2       | 4            | <b>35</b>                       |
| <b>Ffos-y-fran HLCA 039</b>                      | 4      | 4                  | 5             | 4           | 4        | 4         | 4         | 4         | 4         | 3       | 4            | <b>44</b>                       |
| <b>Incline Top HLCA 040</b>                      | 2      | 4                  | 3             | 3           | 2        | 2         | 3         | 2         | 2         | 2       | 4            | <b>29</b>                       |
| <b>Merthyr Common, North HLCA 041</b>            | 4      | 3                  | 4             | 4           | 4        | 4         | 4         | 4         | 3         | 3       | 4            | <b>41</b>                       |
| <b>Twynau Gwynion Quarries HLCA 042</b>          | 3      | 3                  | 3             | 4           | 4        | 3         | 3         | 3         | 3         | 2       | 4            | <b>35</b>                       |
| <b>Garth and Blaen-y-Garth HLCA 043</b>          | 3      | 2                  | 2             | 3           | 4        | 3         | 3         | 4         | 2         | 2       | 3            | <b>31</b>                       |
| <b>Morlais Castle Quarries HLCA 044</b>          | 3      | 3                  | 4             | 4           | 4        | 3         | 4         | 4         | 3         | 3       | 4            | <b>39</b>                       |
| <b>Morlais Hill Castle HLCA 045</b>              | 5      | 2                  | 4             | 4           | 3        | 3         | 3         | 3         | 4         | 4       | 4            | <b>39</b>                       |
| <b>Bryniau Quarries HLCA 046</b>                 | 3      | 3                  | 3             | 3           | 3        | 3         | 2         | 3         | 3         | 2       | 4            | <b>32</b>                       |
| <b>Dowlais Top HLCA 047</b>                      | 3      | 3                  | 3             | 2           | 2        | 2         | 2         | 2         | 2         | 1       | 3            | <b>25</b>                       |
| <b>Bon-y-maen HLCA 049</b>                       | 3      | 2                  | 2             | 2           | 2        | 2         | 1         | 2         | 2         | 1       | 3            | <b>22</b>                       |
| <b>Gurnos and Galon-Uchaf HLCA 050A</b>          | 3      | 2                  | 3             | 2           | 4        | 4         | 3         | 4         | 2         | 1       | 3            | <b>31</b>                       |
| <b>Gurnos Farm and Bunker's Hill HLCA 052</b>    | 3      | 2                  | 2             | 2           | 3        | 3         | 2         | 3         | 3         | 2       | 2            | <b>27</b>                       |
| <b>A465(T) Heads of the Valley Road HLCA 056</b> | 3      | 2                  | 4             | 4           | 4        | 4         | 4         | 4         | 1         | 1       | 2            | <b>33</b>                       |
| <b>Garth Fawr Improved Common HLCA 075</b>       | 3      | 2                  | 2             | 3           | 4        | 4         | 2         | 4         | 3         | 1       | 2            | <b>30</b>                       |

| HLCA No.                                                            | Rarity | Representativeness | Documentation | Group Value | Survival | Condition | Coherence | Integrity | Potential | Amenity | Associations | Sum & relative importance score |
|---------------------------------------------------------------------|--------|--------------------|---------------|-------------|----------|-----------|-----------|-----------|-----------|---------|--------------|---------------------------------|
| <b>Bargoed Taf HLCA 076</b>                                         | 3      | 2                  | 2             | 3           | 4        | 4         | 3         | 4         | 3         | 2       | 2            | <b>32</b>                       |
| <b>Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun HLCA 078</b> | 3      | 3                  | 3             | 2           | 3        | 2         | 3         | 2         | 2         | 1       | 3            | <b>27</b>                       |

**5.32** The following section considers only those parts of the HLCA areas which will lie within the Zone of Theoretical Visibility or within the Site and thus will score differently to the above table. Following that an overall assessment of the impact on the Merthyr Tydfil Historic Landscape as a whole will be determined.

**5.33** In order to get a more empirical way of scoring the importance of these areas affected the percentage of the site area lying within the ZTV zone where the majority of the turbines (3 or more) will be visible has been considered. The following Table 11 shows the percentages per HLCA that lie within the ZTV where 3 or more turbines are visible.

Table 11: Areas of HLCAs affected by the site and majority visibility

| HLCA No.                                   | Total Area km <sup>2</sup> within 3km search area | Area within Site km <sup>2</sup> | Percentage within site | Area within 3 or more turbines visible area of ZTV km <sup>2</sup> | Percentage with 3 or more turbines visible of ZTV |
|--------------------------------------------|---------------------------------------------------|----------------------------------|------------------------|--------------------------------------------------------------------|---------------------------------------------------|
| <b>Penydarren Iron Works Area HLCA 004</b> | 0.02                                              | 0                                | 0%                     | <0.01                                                              | 29.39%                                            |
| <b>Penydarren HLCA 005</b>                 | 0.34                                              | 0                                | 0%                     | 0.32                                                               | 94.54%                                            |
| <b>Dowlais HLCA 007</b>                    | 0.91                                              | 0                                | 0%                     | 0.47                                                               | 52.02%                                            |
| <b>Dowlais Iron Works Area HLCA 008</b>    | 0.30                                              | 0                                | 0%                     | 0.25                                                               | 81.30%                                            |
| <b>Taff Fechan HLCA 027</b>                | 1.03                                              | 0                                | 0%                     | 0.13                                                               | 12.59%                                            |

|                                                       |      |       |        |       |        |
|-------------------------------------------------------|------|-------|--------|-------|--------|
| <b>Ivor Iron Works Area HLCA 029</b>                  | 0.12 | 0     | 0%     | 0.09  | 69.71% |
| <b>Pantcadifor, Rhyd-y-bedd and Caeracca HLCA 030</b> | 0.67 | 0     | 0%     | 0.62  | 93.54% |
| <b>Merthyr Common, Central HLCA 031</b>               | 1.40 | 0     | 0%     | 0.34  | 24.52% |
| <b>Cwm Bargoed Washery HLCA 032</b>                   | 0.44 | 0     | 0%     | 0.08  | 0.18%  |
| <b>Pengarnddu HLCA 035</b>                            | 0.89 | <0.01 | <0.01% | 0.81  | 91.27% |
| <b>Ffos-y-fran HLCA 039</b>                           | 1.05 | 0     | 0%     | 0.55  | 52.89% |
| <b>Incline Top HLCA 040</b>                           | 0.29 | 0     | 0%     | 0.17  | 60.81% |
| <b>Merthyr Common, North HLCA 041</b>                 | 2.25 | 1.28  | 91.42% | 2.14  | 95.31% |
| <b>Twynau Gwynion Quarries HLCA 042</b>               | 0.52 | 0     | 0%     | 0.20  | 37.60% |
| <b>Garth and Blaen-y-Garth HLCA 043</b>               | 0.57 | 0     | 0%     | 0.42  | 73.78% |
| <b>Morlais Castle Quarries HLCA 044</b>               | 0.56 | 0     | 0%     | 0.31  | 54.73% |
| <b>Morlais Hill Castle HLCA 045</b>                   | 0.60 | 0     | 0%     | 0.503 | 83.75% |
| <b>Bryniau Quarries HLCA 046</b>                      | 0.20 | 0     | 0%     | 0.197 | 96.97% |
| <b>Dowlais Top HLCA 047</b>                           | 0.49 | 0     | 0%     | 0.46  | 93.15% |
| <b>Bon-y-maen HLCA 049</b>                            | 0.28 | 0     | 0%     | 0.276 | 99.87% |
| <b>Gurnos and Galon-Uchaf HLCA 050A</b>               | 1.35 | 0     | 0%     | 0     | 0.00%  |
| <b>Gurnos Farm and Bunker's Hill HLCA 052</b>         | 0.57 | 0     | 0%     | 0.17  | 29.68% |
| <b>A465(T) Heads of the Valley Road HLCA 056</b>      | 0.13 | 0     | 0%     | 0.10  | 75.22% |
| <b>Garth Fawr Improved Common HLCA 075</b>            | 0.03 | 0     | 0%     | 0     | 0.00%  |
| <b>Bargoed Taf HLCA 076</b>                           | 0.04 | 0     | 0%     | 0     | 0.00%  |

|                                                                                 |      |   |    |      |        |
|---------------------------------------------------------------------------------|------|---|----|------|--------|
| <b>Dowlais Great Tip,<br/>Trecatti, Trehir and<br/>Twyn-y-Waun<br/>HLCA 078</b> | 1.93 | 0 | 0% | 1.55 | 80.43% |
|---------------------------------------------------------------------------------|------|---|----|------|--------|

- 5.34** The scores for Table 12 have been determined by looking at the ZTV plan overlaid with the HLCA Areas and observing the specific elements of the HLCA areas that will be directly or indirectly affected by the proposals.
- 5.35** As noted above, the biggest weight is given to areas covered by the Site or lying within the majority visible zone of the ZTV.

Table 12: An evaluation of the relative importance of the historic character areas concerned which will be affected by the proposals (Site and Majority visible ZTV)

| HLCA No.                                       | Rarity | Representativeness | Documentation | Group Value | Survival | Condition | Coherence | Integrity | Potential | Amenity | Associations | Sum & relative importance score |
|------------------------------------------------|--------|--------------------|---------------|-------------|----------|-----------|-----------|-----------|-----------|---------|--------------|---------------------------------|
| Penydarren Iron Works Area HLCA 004            | 2      | 1                  | 3             | 1           | 4        | 3         | 1         | 1         | 1         | 0       | 3            | 20                              |
| Penydarren HLCA 005                            | 2      | 4                  | 3             | 4           | 4        | 3         | 4         | 4         | 2         | 2       | 3            | 35                              |
| Dowlais HLCA 007                               | 2      | 4                  | 4             | 3           | 3        | 3         | 2         | 3         | 3         | 2       | 3            | 32                              |
| Dowlais Iron Works Area HLCA 008               | 3      | 4                  | 4             | 3           | 3        | 2         | 2         | 2         | 4         | 3       | 3            | 33                              |
| Taff Fechan HLCA 027                           | 2      | 2                  | 3             | 2           | 2        | 3         | 2         | 2         | 2         | 2       | 3            | 25                              |
| Ivor Iron Works Area HLCA 029                  | 3      | 4                  | 3             | 3           | 3        | 2         | 2         | 2         | 4         | 2       | 3            | 31                              |
| Pantcadifor, Rhyd-y-bedd and Caeracca HLCA 030 | 3      | 4                  | 3             | 4           | 4        | 4         | 4         | 4         | 3         | 2       | 3            | 38                              |
| Merthyr Common, Central HLCA 031               | 4      | 3                  | 4             | 3           | 3        | 3         | 3         | 4         | 4         | 3       | 4            | 38                              |
| Cwm Bargoed Washery HLCA 032                   | 3      | 3                  | 3             | 2           | 3        | 3         | 2         | 2         | 2         | 1       | 3            | 27                              |
| Pengarnddu HLCA 035                            | 3      | 3                  | 3             | 4           | 3        | 3         | 4         | 3         | 3         | 2       | 4            | 35                              |
| Ffos-y-fran HLCA 039                           | 4      | 4                  | 5             | 3           | 3        | 3         | 3         | 3         | 3         | 2       | 4            | 37                              |
| Incline Top HLCA 040                           | 2      | 4                  | 3             | 2           | 2        | 2         | 2         | 2         | 2         | 2       | 4            | 27                              |
| Merthyr Common, North HLCA 041                 | 4      | 3                  | 4             | 4           | 4        | 4         | 4         | 4         | 3         | 3       | 4            | 41                              |
| Twynau Gwynion Quarries HLCA 042               | 3      | 3                  | 3             | 3           | 3        | 2         | 2         | 2         | 3         | 2       | 4            | 30                              |
| Garth and Blaen-y-Garth HLCA 043               | 3      | 2                  | 2             | 2           | 3        | 2         | 2         | 3         | 2         | 2       | 3            | 26                              |

| HLCA No.                                                            | Rarity | Representativeness | Documentation | Group Value | Survival | Condition | Coherence | Integrity | Potential | Amenity | Associations | Sum & relative importance score |
|---------------------------------------------------------------------|--------|--------------------|---------------|-------------|----------|-----------|-----------|-----------|-----------|---------|--------------|---------------------------------|
| <b>Morlais Castle Quarries HLCA 044</b>                             | 3      | 3                  | 4             | 3           | 3        | 3         | 3         | 3         | 3         | 2       | 4            | <b>34</b>                       |
| <b>Morlais Hill Castle HLCA 045</b>                                 | 5      | 2                  | 4             | 4           | 3        | 3         | 3         | 3         | 4         | 4       | 4            | <b>39</b>                       |
| <b>Bryniau Quarries HLCA 046</b>                                    | 3      | 3                  | 3             | 3           | 3        | 3         | 2         | 3         | 3         | 2       | 4            | <b>32</b>                       |
| <b>Dowlais Top HLCA 047</b>                                         | 3      | 3                  | 3             | 2           | 2        | 2         | 2         | 2         | 2         | 1       | 3            | <b>25</b>                       |
| <b>Bon-y-maen HLCA 049</b>                                          | 3      | 2                  | 2             | 2           | 2        | 2         | 1         | 2         | 2         | 1       | 3            | <b>22</b>                       |
| <b>Gurnos and Galon-Uchaf HLCA 050A</b>                             | 0      | 0                  | 0             | 0           | 0        | 0         | 0         | 0         | 0         | 0       | 0            | <b>0</b>                        |
| <b>Gurnos Farm and Bunker's Hill HLCA 052</b>                       | 3      | 2                  | 2             | 1           | 2        | 2         | 1         | 3         | 3         | 1       | 2            | <b>22</b>                       |
| <b>A465(T) Heads of the Valley Road HLCA 056</b>                    | 3      | 2                  | 4             | 3           | 4        | 3         | 3         | 3         | 1         | 1       | 2            | <b>29</b>                       |
| <b>Garth Fawr Improved Common HLCA 075</b>                          | 0      | 0                  | 0             | 0           | 0        | 0         | 0         | 0         | 0         | 0       | 0            | <b>0</b>                        |
| <b>Bargoed Taf HLCA 076</b>                                         | 0      | 0                  | 0             | 0           | 0        | 0         | 0         | 0         | 0         | 0       | 0            | <b>0</b>                        |
| <b>Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun HLCA 078</b> | 3      | 3                  | 3             | 2           | 2        | 2         | 2         | 2         | 2         | 1       | 3            | <b>25</b>                       |

**5.36** By dividing the sum of the above as shown in the last column of Table 9 and Table 11 by the maximum possible score (55) and multiplying by 100, the averages are reached. Table 12 below shows the scores based on Tables 9 and 11 for each of the HLCA areas.

