FOUND AND LOST?

THE RECLAMATION OF INDUSTRIAL LANDSCAPES IN THE HEADS OF THE VALLEYS AREA OF SOUTH WALES.

A Paper presented at Plenary Session B of the TICCIH 2006, XIII International Congress, Terni, Italy.

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Wales is one of the four countries that make up the United Kingdom. Since 1999 it has had some measure of domestic governance through the elected National Assembly and has some control over its economic planning and development. This paper looks at the pressures and threats that economic expansion puts on archaeology, particularly in those areas once peripheral to the ironworks which were the initial foci of industrialisation in South Wales in the mid to late eighteenth century. It also examines such safeguards that exist and suggests how these might be strengthened.

Landscape south of Dowlais Ironworks – late-eighteenth century coal and ironstone workings to the left, reclaimed land to the right. The ironworks was situated out of shot to the right .

In eighteenth century Britain the change from charcoal to coke for iron smelting prompted a movement of production away from the traditional iron-making areas close to the forests to the coalfields such as that in South Wales. The northern fringe of the South Wales coalfield was ideally suited for the establishment of iron making, with shallow outcrops of coal, interspersed with bands of ironstone, nearby outcrops of limestone and an ample supply of water. From the mid-eighteenth century onwards several ironworks were established, and a vast hinterland of coal and ironstone workings, limestone quarries, together with an infrastructure of reservoirs, water channels and tramways, developed in association with them. Between 1760 and the middle of the nineteenth century the iron industry spread across South Wales, but the greatest concentration was along the narrow rim of the northeast part of the coalfield between Pontypool and Hirwaun, an area known as the Heads of the Valleys. Within this area were the Dowlais and Cyfarthfa works, both near Merthyr Tydfil, and for a time both laying claim to be the largest ironworks in the world. In 1872 there were 188 blast furnaces in the region, of which Dowlais had seventeen and Cyfarthfa eleven.

The ironworks, the focus for most of the industrial activity, spawned a complex infrastructure of supporting services. Coal and ironstone were initially mined close to the ironworks sites but as these resources were worked out, workings developed further away. Because of the geology, limestone was always some distance away, off the coal measures themselves. By the end of the eighteenth century the packhorse routes linking these resources to the works had given way to tramroads, which in turn by the mid-nineteenth century had developed into locomotive railways.

Dowlais Ironworks in 1999, showing the surviving blowing engine house of 1909, now converted to a community centre.

Water was used in great quantities, both for power and cooling purposes and was gathered in networks of ponds, reservoirs and leats that spread across the adjacent landscape. At Dowlais the ironworks was set high up a steep side-valley rather than on the main valley bottom like most other works. This meant that more intensive efforts than usual had to be made for the economic use of water, and that also, because the works was on the edge of open moorland and common, the infrastructure could be laid out more expansively, constrained only by natural physical obstacles.

At Dowlais an extensive drainage system was established with water held in reservoirs or fed along leats and channels. The whole system operated by gravity alone, much of it used to power winding engines in the coal and ironstone mines by use of water balances. The used water was fed through the underground workings, eventually emerging at the ironworks.

Sarn Howell Pond, part of the Dowlais Free Drainage System. The system was 'free' in that water was brought to the ironworks solely by gravity.

Even by the mid-1800s the cold wind of change was being felt by the iron industry in the Heads of the Valleys. The exploitation of rich deep-level seams of coal in the Rhondda Valley heralded a southwards shift of focus for coalmining towards the heart of the coalfield. By the 1870s improvements in smelting technology made it more economic to use imported iron ores. Many

ironworks closed down, culminating in the demise of the Cyfarthfa works in 1910. Even the great Dowlais succumbed as an iron-producer in the 1930s, a new works opening at East Moors in Cardiff. It made economic sense: coal was being carried to the port of