**5.37** Table 13 averages these scores by adding them together and dividing by 2. The grades of overall value of the HLCA areas are then determined using the scale laid out in Table 14 (taken from Table 12 of ASIDOHL2, p28). Table 13 also includes an overall value at the end for all of the HLCA areas.

Table 13: Sum and Rating of HLCA areas from Tables 9 and 11

| HLCA                                                  | Sum and rating from Table 9       | Sum and rating from Table 11      |
|-------------------------------------------------------|-----------------------------------|-----------------------------------|
| <b>Penydarren Iron Works Area HLCA 004</b>            | $(35 \div 55) \times 100 = 63.63$ | $(20 \div 55) \times 100 = 36.37$ |
| <b>Penydarren HLCA 005</b>                            | $(35 \div 55) \times 100 = 63.63$ | $(35 \div 55) \times 100 = 63.63$ |
| <b>Dowlais HLCA 007</b>                               | $(39 \div 55) \times 100 = 70.90$ | $(32 \div 55) \times 100 = 58.18$ |
| <b>Dowlais Iron Works Area HLCA 008</b>               | $(37 \div 55) \times 100 = 67.27$ | $(33 \div 55) \times 100 = 60.00$ |
| <b>Taff Fechan HLCA 027</b>                           | $(33 \div 55) \times 100 = 60.00$ | $(25 \div 55) \times 100 = 45.45$ |
| <b>Ivor Iron Works Area HLCA 029</b>                  | $(34 \div 55) \times 100 = 61.81$ | $(31 \div 55) \times 100 = 56.36$ |
| <b>Pantcadifor, Rhyd-y-bedd and Caeracca HLCA 030</b> | $(38 \div 55) \times 100 = 69.09$ | $(38 \div 55) \times 100 = 69.09$ |
| <b>Merthyr Common, Central HLCA 031</b>               | $(42 \div 55) \times 100 = 76.36$ | $(38 \div 55) \times 100 = 69.09$ |
| <b>Cwm Bargoed Washery HLCA 032</b>                   | $(31 \div 55) \times 100 = 56.36$ | $(27 \div 55) \times 100 = 49.09$ |
| <b>Pengarnddu HLCA 035</b>                            | $(35 \div 55) \times 100 = 63.63$ | $(35 \div 55) \times 100 = 63.63$ |
| <b>Ffos-y-fran HLCA 039</b>                           | $(44 \div 55) \times 100 = 80.00$ | $(37 \div 55) \times 100 = 67.27$ |
| <b>Incline Top HLCA 040</b>                           | $(29 \div 55) \times 100 = 51.73$ | $(27 \div 55) \times 100 = 49.09$ |
| <b>Merthyr Common, North HLCA 041</b>                 | $(41 \div 55) \times 100 = 74.54$ | $(41 \div 55) \times 100 = 74.54$ |
| <b>Twynau Gwynion Quarries HLCA 042</b>               | $(35 \div 55) \times 100 = 63.63$ | $(30 \div 55) \times 100 = 54.54$ |
| <b>Garth and Blaen-y-Garth HLCA 043</b>               | $(31 \div 55) \times 100 = 56.36$ | $(26 \div 55) \times 100 = 47.27$ |
| <b>Morlais Castle Quarries HLCA 044</b>               | $(39 \div 55) \times 100 = 70.91$ | $(34 \div 55) \times 100 = 61.81$ |
| <b>Morlais Hill Castle HLCA 045</b>                   | $(39 \div 55) \times 100 = 70.91$ | $(39 \div 55) \times 100 = 70.91$ |
| <b>Bryniau Quarries HLCA 046</b>                      | $(32 \div 55) \times 100 = 58.18$ | $(32 \div 55) \times 100 = 58.18$ |
| <b>Dowlais Top HLCA 047</b>                           | $(25 \div 55) \times 100 = 45.45$ | $(25 \div 55) \times 100 = 45.45$ |

|                                                                     |                                   |                                   |
|---------------------------------------------------------------------|-----------------------------------|-----------------------------------|
| <b>Bon-y-maen HLCA 049</b>                                          | $(22 \div 55) \times 100 = 40.00$ | $(22 \div 55) \times 100 = 40.00$ |
| <b>Gurnos and Galon-Uchaf HLCA 050A</b>                             | $(31 \div 55) \times 100 = 56.36$ | $(0 \div 55) \times 100 = 0$      |
| <b>Gurnos Farm and Bunker's Hill HLCA 052</b>                       | $(27 \div 55) \times 100 = 49.09$ | $(22 \div 55) \times 100 = 40.00$ |
| <b>A465(T) Heads of the Valley Road HLCA 056</b>                    | $(33 \div 55) \times 100 = 60.00$ | $(29 \div 55) \times 100 = 52.72$ |
| <b>Garth Fawr Improved Common HLCA 075</b>                          | $(30 \div 55) \times 100 = 54.54$ | $(0 \div 55) \times 100 = 0$      |
| <b>Bargoed Taf HLCA 076</b>                                         | $(32 \div 55) \times 100 = 58.18$ | $(0 \div 55) \times 100 = 0$      |
| <b>Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun HLCA 078</b> | $(27 \div 55) \times 100 = 49.09$ | $(25 \div 55) \times 100 = 45.45$ |

Table 14: Average overall value of the historic character areas

| HLCA                                                  | Rating from Table 9 | Rating from Table 11 | Average Rating Percentage | Grades of Overall Value (see Table 13) |
|-------------------------------------------------------|---------------------|----------------------|---------------------------|----------------------------------------|
| <b>Penydarren Iron Works Area HLCA 004</b>            | 63.63               | 36.37                | 50%                       | Considerable                           |
| <b>Penydarren HLCA 005</b>                            | 63.63               | 63.63                | 64%                       | High                                   |
| <b>Dowlais HLCA 007</b>                               | 70.90               | 58.18                | 65%                       | High                                   |
| <b>Dowlais Iron Works Area HLCA 008</b>               | 67.27               | 60.00                | 64%                       | High                                   |
| <b>Taff Fechan HLCA 027</b>                           | 60.00               | 45.45                | 53%                       | Considerable                           |
| <b>Ivor Iron Works Area HLCA 029</b>                  | 61.81               | 56.36                | 59%                       | Considerable                           |
| <b>Pantcadifor, Rhyd-y-bedd and Caeracca HLCA 030</b> | 69.09               | 69.09                | 69%                       | High                                   |
| <b>Merthyr Common, Central HLCA 031</b>               | 76.36               | 69.09                | 73%                       | High                                   |
| <b>Cwm Bargoed Washery HLCA 032</b>                   | 56.36               | 49.09                | 53%                       | Considerable                           |
| <b>Pengarnddu HLCA 035</b>                            | 63.63               | 63.63                | 64%                       | High                                   |
| <b>Ffos-y-fran HLCA 039</b>                           | 80.00               | 67.27                | 74%                       | High                                   |
| <b>Incline Top HLCA 040</b>                           | 51.73               | 49.09                | 50%                       | Considerable                           |
| <b>Merthyr Common, North HLCA 041</b>                 | 74.54               | 74.54                | 75%                       | High                                   |
| <b>Twynau Gwynion Quarries HLCA 042</b>               | 63.63               | 54.54                | 59%                       | Considerable                           |
| <b>Garth and Blaen-y-Garth HLCA 043</b>               | 56.36               | 47.27                | 52%                       | Considerable                           |
| <b>Morlais Castle Quarries HLCA 044</b>               | 70.91               | 61.81                | 66%                       | High                                   |
| <b>Morlais Hill Castle HLCA 045</b>                   | 70.91               | 70.91                | 71%                       | High                                   |
| <b>Bryniau Quarries HLCA 046</b>                      | 58.18               | 58.18                | 58%                       | Considerable                           |
| <b>Dowlais Top HLCA 047</b>                           | 45.45               | 45.45                | 45%                       | Considerable                           |

|                                                                         |                |                |             |                     |
|-------------------------------------------------------------------------|----------------|----------------|-------------|---------------------|
| <b>Bon-y-maen HLCA 049</b>                                              | 40.00          | 40.00          | 40%         | Considerable        |
| <b>Gurnos and Galon-Uchaf HLCA 050A</b>                                 | 56.36          | 0              | 28%         | Moderate            |
| <b>Gurnos Farm and Bunker's Hill<br/>HLCA 052</b>                       | 49.09          | 40.00          | 45%         | Considerable        |
| <b>A465(T) Heads of the Valley Road<br/>HLCA 056</b>                    | 60.00          | 52.72          | 56%         | Considerable        |
| <b>Garth Fawr Improved Common<br/>HLCA 075</b>                          | 54.54          | 0              | 27%         | Moderate            |
| <b>Bargoed Taf HLCA 076</b>                                             | 58.18          | 0              | 29%         | Moderate            |
| <b>Dowlais Great Tip, Trecatti, Trehir<br/>and Twyn-y-Waun HLCA 078</b> | 49.09          | 45.45          | 47%         | Considerable        |
| <b>Overall Scores</b>                                                   | <b>1651.65</b> | <b>1332.67</b> | <b>53 %</b> | <b>Considerable</b> |

Table 15: Grade of Overall Value

| <b>Overall Score</b> | <b>Value</b> |
|----------------------|--------------|
| 80 – 100             | Very High    |
| 60 – 79              | High         |
| 40 – 59              | Considerable |
| 20 – 39              | Moderate     |
| 5 – 19               | Low          |
| 0 – 4                | Very Low     |

## 6. Stage 5 - Assessment of Overall Significance of Impact

- 6.1** The final stage of the ASIDOHL process combines the results of Stages 2 – 4 to produce ‘an assessment of the overall significance of impact of development and the effect that altering the Historic Character Areas concerned has on the whole of the historic landscape area on the Register’<sup>5</sup>.
- 6.2** The overall impact of the development is assessed using the ASIDOHL guidelines, (Table 13 p29) and the Overall significance of impact scale included in ASIDOHL (Table 14, p30) reproduced here in Table 15.
- 6.3** The information is collated and laid out in Table 17. In terms of the ‘VALUE OF HCLA’ column, this is based on STAGE 4 above and considered in terms of categories from Very Low to Very High and assigned appropriate scoring from 1-10. The majority of HLCA areas were deemed to be of high or considerable importance as laid out in Table 13 of ASIDOL (p2).
- 6.4** The second table category is based on Stages 2 and 3 of the process, scoring the ‘Impact of Development’ on the HLCA. This includes the fact that only one HLCA is considered likely to have direct physical impacts: Merthyr Common North HLCA 041. In terms of indirect impacts (physical and visual) all HLCAs are considered, with the majority having low or very low impacts.
- 6.5** Finally the overall Reduction of Value of the Historic Landscape on the Register is determined by totalling the previous scores. The majority of HLCAs the overall significance of impact is slight.
- 6.6** For Merthyr Common, North HLCA 041, Twynau Gwynion Quarries HLCA 042, Garth and Blaen-y-Garth HLCA 043, Dowlais Top HLCA 047 and Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun HLCA 078, the overall significance of impact is assessed as moderate.

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<sup>5</sup> Cadw 2007, ASIDOHL2, p28

Table 16: Overall Significance Of Impact

| Score | Grading       |
|-------|---------------|
| 26-30 | Very Severe   |
| 21-25 | Severe        |
| 16-20 | Fairly Severe |
| 10-15 | Moderate      |
| 4-9   | Slight        |
| 1-3   | Very Slight   |

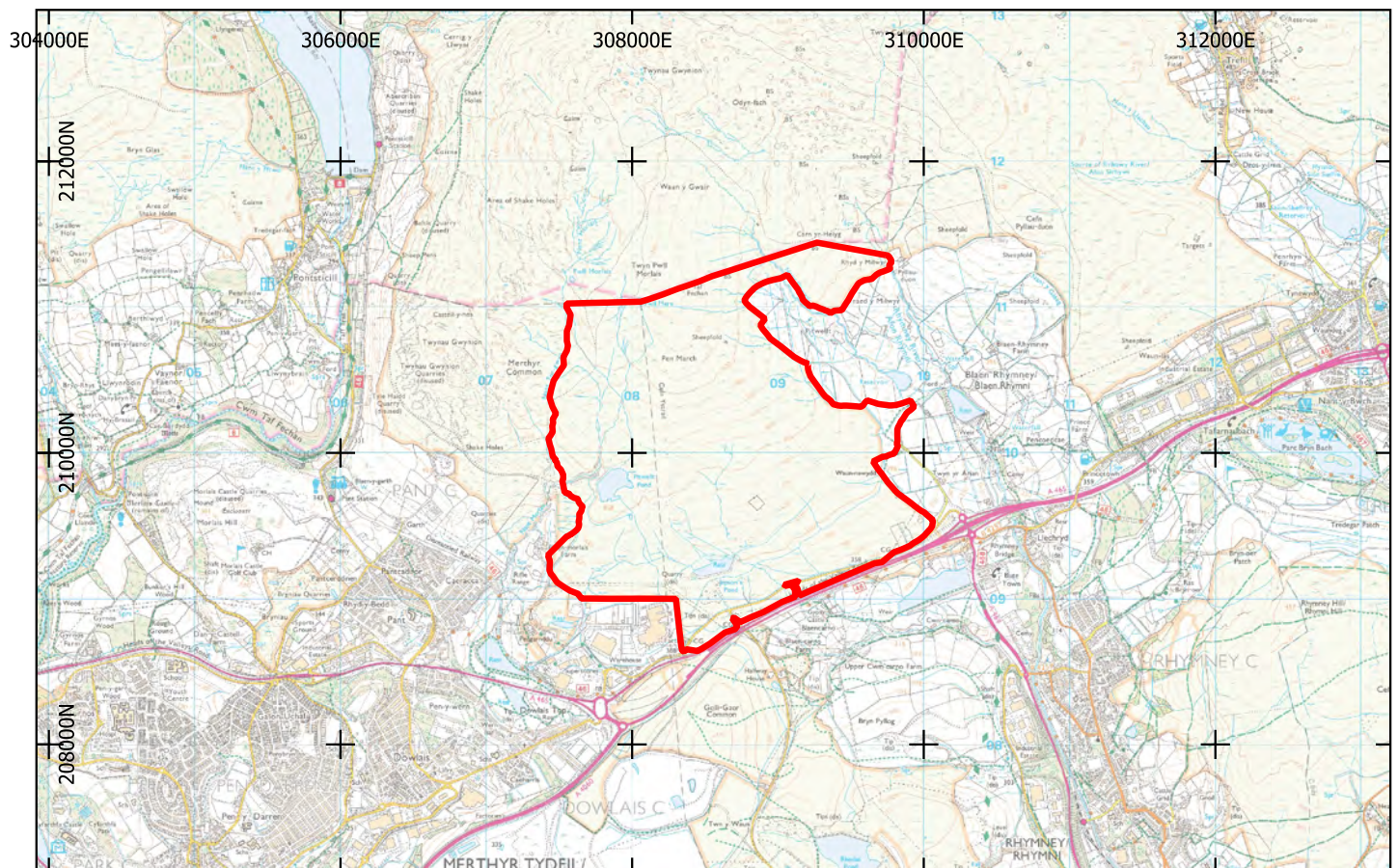
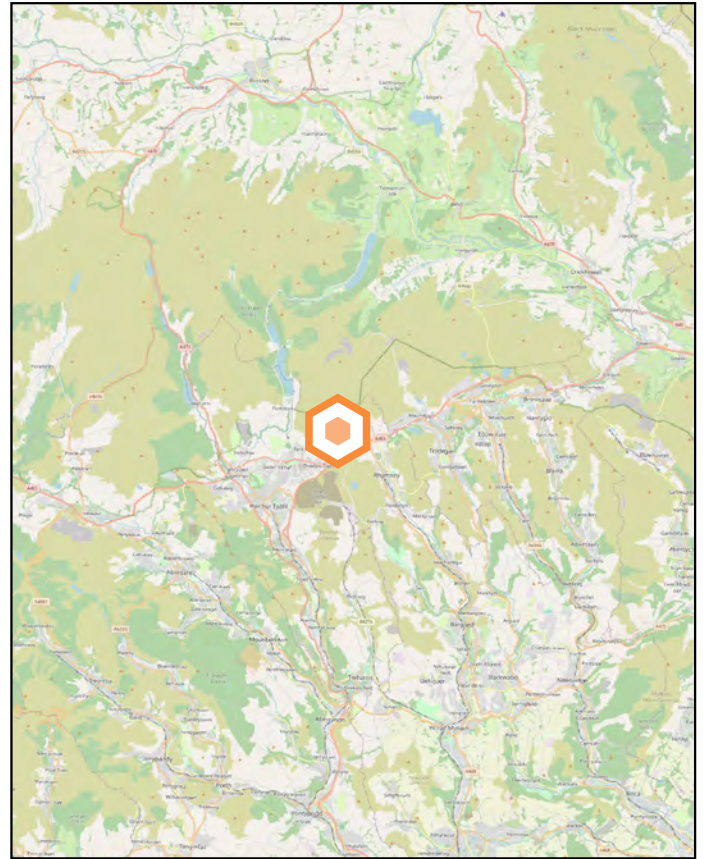
Table 17: Summary of the Overall Significance of the Impact of Development on Landscape of Historic Interest

| HLCA No.                                              | VALUE OF HCLA<br>(based on STAGE 4)<br>(Score based on ASIDOHL guidance table 13) |   | IMPACT OF DEVELOPMENT<br>(based on STAGES 2 & 3 results)<br>(Score based on ASIDOHL guidance table 13) |   | REDUCTION OF VALUE<br>OF THE HCLA<br>(Score based on ASIDOHL guidance table 13) |   | TOTAL<br>SCORE<br>FOR HCLA | OVERALL<br>SIGNIFICANCE OF<br>IMPACT FOR HCLA |
|-------------------------------------------------------|-----------------------------------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------------------------|---|----------------------------|-----------------------------------------------|
|                                                       |                                                                                   |   |                                                                                                        |   |                                                                                 |   |                            |                                               |
| <b>Penydarren Iron Works Area HLCA 004</b>            | Considerable                                                                      | 5 | No direct physical impact<br>Slight indirect impact                                                    | 1 | Very Low                                                                        | 1 | <b>7</b>                   | <b>Slight</b>                                 |
| <b>Penydarren HLCA 005</b>                            | High                                                                              | 4 | No direct physical impact<br>Slight indirect impact                                                    | 1 | Very Low                                                                        | 1 | <b>6</b>                   | <b>Slight</b>                                 |
| <b>Dowlais HLCA 007</b>                               | High                                                                              | 4 | No direct physical impact<br>Slight indirect impact                                                    | 3 | Low                                                                             | 2 | <b>9</b>                   | <b>Slight</b>                                 |
| <b>Dowlais Iron Works Area HLCA 008</b>               | High                                                                              | 4 | No direct physical impact<br>Slight indirect impact                                                    | 1 | Very Low                                                                        | 1 | <b>6</b>                   | <b>Slight</b>                                 |
| <b>Taff Fechan HLCA 027</b>                           | Considerable                                                                      | 5 | No direct physical impact<br>Slight indirect impact                                                    | 1 | Very Low                                                                        | 1 | <b>7</b>                   | <b>Slight</b>                                 |
| <b>Ivor Iron Works Area HLCA 029</b>                  | Considerable                                                                      | 5 | No direct physical impact<br>Slight indirect impact                                                    | 1 | Very Low                                                                        | 1 | <b>7</b>                   | <b>Slight</b>                                 |
| <b>Pantcadifor, Rhyd-y-bedd and Caeracca HLCA 030</b> | High                                                                              | 4 | No direct physical impact<br>Slight indirect impact                                                    | 1 | Very Low                                                                        | 1 | <b>6</b>                   | <b>Slight</b>                                 |
| <b>Merthyr Common, Central HLCA 031</b>               | High                                                                              | 4 | No direct physical impact<br>Slight indirect impact                                                    | 3 | Low                                                                             | 2 | <b>9</b>                   | <b>Slight</b>                                 |

|                                         |              |   |                                                     |   |        |   |           |                 |
|-----------------------------------------|--------------|---|-----------------------------------------------------|---|--------|---|-----------|-----------------|
| <b>Cwm Bargoed Washery HLCA 032</b>     | Considerable | 5 | No direct physical impact<br>Slight indirect impact | 2 | Low    | 2 | <b>9</b>  | <b>Slight</b>   |
| <b>Pengarnddu HLCA 035</b>              | High         | 4 | No direct physical impact<br>Slight indirect impact | 3 | Low    | 2 | <b>9</b>  | <b>Slight</b>   |
| <b>Ffos-y-fran HLCA 039</b>             | High         | 4 | No direct physical impact<br>Slight indirect impact | 2 | Low    | 2 | <b>8</b>  | <b>Slight</b>   |
| <b>Incline Top HLCA 040</b>             | Considerable | 5 | No direct physical impact<br>Slight indirect impact | 2 | Low    | 2 | <b>9</b>  | <b>Slight</b>   |
| <b>Merthyr Common, North HLCA 041</b>   | High         | 4 | Direct physical impact<br>Slight indirect impact    | 6 | Medium | 5 | <b>15</b> | <b>Moderate</b> |
| <b>Twynau Gwynion Quarries HLCA 042</b> | Considerable | 5 | No direct physical impact<br>Slight indirect impact | 3 | Low    | 2 | <b>10</b> | <b>Moderate</b> |
| <b>Garth and Blaen-y-Garth HLCA 043</b> | Considerable | 5 | No direct physical impact<br>Slight indirect impact | 3 | Low    | 2 | <b>10</b> | <b>Moderate</b> |
| <b>Morlais Castle Quarries HLCA 044</b> | High         | 4 | No direct physical impact<br>Slight indirect impact | 2 | Low    | 2 | <b>8</b>  | <b>Slight</b>   |
| <b>Morlais Hill Castle HLCA 045</b>     | High         | 4 | No direct physical impact<br>Slight indirect impact | 3 | Low    | 2 | <b>9</b>  | <b>Slight</b>   |
| <b>Bryniau Quarries HLCA 046</b>        | Considerable | 5 | No direct physical impact<br>Slight indirect impact | 2 | Low    | 2 | <b>9</b>  | <b>Slight</b>   |
| <b>Dowlais Top HLCA 047</b>             | Considerable | 5 | No direct physical impact<br>Slight indirect impact | 3 | Low    | 2 | <b>10</b> | <b>Moderate</b> |

|                                                                     |              |   |                                                          |   |          |   |           |                 |
|---------------------------------------------------------------------|--------------|---|----------------------------------------------------------|---|----------|---|-----------|-----------------|
| <b>Bon-y-maen HLCA 049</b>                                          | Considerable | 5 | No direct physical impact<br>Slight indirect impact      | 2 | Low      | 2 | <b>9</b>  | <b>Slight</b>   |
| <b>Gurnos and Galon-Uchaf HLCA 050A</b>                             | Moderate     | 4 | No direct physical impact<br>Very slight indirect impact | 2 | Low      | 2 | <b>8</b>  | <b>Slight</b>   |
| <b>Gurnos Farm and Bunker's Hill HLCA 052</b>                       | Considerable | 5 | No direct physical impact<br>Slight indirect impact      | 2 | Low      | 2 | <b>9</b>  | <b>Slight</b>   |
| <b>A465(T) Heads of the Valley Road HLCA 056</b>                    | Considerable | 5 | No direct physical impact<br>Slight indirect impact      | 1 | Very Low | 1 | <b>7</b>  | <b>Slight</b>   |
| <b>Garth Fawr Improved Common HLCA 075</b>                          | Moderate     | 4 | No direct physical impact<br>Very slight indirect impact | 1 | Very Low | 1 | <b>6</b>  | <b>Slight</b>   |
| <b>Bargoed Taf HLCA 076</b>                                         | Moderate     | 4 | No direct physical impact<br>Very slight indirect impact | 1 | Very Low | 1 | <b>6</b>  | <b>Slight</b>   |
| <b>Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun HLCA 078</b> | Considerable | 7 | No direct physical impact<br>Slight indirect impact      | 3 | Low      | 2 | <b>12</b> | <b>Moderate</b> |

## 7. Figures

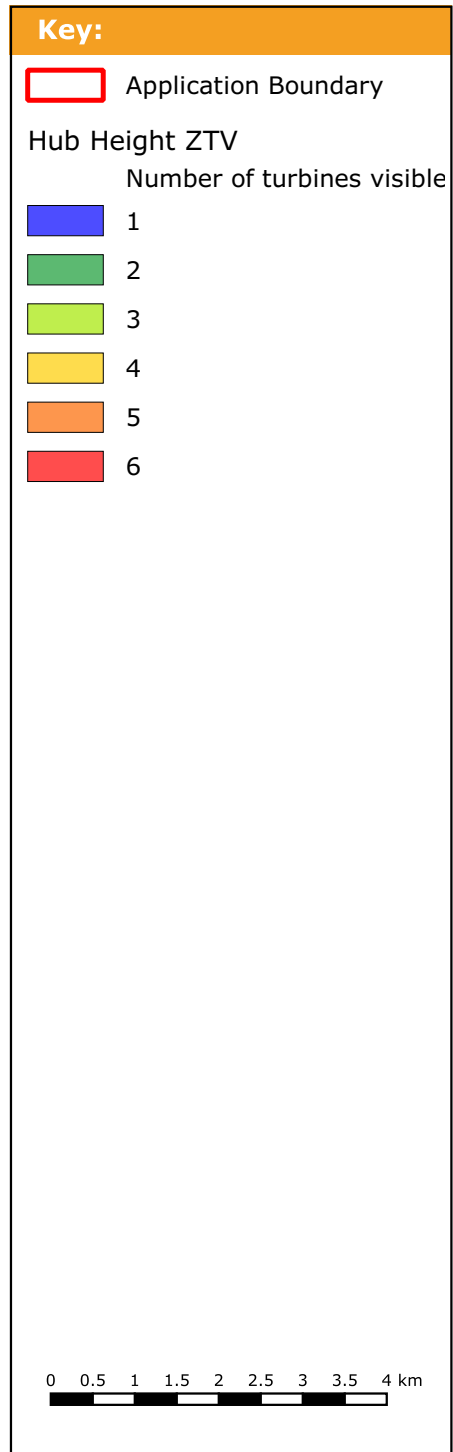
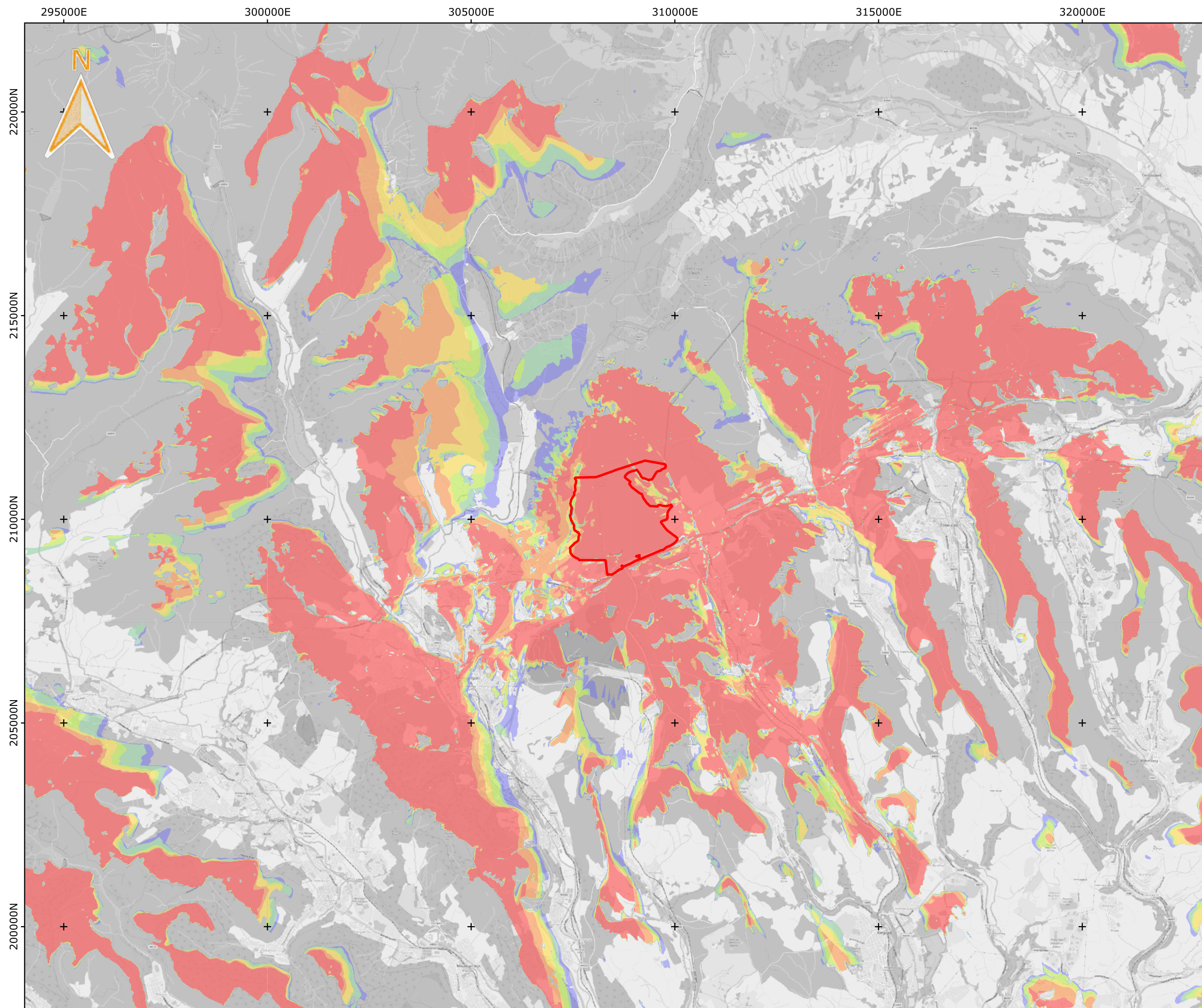


# Pen March Wind Farm

ASIDOHL

**Figure 1**  
Site Location Plan



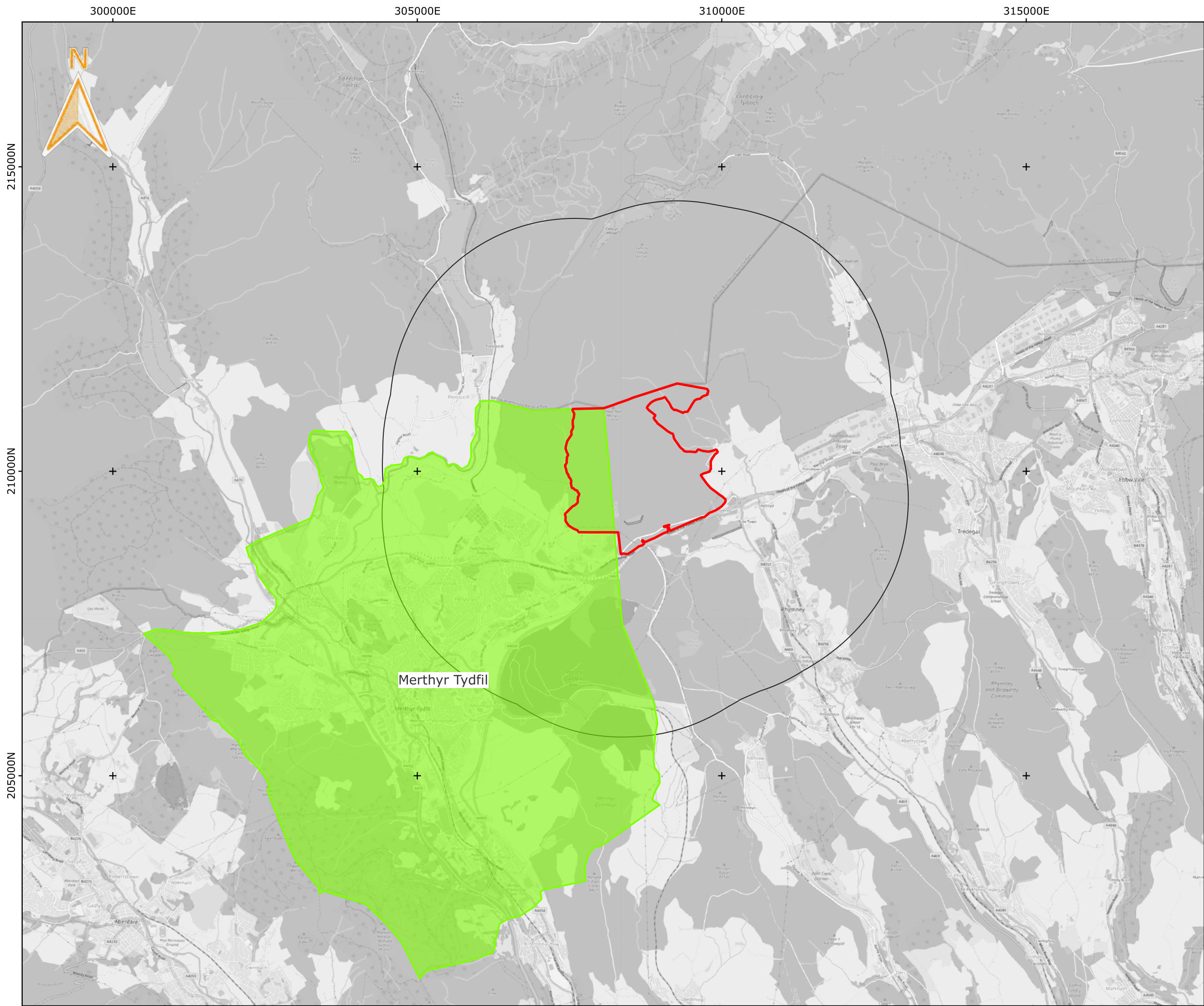


**Pen March Wind Farm  
ASIDOHL**

**Figure 2**

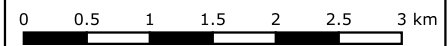
Turbine Hub Height  
Zone of Theoretical Visibility  
(ZTV)

Project No.06151A | 30/4/2023 | Drawn By: JM



**Key:**

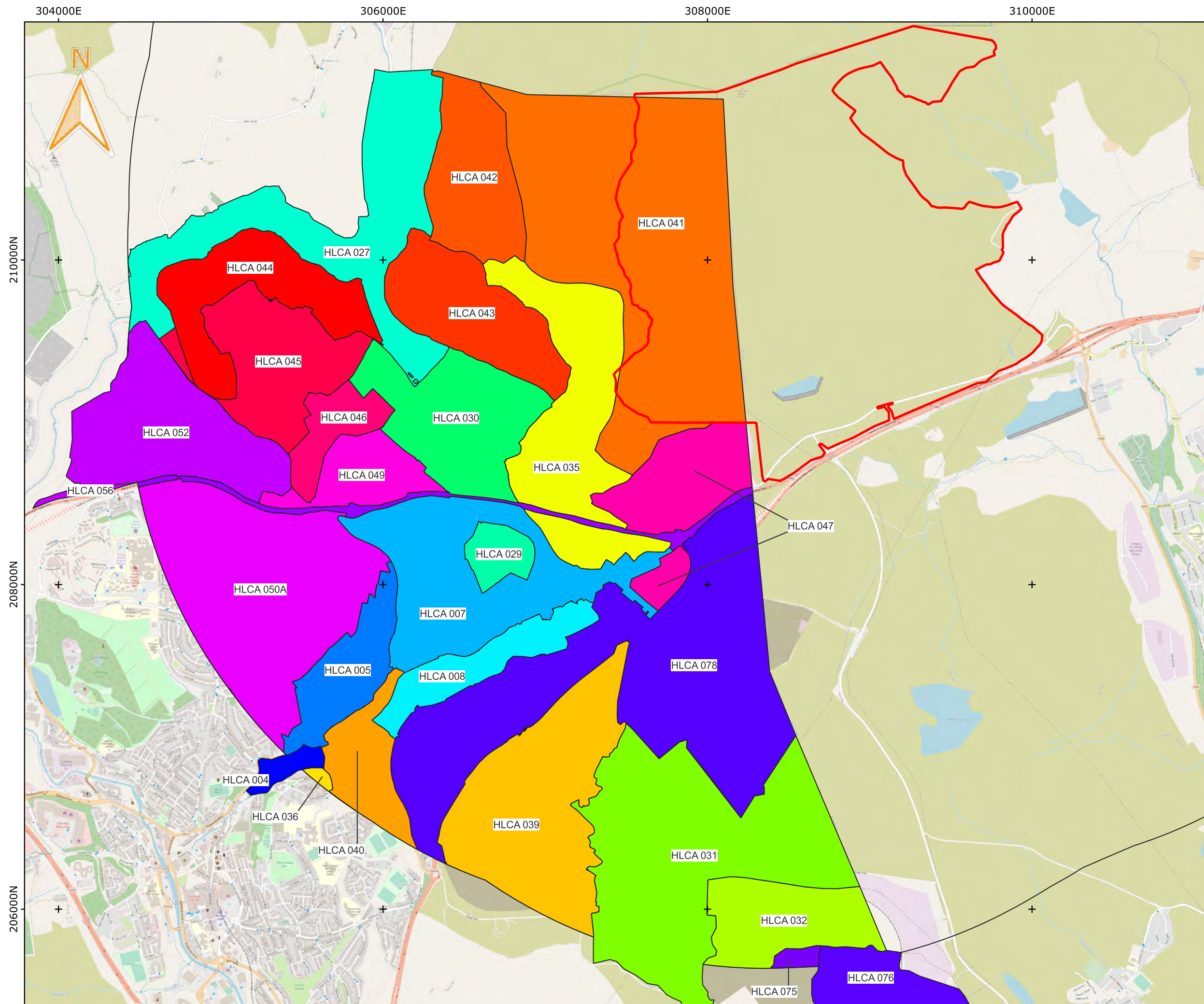
-  Application Boundary
-  3km study area
-  Merthyr Tydfil Historic Landscape



**Pen March Wind Farm  
ASIDOHL**

**Figure 3**

Merthyr Tydfil Historic  
Landscape



**Key:**

- Application Boundary
- 3km study area

0 0.25 0.5 0.75 1 km

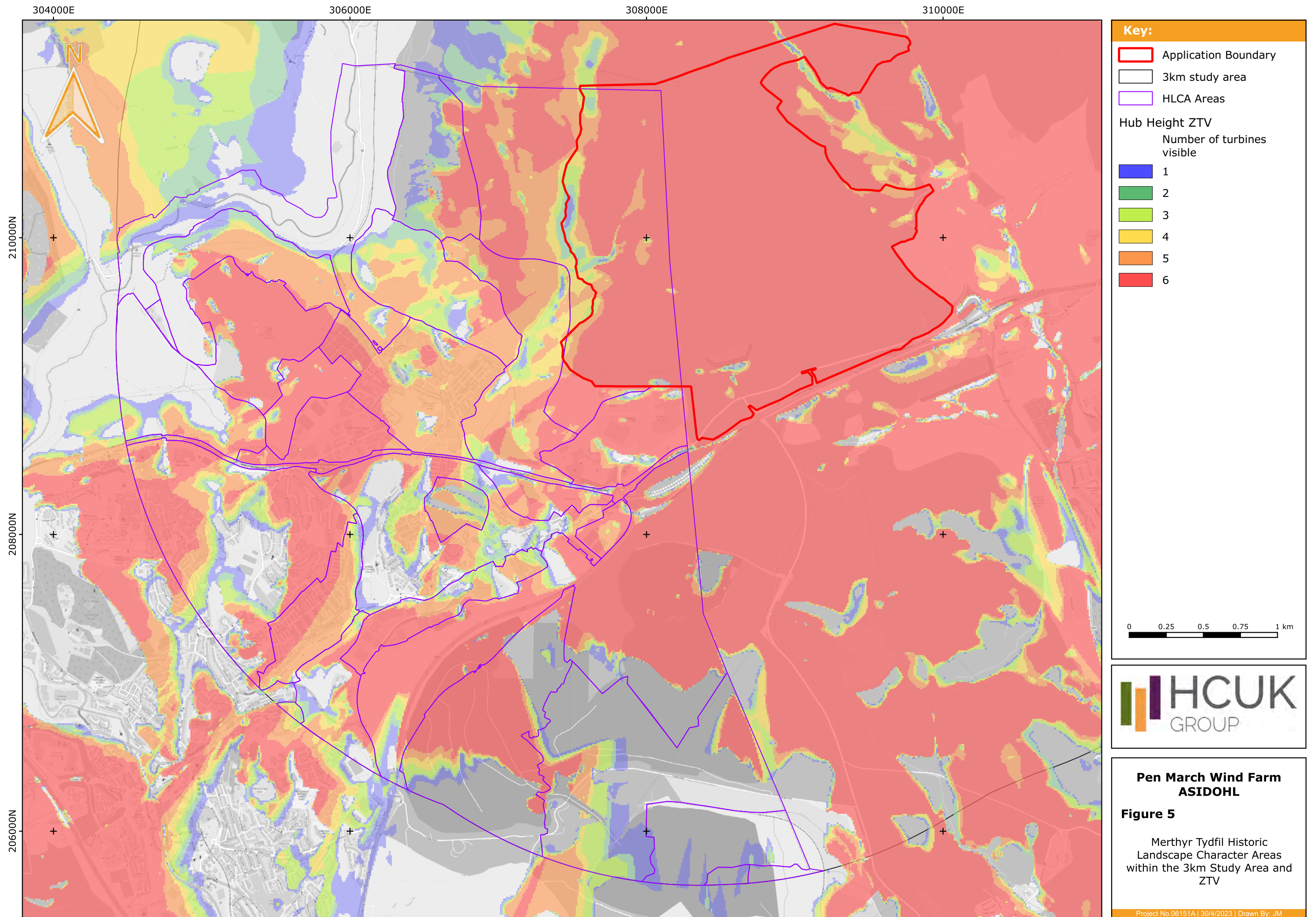


**Pen March Wind Farm  
ASIDOHL**

**Figure 4**

Merthyr Tydfil Historic  
Landscape Character Areas  
within the 3km Study Area

Project No.06151A | 30/4/2023 | Drawn By: JM



## Appendix 1: Full descriptions of HLCA areas

| HLCA No. | HLCA Name                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HLCA 004 | Penydarren Iron Works Area | <p>Penydarren Iron Works were founded in 1784, but were in ruins by the 1870s. The area was later developed as the depot for the tramway system and as workers' housing. A few of the ironworks structures still survive, but otherwise the area is mainly characterised by industrial terraced housing.</p> <p>Historical background</p> <p>The historic landscape area of Penydarren Iron Works Area encompasses the main area of the ironworks founded in 1784 by Francis Homfray. In 1788, Penydarren was the second Merthyr ironworks to begin production of bar iron, buying in pig iron from Dowlais to keep up with demand. Late 18th century cartographic evidence (1799 Yates) depicts two blocks of Ironwork buildings and a "waggon way" which approached Pen-y-Darren Ironworks from the south from coalmines in HLCA 039. The works developed numerous trackways and tramways over the following period. The effect on the adjacent HLCA 040 was dramatic; by 1814 the area was already heavily quarried, and later maps chart the development. The Homfray family's association with the works ended with the death of Samuel Homfray in 1822. Thereafter the works continued under the partnership of Thompson and Foreman. The Penydarren iron works engaged in rail production at an early stage, supplying the Liverpool and Manchester Railway. However severely competitive markets of the 1850s caused increasing difficulties and production ceased in 1859, under Messers Fothergill and Hankey. The works and its associated vast mineral deposits were later sold to Dowlais for almost £60,000.</p> <p>While cartographic sources indicate the Ironworks, including its blast furnaces, casting houses, and rail network remained in 1875-78, contemporary photographs show the works in ruins by this date. The area of ironworks was subsequently cleared and by 1919, the tramway depot and the electric power station of the Merthyr Electric Traction and Lighting Co. occupied the furnace area. The western part of the ironworks was later redeveloped for housing; by 1905 the southern side and part of the northern side of Trevithick Street and a short row at Gwynnes Close were in place, and completed by 1919. The cartographic evidence also showed a short row dating from before 1850, opposite the entrance to Pen-y-Darren Park.</p> |
| HLCA 005 | Penydarren                 | <p>HLCA 005 Penydarren Industrial settlement: Iron Company owned settlement of early dense scatter/cluster and, linear ribbon development supplemented by planned settlement of regular linear blocks of terracing, including early local authority housing</p> <p>Penydarren originated during the early 19th century as an industrial settlement associated with the Penydarren Iron Company and its core consisted of a small cluster of cottages extended by ribbon development, later forming a more or less regular grid. Buildings are mainly regular linear</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| HLCA No. | HLCA Name | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |           | <p>terraces and the public buildings which served them, including a church, chapels, public houses and schools.</p> <p>Historical background</p> <p>The historic landscape area of Penydarren evolved during the early 19th century on land acquired by the Penydarren Iron Company (part of land belonging to Gellifaelog Farm). The initial settlement comprised a small cluster of cottages adjacent to lane to Gwaelod-y-Garth (Tramroad Lane) at junction with the road to Dowlais and a small number of cottages to the south of High Street. The period 1814 to 1840 showed further linear ribbon development south of High Street between the latter and the tramroad leading to Dowlais. The Tithe Map (c. 1850) depicted initial rows along the High Street and Penydarren Road and indicated the street layout under construction in the area beyond, including Church Street and Plantation Street, though the area to the north was still farmland.</p> <p>By 1879, the settlement of Penydarren included rows to either side of High Street extending as far southeast as Nantmorlais. The original early core adjacent to Tramroad Lane extended as far as Plantation Street, Church Street, North Sweet, Upper North Street and Penydarren Road, upslope and parallel to High Street. Also evident by this date were Elim Welsh Baptist Chapel and burial ground to south of North Street, St John's Church and school, Church Sweet. At this date a tramline from the Morlais limestone quarries, to the north was still a feature of Tramroad Lane. The filter beds to north of Penydarren (Penybryn Water Works) indicated sanitation improvements of the period.</p> <p>The addition of Brynhyfryd Street - four blocks of linear terracing by 1897-98 marked a change in the layout of the settlement; this street and almost all the later streets was set at a right angle to the earlier street alignment. Later terracing, complete by 1919, including Urban, Council (the latter two sweets, dating to 1903, contain the earliest examples of council housing in Merthyr) Brynheulog, Lloyds Terrace and Williams Place and Tanybryn place, Seward Sweet eventually formed the characteristic linear grid pattern, seen today. An exception was Gwaunfarren Road, the northern boundary of the settlement, which includes terraces and semi-detached housing (some with bay windows); this was set on a similar alignment to High Street.</p> <p>By 1905, the settlement boasted at least two inns, a public house and Post, while Tramroad Lane no longer retained its tramlines. Over the following 14 years the area gained schools to the north at Cwm Rhyd-y-Bedd including the Infant School, while another school had been built to the west of Tramroad Lane removing the earlier core settlement. Development had also begun on the adjacent 'garden city area' to the north, near Gellifaelog Farm (see HLCA 050).</p> |

| HLCA No. | HLCA Name | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HLCA 007 | Dowlais   | <p>The settlement associated with the Dowlais and later Ivor Works. Although it initially started in the second half of the 18th century as a dispersed scatter of cottages, it evolved via several phases of ribbon development to a grid system, which was already partly in place by 1814. Areas of industrial housing survive, but the area as a whole is dominated by imposing public and religious buildings, such as the Dowlais Ironworks Stables and the Memorial Library.</p> <p>Historical background</p> <p>The historic landscape area of Dowlais comprised the settlement associated with the Dowlais and later Ivor Works. The settlement developed on the holdings Wern-Llwyn Isaf and Uchaf farms during the latter half of the 18th century. Estate maps of the area (Dowlais Iron Company 1784-1806) provide useful background to the area's early development. The initial settlement comprised a loosely dispersed scatter of cottages, mainly along the road to the Dowlais Iron Works furnaces and in the area immediately north of the furnaces, with a core cluster at the junction of the road from Upper Garth with Nantmorlais (the Cae-Harris area).</p> <p>By 1814, the settlement was characterised as a linear ribbon development along the road west of Pontgellifaelog to the junction with the lane from Pant, where there was a small nucleus of settlement adjacent to the furnaces, in the area south of the later Dowlais stables.</p> <p>The characteristic grid system imposed on the settlement was partly in place by the 1820s, with the area to the south of Union Street complete, including a church and the Dowlais stables (1820; site of the first educational facility for workers in Merthyr, established by Josiah John Guest in 1828). Gwern Llwyn Uchaf Farm remained, separated by agricultural land, to the east of the settlement. There was also a scatter of cottages in the area of Morgan Sweet during the period.</p> <p>Between 1832 and 1850 the settlement at Dowlais underwent major expansion; by the latter date Dowlais comprised linear ribbon development to the south of High Street, while the original core had been extended to include Cae Canol Street. Ribbon development now extended east beyond the junction with Pant Road. The southern area of Dowlais, all Dowlais Iron Company land, had already been laid out in grid fashion. By 1850, this area extended north of High Street as far as Upper Elizabeth Street and the southern end of Victoria Sweet, extending as far as the later station area and the road to Pant. The area included the north side of Ivor Street, where a barracks was located (later replaced by Barrack Row), and Lower and Upper Row. The northwestern area of Dowlais, adjacent to Cwm-Rhyd-y-Bedd belonged to a number of minor landowners and developed slightly different characteristics: notably in its layout. The latter was typified by a scatter of short rows and individual cottages and included the area between Pant Road and the Ivor Iron Works (HLCA 029), Llewellyn Street; Winifred Street and a row to the west of the later Balaclava Road in the area of Pen Cae Eira.</p> |

| HLCA No. | HLCA Name               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                         | <p>The OS 6-inch and 25-inch First Edition maps (1875 and 1878) provide further detail such as the Dowlais Ironworks stables, Market House, Dowlais Iron Company schools, the Guest Reading Room, Hebron chapel, Dowlais House Lodge, hospital, and Beulah chapel. The area from Victoria Street and Elizabeth Street as far north as Francis Street, ie north western Dowlais, had developed in a more tightly-packed fashion with a less regular grid street pattern, perhaps indicating different house provision to the south part of Dowlais where the Influence of the Iron Company on town-planning was clear.</p> <p>Dowlais was largely complete by 1878, though there was some minor additional development during the period up to 1919, such as Alfonso Terrace and Moulson, Rees and Jones Street.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| HLCA 008 | Dowlais Iron Works Area | <p>Dowlais Ironworks was founded in 1759, and went on in the 19th century to become the largest ironworks in the world. The area now forms an industrial park with significant standing remains, such as the Blast Engine House, together with buried remains including the base of the Blast Furnaces.</p> <p>Historical background</p> <p>The historic landscape area of Dowlais Iron Works Area encompasses site of the ironworks founded in 1759 by a partnership headed by Isaac Wilkinson, an ironmaster from Bersham, Clwyd. The change over to the production of bar as opposed to pig iron was comparatively late at Dowlais. The lack of success in applying Peter Onions' puddling process dissuaded all but John Guest from investing in the technology during the 1780s and Dowlais continued to supply pig iron to Pen-y-darren and Cyfarthfa. The Dowlais works was the first in Merthyr Tydfil to install Steam blowing engines, replacing waterwheel-powered bellows in 1798.</p> <p>The Works at Dowlais was to become strongly associated with the Guest family; first John Guest, then his son, Thomas Guest (1787) and in turn by his son Josiah John Guest (1807), a liberal who advocated free trade and Merthyr's first MP, following the 1832 Reform Act. It was a result of the latter's vision and business acumen that Dowlais became the largest ironworks in the world. The rails for the Stockton and Darlington Railway were produced at the Dowlais works in 1821 heralding the rewards to come of the railway boom years of the 1830s and 1840s. Technological advances such as the adoption of the 'hot blast technique', patented in 1828, which substantially reduced the amount of coke required for smelting, enabled Dowlais to maintain its competitive edge. Further mills were constructed to produce rails: the Big Mill in 1830, supplemented by the Little Mill in 1840.</p> <p>William Menelaus was appointed general manager in 1856 and soon after the Dowlais works began experimenting with a new process developed by Henry Bessemer. Menelaus was to oversee the conversion to steel production, which began in a limited fashion in 1865. The local ironstone was unsuitable for the production of steel, due to its high phosphorous content and by the 1870s ironstone mining had ceased altogether in the Merthyr area. Based on</p> |

| HLCA No. | HLCA Name   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |             | <p>imports, chiefly from Spain, steel production would ultimately transfer to coastal sites, such as the new steelworks built by the Dowlais Company at East Moors in Cardiff in 1891. In 1905, under GKN a new blast Furnace complex, which included two American designed 'Yankee' furnaces and a new mill was added. However, after a period of prolonged decline, in 1930 the production of steel at Dowlais finally came to an end.</p> <p>The early development of the works can be charted from cartographic sources, including estate maps and early OS maps and surveyor's drawings, the Tithe map of 1850 and unpublished map of 1851, among others. The extent of the ironworks development is well demonstrated by the 1878 6-inch OS map, which in part reflects the conversion of the works to steel production in the years after 1865. Numerous features were recorded within the area including charging bank, furnaces and brick kilns among other industrial features southeast of Dowlais House. Other features shown are engine houses, levels, a brickworks, the reservoir to the south of Dowlais House, Cae-Harris Pond, adjacent cottages on Pond Street (now demolished), the Dowlais Railway and numerous railway sidings and tramroads. GGAT Mill, Coed Cae pond, and an adjacent row of cottages (demolished by 1905) were located to the south the area.</p> <p>Significant changes occurred in 1905 when the plant was remodelled under GKN: additional reservoirs and extensive coke ovens were built in the area to the north of the brickworks, which itself had been extended. The Goat Mill was enlarged and Cae-Harris station had been constructed; this included a goods shed, an engine shed and cattle pens. Further alterations indicated by 1919 were primarily in the area to the southeast of Dowlais House and the blast engine house (now listed grade II), and included additions to the furnaces.</p> |
| HLCA 027 | Taff Fechan | <p>A transport corridor based on the Taff Fechan Valley, characterised by public rail networks of the latter half of the 19th century, including the B&amp;M/LNWR Joint Railway and the impressive structure of the Glais Viaduct at Pontsarn.</p> <p>Historical background</p> <p>The historic landscape area of Taff Fechan contains features associated with the BM and LNWR joint Line (built 1868 by the BM, joint from 1879), the Brecon and Merthyr Line, and the Merthyr Tredegar &amp; Abergavenny (LNWR) and the Morlais Tunnel (1879). Particularly impressive structures include the Glais Viaduct at Pontsarn (built by Savin and Ward 1866). The remains of the Brecon and Merthyr Line, to the northeast of Pant junction are partly re-used by the current Brecon Mountain Railway. Other distinctive features are the ventilation towers of the Morlais Tunnel.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| HLCA No. | HLCA Name                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HLCA 029 | Ivor Iron Works Area                  | <p>An industrial landscape, the site of the Ivor Iron Works, opened in 1839, and now characterised by early 20th century disused industrial buildings.</p> <p>Historical background</p> <p>The historic landscape area of the Ivor Iron Works Area comprises the site of the works, which opened in 1839 as an extension of the Dowlais Iron Works, initially with four blast furnaces. A single redbrick built building, post-1915 in date, survives from the pre-British Steel era.</p> <p>During the second half of the 20th century the site of the Ivor Works was given over to a foundry operated by British Steel. The closure of the foundry in 1987 ended Merthyr's association with the iron industry; an association which had lasted more than 200 years.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| HLCA 030 | Pantcadifor, Rhyd-y-bedd and Caeracca | <p>A roadside settlement of late 18th century to early 19th century and later date, associated with local quarries. The settlement, which now also contains 20th century social housing and executive housing, is dominated by its mid 19th century cemetery with two chapels.</p> <p>Historical background</p> <p>The historic landscape area of Pantcadifor, Rhyd-y-bedd and Caeracca originated as a small roadside quarrymen's settlement. By the 1870s, the settlement had grown to the north and south eventually merging with Dowlais. The original settlement at Pant appears in 1799 as a small settlement at the junction of the Penydarren and Dowlais roads to Brecon, nucleated around the Pant-Cad-Ivor Inn (c 1740), with minor development along the road south to Nant Morlais (Dingle) and Dowlais, including the farms of Cae'r-acca and Cwm Rhyd-y-bedd. By 1814 a small settlement was in place at Pantysgallog, including Pantysgallog House, just to the south of the original settlement at Pantcadifor, while to the west was a row of cottages (Tair Efail on the 1850 Tithe Map).</p> <p>The settlement remained static during the period up to 1850, apart from a major shift in the alignment of Pant Road to the south, and the establishment in 1849 of the prominent cemetery for victims of the second cholera epidemic to hit Merthyr (the first being in 1832). Pant Cemetery with its two mortuary chapels, one nonconformist, one Church of England, was located on land formerly part of Castle Farm.</p> <p>The Dowlais Fever Hospital located slightly to the south of Pantysgallog had been constructed in 1869 for the Merthyr Board of Health, built of wood, this 32 bed hospital was occupied on a temporary basis during epidemics. Just northeast of Pant Road was the Dowlais Branch of the Brecon &amp; Merthyr Railway, built in 1864/65, with a signal box.</p> <p>The settlement developed in ribbon fashion with roadside developments of industrial workers' rows constructed at Pantysgallog and at Pant-Cerddinen to the south of Bryniau Quarry by 1875. Forty years later, the settlement had</p> |

| HLCA No. | HLCA Name               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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|          |                         | grown to include King and Queen Streets in the area between Pant Road and the Merthyr Extension of the LNWR (c 1868). Additional terraces had been constructed on the west side of Pant Road (New Houses), while a new area had been established to the east of the Brecon & Merthyr Railway including Caracas Terrace, and the grid layout of Edward and Gwladys Streets. By this date the settlement, served by a halt on the BM Railway and a station on the LNWR, also boasted schools, a post office, and a church, Christ Church, a laundry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| HLCA 031 | Merthyr Common, Central | <p>The central area of Merthyr Common is strongly associated with the development of the iron industry of Merthyr, and indeed of South Wales. It is primarily characterised by water management features associated with the Dowlais Free Drainage System, which single out this landscape as being one of unique importance within the Merthyr Tydfil Historic Landscape, and also of national importance. The area also contains extractive features and transport networks.</p> <p>Historical background</p> <p>The historic landscape area of Merthyr Common, Central is a nationally and internationally important landscape created by an upsurge in coal and ironstone extraction from the latter half of 18th century. The area is directly associated with the renaissance in the iron industry, and a result of the introduction of the Cort puddling process, which enabled coke to be used in iron smelting, in place of the traditional charcoal. Coal and ironstone workings in the area came under the direct control of the Iron companies of the region, ie Dowlais and to a lesser extent Penydarren; the Ironwork Company owners holding the mineral leases.</p> <p>The Dowlais Free Drainage System, an ingenious system of reservoirs and leats dating in part to c 1818, was constructed and embellished over a period of over seventy years to supply water to the coalmines and ironworks of Dowlais. The system, fed by gravity, employed an extensive above-ground network of leats and reservoirs and underground U-shaped channels, built to the 'Dowlais pattern' within various levels, such as the Brew House Level, and Buxton's or the Purple Level, the latter still extant and in good condition as late as the 1960s. The system acted to drain a variety of coal seams including the Lower Four Feet seams of the Cwm-Bargoed, Trecatty and Trehir area and the Upper, and Lower Four Feet, Big Coal, Red, Blue and Sported Vein in the Pantywaun, Rhaslas, and South Tunnel areas. It eventually drained into a water pit at Tyle Dowlais Pit, from where water could either be pumped back to the surface system or allowed to drain to the charging levels of the Penydarren furnaces (Owen 1977, 67-8).</p> <p>The principal line in the character area was the Great Western &amp; Rhymney Railways' Taff Bargoed Joint Line (c 1876), which projected eastwards to sidings at Fochriw Junction and westwards to the Dowlais Zigzag Lines Junction. The Line then divided, one line preceding to Ivor Works, via the</p> |

| HLCA No. | HLCA Name           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|          |                     | <p>passenger station at Dowlais (Cae Harris), the other, via two reversing junctions (Furnace Tops and Ffos-y-fran) to the Dowlais Works. The mineral branch of the LNWR (opened 1881, closed 1937) from Cwmbargoed Junction to the Cwmbargoed Pits was located within the area. It also contained a section of the Dowlais Iron Company's Railway, together with remains of various associated industrial tramroads and inclines, such as the Penydarren and Bargoed inclines at Tyle Dowlais, and the tramroad and incline to Penydarren Pits.</p> <p>The area's coal and ironstone workings (predominantly within the adjacent HLCAs 039 and 078) provided the Dowlais Ironworks in particular with a large amount of raw material. Surface workings predominated in the area. This essentially comprised a combination of patching (in use at Tyle Dowlais until the mid-19th century), small pits of the crown pit type, seen in the vicinity of the Ffos-y-fran Ironworkers' settlement, and where the topography allowed levels driven into the hillsides. Several levels and other features associated with this period are recorded in the northern half of the historic landscape area.</p> <p>The extraction of ironstone and coal in particular continued throughout the 19th century, fluctuating with economic demand. After the First World War, the extractive industries in the area entered a period of decline, and most of the area's mines had been closed by the end of the 1920s.</p> |
| HLCA 032 | Cwm Bargoed Washery | <p>A modern industrial area overlying the site of Cwm Bargoed Pit, and characterised by extensive waste tips and lagoons, with surviving rail features along its northern edge. Most other historic features in the area have been largely removed by continues industrial use.</p> <p>Historical background</p> <p>The historic landscape area of Cwm Bargoed Washery essentially comprises the site of the washery established during the later half of the 20th century with its extensive tips and lagoons. The washery has removed or buried most of the mining and transport remains, which previously stood in the area. Surviving features are largely associated with the Great Western &amp; Rhymney Railways' Taff Bargoed Joint Line (c 1876), which ran eastwards to sidings at Fochriw Junction and westwards to the Dowlais Zigzag Lines Junction, part of the line remains in use as a mineral line for the washery. Other railways in the area included the former mineral branch of the LNWR (opened 1881, closed 1937) from Cwmbargoed Junction, between Dowlais Top and Dowlais, to Cwmbargoed and the Cwmbargoed Pits, and remains of various associated industrial tramways are located within the area.</p> <p>The extraction of ironstone and coal in particular continued throughout the 19th century, fluctuating with economic demand. After the First World War, the extractive industries in the area entered a period of decline; by the end of</p>                            |

| HLCA No. | HLCA Name  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|          |            | the 1924, the Cwmbargoed Colliery, and most of the surviving mines had been closed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| HLCA 035 | Pengarnddu | <p>Summary</p> <p>A transport corridor associated with the limestone quarries at Twynau Gwynion, where mineral railways replaced the 18th-19th century pack-horse route. It also contains extensive remains of the Dowlais Free Drainage System and the former industrial settlement of Pengarnddu, associated with the adjacent limestone quarries.</p> <p>Historical background</p> <p>The historic landscape area of Pengarnddu comprises an area of semi-improved land bordered at the north and east by the Rhymney Limestone Railway of c 1864. The latter served the Twynau-gwynion quarries (HLCA 042), connecting the quarries with the Guest's Ironworks at Rhymney and was connected to the ironworks by the Rhymney Mineral (Limestone) Railway in c 1864. The Twynau Gwynion Tramroad of 1805 to Dowlais Ironworks passed through the area; a Tramroad bridge of 1805/15 survived until 1984. The area also contains the remains of the Brecon &amp; Merthyr (Newport Branch) Railway, dating from between 1860 and 1865.</p> <p>Interesting water management features dating from the 19th century, also survive in the area, part of the extensive 'Dowlais Free Drainage System': these remains are primarily Lower (Fish Pond) and Upper Reservoirs (New Pond) with associated leats (with brick and masonry lining) and aqueducts (masonry), and a 19th century red-brick pumping station, below Upper Reservoir. Lower Reservoir was built before 1850, while Upper reservoir dates to between 1850 and 1875.</p> <p>The area largely formed part of the Bute Estate during the 1850s and included the farm of Blaen-Morlais. The area contains the small industrial settlement of Pengarnddu, extant in 1814. By 1875, this comprised two isolated rows, one associated with yards, to either side of the existing farmstead, and a school to the southwest. By 1915, the settlement boasted a church, St Michaels south of the school and a public house, among other features. By the 1960s the settlement has been abandoned, the farmstead and one cottage remaining.</p> |

| HLCA No. | HLCA Name   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| HLCA 039 | Ffos-y-fran | <p>HLCA 39 Ffos-y-Fran Nationally important Industrial landscape associated with the Dowlais Ironworks; industrially altered upland Common: intensive area of extractive features predominantly early to mid 19th century coal and ironstone workings along mineral outcrop, primarily levels and pits, also early remains of crown pit workings, and patch workings; transport networks; industrial and public rail, drainage features: the Dowlais Free Drainage System; industrial settlement: includes scheduled Ffos-y-fran Iron Worker's settlement.</p> <p>Summary</p> <p>An extensive and nationally important landscape of industrial sites associated with the Dowlais Iron Works, mainly comprising features associated with iron ore extraction and, to a lesser extent, coal, and in use between the late 18th and early 19th century. The area is characterised by extractive features (mainly waste tips), the Dowlais Free Drainage System associated with the Dowlais and later the Ivor Iron Works, and mineral railways and tramways as well as public rail (now disused).</p> <p>Historical background</p> <p>The historic landscape area of Ffos-y-fran comprises an important industrial extractive landscape; the area is dominated by coal and ironstone workings along the western outcrop of Merthyr Common, associated with the Dowlais and Penyarden Ironworks. It should be emphasised that while most of the surface remains in the area are 19th century coal and ironstone outcrop workings associated with the main period of operation of the Dowlais, and the Penyarden works (the latter closed c 1859), outcrop workings in the area span most of the century. These start in the late 18th century and end with some residual activity in the early 20th. Today's landscape is essentially the product of a succession of 19th century extraction phases (including re-working of earlier areas).</p> <p>The accessibility of the outcrop, particularly the reserves of ironstone make it likely that some mining activity occurred during late 18th to early 19th century. The initial stage of working would have been by quarrying or patch working, in addition to small levels and pits. These activities have produced a scarped face almost 1 km in length, curving around the crest of the NWW facing slopes to the north of Ffos-y-fran, possibly on the line of an existing erosion bench (the area has been subject to some reworking in later periods). Further patch working or open ore quarrying. some 9.5 ha in extent, in conjunction with surviving areas of crown pit type workings, continues south to the iron ore miners' settlement. Overburden removal for the patch working may have been cleared by a process known as scouring although surviving evidence in the area is now inconclusive. Scouring on the coalfield, though well documented in the 18th century, seems not to have continued much beyond the early 19th century.</p> |

| HLCA No. | HLCA Name | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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|          |           | <p>The Dowlais Free Drainage System, an ingenious system of reservoirs and leats, fed by gravity, and which formerly provided water to the Dowlais Ironworks and the water balance systems of its associated workings, was also a feature of the area (though the largest concentration of surviving features are now found in the adjacent area HLCA 031). The system, which in part dates to c 1818, was crucial to the expansion of the ironworks at Dowlais and indeed Pen-y-darren. It supplied water to the coal mines and ironworks of Dowlais via an extensive above-ground network of leats and reservoirs and underground U-shaped channels, built to the 'Dowlais pattern' within various levels, such as the Brew House Level, and Buxton's or the Purple Level. The system acted to drain a variety of coal seams including the Lower Four Feet seams of the Cwmbargoed, Trecatty and Trehir area and the Upper, and Lower Four Feet, Big Coal, Red, Blue and Spotted Vein in the Pantywaun, Rhaslas, and South Tunnel areas. It eventually drained into a water pit at Tyle Dowlais Pit, from where water could either be pumped back to the surface system or allowed to drain to the charging levels of the Pen-y-darren furnaces (Owen 1977, 67-8).</p> <p>Considerable expansion of level and shaft activity was the main feature of the mid 19th century (1820s to 1880s) outcrop working in the area and entirely replaced the older methods of shallow surface workings, as accessible sections of the outcrop became exhausted. Despite the Dowlais Iron Company having sunk 19 pits between 1837 and 1857, levels continued to provide the main means of coal and ironstone extraction in the area up to 1850, and accounted for 75 per cent of coal out put from the Dowlais workings. After this date, however, extraction of ironstone and coal appears to have concentrated on a number of pits (shafts) set on the lower slopes immediately to the west of this area. These included the Dowlais Pits 1, 2, 4, 6, and 7, the Pen-y-waun Fawr Pits and the Tyle Dowlais Pit, the latter two at the extreme northwest corner of the application area. Further reworking of the area along the crest of the west-facing outcrop with at least two additional levels driven into the worked face during the period was evident as was a series of levels driven along the base of the slope at the western boundary of the area.</p> <p>The area contains extensive versions of 'finger' or 'fan-tips' frequently associated with shaft, as opposed to level workings, and generally restricted to the lower western outcrop, above the area of the now removed Great Dowlais Tip. Examples of these dominant and highly visual features include those associated with No.1 Pit, No. 2 Pit, No. 4 Pit, and No. 6 Pit, Dowlais. While many of the levels and pits were still named in the 1873 and 1879 OS surveys, the vast majority appear to have become disused soon after.</p> <p>By 1879, the current form of tipping was typified by parallel tramlines, in close-set blocks, producing smooth, level surfaces; the contrast between the old and new forms of tipping is clearly shown on the surface of the tip. The first edition OS map shows this method in practice in the area north and south of No.1 Pit and at the pits of Pen-y-waun Fawr and Tyle Dowlais; the tips at</p> |

| HLCA No. | HLCA Name | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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|          |           | <p>the latter two sites have been extensively remodelled during the latter part of the 20th century.</p> <p>The haulage tramroad, a common feature of the Merthyr outcrop landscape by the early 19th century, was an important element of the workings, allowing increasing volumes of ironstone and coal to be moved to the Dowlais stockyards. A haulage tramroad, the Dowlais Iron Company Railway, skirted the line of the outcrop, connecting the various levels and pits (shafts) with the main routes to the stockyards via a system of inclines. Several large sections of haulage tramroads, including the latter, and inclines provided for the levels of the Dowlais, and the Pen-y-darren workings survive in the area.</p> <p>Others included the Pant-y-Waun Mineral Railway, extended and incorporated into the Dowlais Iron Company Railway at around the turn of the century. The principal line in the study area was the Great Western &amp; Rhymney Railways' Taff Bargoed Joint Line (c 1876). This projected eastwards to sidings at Fochriw Junction and westwards to the Dowlais Zigzag Lines Junction, where it divided, one line proceeding to Ivor Works, via the passenger station at Dowlais (Cae Harris), the other, via two reversing junctions (Furnace Tops and Ffos-y-fran) to the Dowlais Works. The former mineral branch of the LNWR (opened 1881, closed 1937) from Cwmbargoed Junction, between Dowlais Top and Dowlais, to Cwmbargoed and the Cwmbargoed Pits passes through the area. Also located within the area is a section of the Dowlais Iron Company's Railway, together with remains of various associated industrial tramways and inclines, such as the Pen-y-darren and Bargoed inclines at Tyle Dowlais, and the Pen-y-darren Pits tramway/incline.</p> <p>By the end of the 19th century, the outcrop workings of the area were in decline; the main product of these workings had been ironstone for the Dowlais furnaces, now given over to steel production, while coal was being won in far greater quantities elsewhere from the surviving mid-19th century deep shaft mines. By this date, iron ore was being sourced from northern Spain, the local ore, rich in phosphorous and sulphur being no longer suitable for steel production. As a result, local ore production declined rapidly to such an extent that it had ceased altogether by the early 1870s. Most if not all the pits and levels within the area shown on the first edition 25" OS map (surveyed 1879) were probably already defunct.</p> <p>Cartographic evidence charted the dereliction of the area's workings and associated transport network. The majority of the coal and iron ore workings in the area, in particular along the north west-facing slopes above Dowlais, were disused by this date, including Pits 1, 2, 4, 6, and 7, as were the ironstone levels (2nd edition OS, 1905). A possible exception of Pen-y-waun Fawr pits and Tyle Dowlais pit where the continued existence of tramway tracks might indicate some level (if limited) of continued working. Most of the minor haulage tramroads had also been removed, however, the main Dowlais</p> |

| HLCA No. | HLCA Name   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|          |             | Iron Company Tramroad connecting the works at Dowlais with Cwm Bargoed Pits and the incline to Penydarren Pits (HLCA 031) were apparently railed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| HLCA 040 | Incline Top | <p>HLCA 40 Incline Top Transport corridor, industrial; industrial incline-top settlement,' reclaimed landscape formerly characterised by industrial extractive and water management features. Major industrial transport corridor, characterised by the route of the Penydarren Incline and the Dowlais Railway. New roads in the area primarily serving the area's industrial estates continue the transport corridor characteristics. The settlement of Incline Top contains early industrial housing as well as the now more prominent recent industrial estate.</p> <p>Historical background</p> <p>The historic landscape area of Incline Top comprises an industrial transport corridor, associated with both Penydarren and Dowlais Ironworks. Cartographic evidence indicates that a network of tracks, platways and or tramroads was in place by 1814, shown in more detail on the OS surveyor's drawing of 1826, connecting Penydarren Ironworks with the Pencoedcae Colliery, via Pantyffin. The area was largely part of the Penydarren Iron Company land by the Tithe of 1850, with a part to the west leased from William Thomas. The Penydarren Incline at Incline Top was extant by 1850 and the tramroad connecting the Penydarren and Cwmbargoed Pits was at least partly in place by 1850, heading from Incline Top as far as the junction at Mountain Hare.</p> <p>In 1851, the Dowlais Iron Company had opened its railway from Dowlais to the Taff Vale Terminus and sidings off Plymouth Street. The 6-inch OS map of 1875 detailed the tramroad system at its peak; including the Penydarren tramroads with an additional incline to the north of Bradley Row with an engine house. The Dowlais Railway with its incline engine house was also shown; this line ran south and southwest through the area from Dowlais to its junction with the Taff Vale Railway. Numerous other tramroads served the various pits and levels of the area and the adjacent hinterland.</p> <p>The Zigzag Branch (later Dowlais Steel Works Branch of the GWR and Rhymney under construction in 1875, was yet to penetrate the area, by 1898 the latter had been completed. Apart from minor remnants most of the Penydarren tramroad system in the area was disused and lifted by 1898.</p> <p>By 1850, Incline Top comprised a settlement of four isolated rows with associated linear yards (including Bradley Row), at the head of the Penydarren Incline, from the two original small rows of collages indicated in 1814. Between 1875 and 1898 the area gained a mission Room adjacent to a</p> |

| HLCA No. | HLCA Name             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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|          |                       | <p>cottage extant in 1875 by the side of the Penydarren Tramroad, little change is visible thereafter. Bradley Row is now demolished and only a much-altered fragment of one of the former rows remains north of the incline's route in addition to a nearby, detached collage, extant in 1850.</p> <p>The area was formerly an industrial extractive area with numerous coal and ironstone pits and levels. In addition to the area's transport network, other industrial features such as coal levels (both ironstone and coal), airshafts and engine houses were extant in the landscape by 1875. Also in place were water management features such as the reservoir to the northwest of Mountain Hare, disused by 1898. Other former characteristic features were reservoirs and leats, part of a much more extensive water management system (the Dowlais Free Drainage System), which here appeared to have supplied the water to the water balance systems of the local pits and probably the engines associated with the various inclines (see HLCAs 039 and 031).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| HLCA 041 | Merthyr Common, North | <p><b>Summary</b></p> <p>An area of common land containing characteristic water-management features, including part of the 19th century Dowlais Free Drainage System associated with the Dowlais and later the Ivor Iron Works; individual components include the Saints and Pitwellt Ponds and numerous associated features.</p> <p><b>Historical background</b></p> <p>The historic landscape area of Merthyr Common, North comprises an area of traditionally open mountain grazing, part of the extensive Merthyr Common east of Twynau-gwynion Quarries and its associated limestone railway. The area's characteristics extend beyond the eastern boundary of the Merthyr Tydfil and the historic landscape. The watershed of the area dissected by various natural watercourses such as Nantmorlais and Torgwyn, has been subsequently exploited for water management purposes: the area contains the most northerly part of the Dowlais Free Drainage System, a system of reservoirs and leats, which evolved over a period of over 70 years to serve the Dowlais Ironworks and associated workings.</p> <p>The area contains Pitwellt Pond, shown on the 1850 tithe map, known to have been complete by 1862. The other reservoir in the area is the Saints Pond, which had been added by 1891. Pitwellt (Pitwellt) Pond is shown as drained and 'disused' on the 1919 OS map, but is described as in use in Dowlais documents of 1920.</p> <p>In addition to these industrial features, the area has a reservoir built by the Merthyr Tydfil Corporation in c 1902 as part of sanitation improvements; other features are mainly stone quarries.</p> |

| HLCA No. | HLCA Name               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| HLCA 042 | Twynau Gwynion Quarries | <p>A series of 19th century quarries associated with the Dowlais Iron Works and later the Rhymney Iron Works.</p> <p>Historical background</p> <p>The historic landscape area of Twynau Gwynion Quarries comprises an extensive limestone quarry developed by the Dowlais Iron Company on land from the early 19th century, leased from the Bute Estate. The quarries were connected to Dowlais by tramroad, a tramroad bridge of 1805/15 survived just to the south until 1984 (HLCA 035). The quarry later became associated with the Guest's Ironworks at Rhymney, and was connected to the ironworks by the Rhymney Mineral (Limestone) Railway in c 1864.</p> <p>Cartographic evidence indicates that the area may contain the remains associated with the quarry tramroad, which formerly served the working face of quarry.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| HLCA 043 | Garth and Blaen-y-Garth | <p>An agricultural landscape characterised by an area of surviving medieval or post-medieval irregular enclosures, traditional field boundaries, and vernacular domestic and agricultural buildings. There are also localised evidence for small-scale extraction, and water-management features associated with public health improvements of the late 19th century.</p> <p>Historical background</p> <p>The historic landscape area of Garth and Blaen-y-garth comprises an area of post-medieval evolved agricultural enclosure with medieval origins. The holding is centred on the post-medieval farm of Garth Farm, which lies on the site of the medieval settlement of Castell Madoc, a fortified manor known to have been abandoned by the 14th century.</p> <p>The post-medieval (early 18th century) farmhouse at Garth belongs to the hearth passage group of sub-medieval houses, and is of the three-unit chimney backing on entry type with hail between heated outer and narrow inner rooms, typical of the Blaenau. A characteristic feature of the building is the lateral stone stairs within an outshut.</p> <p>Is the layout of the area's farmsteads and holdings prior to the arrival of the lines of the Brecon and Merthyr Railway. The holding of Garth, owned by one Mary Williams, was characterised by an irregular arrangement of linear fields, possible amalgamated medieval strip fields, while Blaen-y-Garth (Blaenayr Garth) was characterised by larger irregular enclosures of possibly later date. While little had altered by the date of the OS survey of 1875, a series of quarries had been added to the west and north of Garth farm, those to the west were connected to Pantysgallog by track or minor tramroad.</p> <p>Later landscape features include the Garth Storage Reservoir and Filter Beds constructed by 1884 for the Merthyr Tydfil Corporation and linked by 12" main to the Lower Neuadd Reservoir of 1884, and later by high level aqueduct to the Upper Neuadd Reservoir and to a new service reservoir at Pengarnddu.</p> |

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| HLCA 044 | Morlais Castle Quarries | <p>An industrial extractive landscape of early 19th century date characterised by limestone quarries with associated tips, a lime kiln, and the tram roads which linked the quarries with the Penyardarren and Plymouth Ironworks.</p> <p>Historical background</p> <p>The historic landscape area of Morlais Castle Quarries comprises a dramatic and important extractive landscape based on the early 19th century quarries associated with Penyardarren and Dowlais Ironworks, on land leased from the Earl of Plymouth from 1763. Leases indicate that part of the area was leased to the Dowlais Iron Company (Isaac Wilkinson and John Guest) from 1763/65, while leases of 1810 and 1819 illustrate the connection of the Plymouth Iron Company (the Hill family) to the area.</p> <p>In 1793, the Morlais Tramroad of the Penyardarren, Dowlais and Plymouth Ironworks was constructed (Goitre Lane). Cartographic evidence of 1814 and 1826 shows the lime works west of Morlais Castle connected by the Morlais Tramroad. Between 1814 and 1826 a track connected the eastern quarry area to Pant and the Dowlais Ironworks. A plan attached to a lease of 1848 showed that the area effectively divided in three between the ironworks of Dowlais to the east, Penyardarren to the southwest and Plymouth to the northwest. The plan also detailed the line of the Tramroad to the Plymouth (Duffryn Works) and Penyardarren Quarries (Goitre Lane) and the Dowlais Railway. The tithe map of 1850 indicates the entire area was the property of Robert Henry Clive and at this date leased to the Dowlais Iron Company.</p> <p>The OS maps of 1875 to 1915 chart the later development of the quarries, indicating the development of different quarry faces over time and the associated tramroad systems; features include smithies and a limekiln. By 1915 the quarries to the west and north are disused, while that on the east had been extended to the southwest, and largely retained its tramroad system.</p> |
| HLCA 045 | Morlais Hill Castle     | <p>A nationally important relict landscape of pre-industrial date, dominated by the medieval stronghold of Morlais Castle. The area contains defensive, domestic and funerary features dating to the prehistoric and medieval periods, including a relict field system, prehistoric enclosures and a Bronze Age ring cairn. There are also post-medieval agricultural features and a fieldscape of large but irregularly shaped fields associated with Castle Farm. Industrial features are limited in extent, although the early 19th century tramroad associated with the adjacent limestone quarries does pass through the area.</p> <p>Historical background</p> <p>The historic landscape area of Morlais Hill and Castle comprises a relict landscape area of national importance. The area is dominated by defensive features of late prehistoric and medieval date: Castell Morlais, a univallate</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| HLCA No. | HLCA Name        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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|          |                  | <p>hillfort of Iron age date, comprising an almost rectangular enclosure of c 1.6 ha, partly obscured by the later medieval castle of Morlais Castle.</p> <p>Morlais Castle is considered to have been a stronghold of the native lords of Senghennydd before being reconstructed by Gilbert de Clare in c 1270. The site comprises two baileys surrounded by a curtain wall with five or six round towers, largely collapsed but standing in places, all set within a bank and ditch. The adjacent area contains ploughed out field boundaries associated with a rectangular enclosure.</p> <p>An important funerary and ritual landscape element of the Bronze Age is supplied by the Morlais Hill Ring Cairn to the north of the farmstead; a circular bank of limestone rubble with a possible entrance to the south (PRN 0830m).</p> <p>An estate map by John Edward Eyre details the Castle Farm and the Castle at Morlais as it appeared in 1766 (St. Fagans Estate, Earl of Plymouth), while Yates' map of 1799 again showed both the castle and the farmstead, then a single range of buildings. By 1814 the post-medieval farm of Castle Farm comprises three separate rectangular building within an irregular straight-sided enclosure connected by track to Pontsarn Road. The OS Surveyor's drawing of 1826 depicted the field pattern much as it appeared on later maps and indeed survives to the present day. It would also appear that the form of the later industrial farm, three ranges around a rectangular yard, was in place by this date, this was certainly the case in 1848 and on the Tithe of 1850, the farm was part of the estates of Robert Henry Clive. The three editions of OS maps between 1875 and 1915 illustrated landscape changes, such as the progressive loss of the area to the north to quarrying, the conversion of the farm to a golf course, which included the construction of a pavilion (the Golf Club). Additional features noted from cartographic sources include Ivor's Chair, Carreg Ifan, an old shaft, and ranges of linear agricultural sheds west of the farm.</p> <p>Also located at the western edge of the area beneath the prominent site of Morlais Castle was the Pontsarn Sanatorium built 1913 under the auspices of the Merthyr Tydfil Board of Guardians, now converted to flats.</p> |
| HLCA 046 | Bryniau Quarries | <p>An industrial extractive landscape associated with Dowlais and Ivor Iron Works, containing quarries and an associated tramroad.</p> <p>Historical background</p> <p>The historic landscape area of Bryniau Quarries comprises an area of poorly drained rough grazing, part of the Castle Farm holding of the Plymouth Estate, leased to the Dowlais Iron Company during the 19th century. The area, depicted as wooded (scrub) on maps between 1766-1875, was being quarried by 1875. At this date a small quarry within the Bryniau enclosure was being worked connected by tramroad to the Dowlais area and the Ivor Iron Works, in particular. The quarry with its associated tram network had</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| HLCA No. | HLCA Name   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|          |             | expanded considerably by 1915. Other features of the 19th century (and earlier) were tracks leading to Castle Farm.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| HLCA 047 | Dowlais Top | <p>An area of largely reclaimed industrial land, now redeveloped for modern commercial, retail and light industrial use.</p> <p>Historical background</p> <p>The historic landscape area of Dowlais Top comprises former industrial landscapes associated with the Dowlais Ironworks. The area to the north contained extensive workings, extant in 1814 and 1826 and connected to Dowlais and Dowlais Top by haulage or tramroad. These workings, depicted on later maps as quarries with numerous linear and lobed tips, were the remains of early surface or patch workings, and levels probably worked from the adjacent settlement of Penygarnddu (HLCA 035) and Dowlais Top. The workings, like those to the south (Ffos-y-fran HLCA 039) would have been largely redundant by the 1860s, confirmed by the apparent lack of associated railed tramroads depicted on the 1875 OS 6-inch maps. Rail and tramroad routes passed through the area: that of the Twynau Gwynion Tramroad ('Tramway' in documentary evidence) of 1805 to Dowlais Ironworks, later the Rhymney Limestone Railway of c 1864, and the B&amp;M (Newport Branch) Railway c 1860-1865, opened 1863. The latter had a station at Dowlais Top, detailed on the 1st, 2nd and 3rd edition 6-inch OS maps (1875-1915). This survives to the present-day. A kiln was depicted in the area adjacent to the Twynau Gwynion Tramway in 1826, apparently still extant in 1875 as a limekiln adjacent to the Rhymney Limestone Railway. Leats associated with the Dowlais Free Drainage system (see neighbouring 5) also once existed in the area.</p> <p>The area to the south comprises an open area of reclaimed industrial land to the south of Dowlais Top primarily a former rail corridor associated with Dowlais Iron Company Railway, which formerly contained lines and sidings in area north east of the charging bank and blast furnaces of Dowlais Ironworks. The lines served both the Dowlais and Ivor Works and connected tips, and the Dowlais coke yard. The present character of the area is that of a recreational landscape with sports facilities, football fields and until recently commercial provided by the site of recently demolished MacDonalds Restaurant, one of the earliest in the area.</p> |

| HLCA No. | HLCA Name              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| HLCA 049 | Bon-y-maen             | <p>A modern industrial estate built on the site of former agricultural land with a fieldscape of large but irregular fields, associated with the holding of Bon-y-maen.</p> <p><b>Historical background</b></p> <p>The historic landscape area of Bon-y-Maen was formerly similar to the adjacent surviving agricultural area of HLCA 052, and included a rectangular range of buildings, the post-medieval farmstead, on the southern edge of a very large sub-circular enclosure of unknown date to the north of Cwm Rhyd-y-Bedd. The northwest boundary of the area is formed by the Bryniau Road to Pant, while along the northeast is Heol Rhyd-y-Bedd, which formerly carried the line of the tramroad from Bryniau Quarry to the Dowlais Ivor Ironworks, shown on maps between 1878/9 and 1915.</p> <p>The entire area was radically changed during the 1930s when ICI established a works in the area, in operation by 1939. The construction of the Heads of the Valleys Road during the mid-1960s opened up the area to renewed commercial and industrial possibilities and in response the site of the old works area was developed as the Merthyr Tydfil Industrial Estate by the Borough in 1966. The current features of the area comprise mixed industrial and commercial units and a sports ground.</p>                                                                                                                                                                                                                                                                                                                                                                                                                             |
| HLCA 050 | Gurnos and Galon-Uchaf | <p>A mid 20th century urban landscape characterised by council housing estates with associated commercial, educational and health facilities, built on former agricultural land with some industrial features.</p> <p><b>Historical background</b></p> <p>The historic landscape area of Gurnos and Galon Uchaf comprises housing estates of local authority housing created during the early 1960s. The area displays an attempt to integrate commercial facilities at the core of the settlement. The estates at Gurnos are laid out in a variety of differing patterns centred on the Prince Charles Hospital. A unifying feature are the street</p> <p>Additional distinctive features of the area are large schools, which with playing fields and allotments preserve to an extent the former open nature of the area, this is particularly evident at the south of the area (HLCA 050). The area included the former holding of Gwaunferran Farm (the Dairy on the 1850 tithe map). The Penyardren Iron Company owned, or leased most of the area for agricultural purposes. Apart from agricultural land, the area contained leats and reservoirs such as those which formerly connected Goitre Pond (now infilled) to Penyardren, and which formed a part of a water management system supplying the needs of the Penyardren Ironworks. These features were extant by 1826, shown on the tithe map of 1850 and elaborated by 1875, the lower reservoir at Gwaelod-y-garth in use as a swimming pool by 1915. In 1858, the Penybryn filterbeds and storage tanks were constructed by the Merthyr Tydfil Corporation to supply domestic water to Merthyr and Penyardren piped from the Taff Fechan at a point near Dolygaer; this was in</p> |

| HLCA No. | HLCA Name                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|          |                               | <p>operation by 1861. Supply to Dowlais and Pant was via a service reservoir at Dowlais Top (HLCA 035) to which water was pumped by steam engine until 1884.</p> <p>The small road/tramroad junction settlement of Gwaelod-y-garth, the early development of which is charted by maps of 1814, 1826, and 1850, lies at the southwest corner of the area (030B). Though the settlement has been almost submerged by the expansion of Penydarren Park, isolated rows of industrial housing (extant in 1875), still survive.</p> <p>Prince Charles Hospital (built in 1965-75 by Sir Percy Thomas and Partners, with additions of 1989-91) comprises a formal modern structure of two parallel five-storey ranges with service towers linked by a series of cross ranges.</p> <p>Prior to the construction of the housing estates the area was characterised by a mixed regular and irregular field pattern of generally large improved enclosures of late 18th/early 19th century date. The area contained the holdings of Galon Uchaf, Penygarn (kennels), Gain, Goitre, parts of Gellifaelog, Bonymaen and Gymos (Gurnos), only the latter farmstead survives (see HLCA 052) just north of the A465(T). The use of the area as a transport corridor from the Roman period, and especially during the 19th century (eg the limestone tramway to Penydarren Iron Works from Morlais Castle Quarries) has had some influence on the present road system. The current main arterial routes of the area are essentially those established before the end of the 19th century.</p> |
| HLCA 052 | Gurnos Farm and Bunker's Hill | <p>late 18th century agricultural landscape characterised mainly by planned medium-large regular enclosures walled in dry stone, centred on the model estate farm at Gurnos. A deserted settlement at Pantton seems to have been removed to make way for the agricultural improvements. The area is also characterised by a transport corridor which includes a tramroad to Morlais Castle Quarries, and the possible route of a Roman road associated with the crossing of the Taff Fechen at Pont Sarn.</p> <p>Historical background</p> <p>The historic landscape area of Gurnos Farm and Bunker's Hill comprises the surviving post-medieval agricultural landscape north of the Heads of the Valleys Road. The area was largely associated with William Crawshay; it included the eastern part of the Cyfarthfa Estate (Glanmol-goch tithe map of 1850, Llwyn-moelgoch OS 6-inch 1875 (later Dan-y-Castell Farm), and the holding of Gurnos, centred on its 'model' farm' owned by David Edwards leased to William Crawshay in 1850. The southeastern corner of the area comprises the surviving portion of Gain, formerly part of the Estate of Robert Henry Clive, the Earl of Plymouth, leased to the Penydarren Iron Company. The industrial agricultural landscape of large regular enclosures and stands of trees associated with the 'model' farm of the area was in place by 1826; cartographic evidence indicates that the area's field and track layout</p>                                                                                                   |

| HLCA No. | HLCA Name                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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|          |                                  | <p>underwent drastic remodelling between 1814 and 1826. This included the removal of the former settlement of Pantton; the element 'Pen ton' retained in the field names of the area is a reference to it, while relict drystone enclosures in the area are surviving elements associated with the earlier agricultural landscape.</p> <p>The Morlais Castle Quarries Tramroad of 1803 crosses the area on its route to the Penydarren and Plymouth ironworks.</p>                                                                                                                                                                                                                                                                                                                                                                                                                  |
| HLCA 056 | A465(T) Heads of the Valley Road | <p>A transport corridor with important examples of mid 20th century bridge design.</p> <p>Historical background</p> <p>The historic landscape area of the A465(T) Heads of the Valleys Road comprises the east-west road link constructed in 1964. Important features include the three contemporary road bridges carrying A465(T) Road over rivers and streams, one of which has been subsequently altered. Built by Rendel, Palmer and Tritton (Consultant architects Alex Gordon &amp; Partners), of contrasting design in reinforced concrete, two with twin parabolic arched ribs and one of three spans cantilevered from two piers, these won civic awards in 1968.</p>                                                                                                                                                                                                      |
| HLCA 075 | Garth Fawr Improved Common       | <p>An area of improved and enclosed common land characterise by regular large enclosures of resent date.</p> <p>Historical background</p> <p>The historic landscape area of Garth Fawr Improved Common is an area of common which was the subject of agricultural improvements, ie stone clearance and drainage works, during the mid-20th century. Cartographic evidence show the area lay originally outside the area of enclosed land. Earlier place-names 'Cairn-mawr' (great cairn) in 1875 and later Garth Fawr (great enclosure), suggestive of prehistoric burial monuments or enclosures, possibly refer to the nearby settlement west of the area within the HLCA 033, but might equally refer to the earlier rocky nature of the un-cleared common.</p>                                                                                                                  |
| HLCA 076 | Bargoed Taf                      | <p>An enclosed agricultural landscape along the Taff Bargoed valley, characterised by irregular field patterns, dry stone walls and stone-faced banks, with minor industrial features (mining and associated transport).</p> <p>Historical background</p> <p>The historic landscape area of Bargoed Taf primarily comprises an agricultural enclosed landscape of dry-pasture with extensive drystone enclosure boundaries. The field boundaries are for the most part dry-stone wall and stone-faced bank mostly with hedge, although earth bank, ditches and post and wire fence are also present. The drystone boundaries in place by the post-medieval period were probably established during the medieval period and are likely to preserve earlier elements, possibly of prehistoric date. The place-names in the area, Bryn Cyriawg (the later Bryn Caerau) and Nant-y-</p> |

| HLCA No. | HLCA Name                                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|          |                                                     | <p>Ffin probably refer to nearby administrative boundaries. The field system is associated today with post-medieval settlement, including the farmsteads of Bryn Caerau, Cwm Bargoed and Nant-y-Ffin, which are grouped together at the head of the valley and the confluence of the three main tributaries of the valley: the Bargoed Taf itself, Nant Gyrawd, and Nant-y-Ffin.</p> <p>While 19th century industrial extraction is represented in the area; mining remains, such as levels, tips, ventilation shaft and tramroads, have had a minor impact on the earlier agricultural landscape and are generally small scale.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| HLCA 078 | Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun | <p>A reclaimed industrial landscape typified by open-cast and landfill operations. It contains nothing of historic interest above ground.</p> <p>Historical background</p> <p>The historic landscape area of Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun comprises an extensive area of reclaimed industrial land, part of which has been subjected to opencast operations. The area encompasses the sites of Longtown (Trehir), Trecatti and Twyn-y-waun, the latter being the former site of a medieval market mentioned in numerous documentary sources.</p> <p>The area formed part of the extensive coal and ironstone workings associated with Dowlais Ironworks, part of which survives within the adjacent HLCA 039. The workings of the area spanned from the latter half of the 18th century, through the hey days of iron production associated with railway construction during the 1840s, and the conversion of Dowlais to steel production during the 1860s. With conversion to steel production the area's mineral workings declined, being all but abandoned by the early 1870s; a result of coal and iron ore imports from northern Spain, the local ore, rich in phosphorous and sulphur being unsuitable for steel production. By 1879, most if not all the pits and levels within the area, were probably already defunct.</p> |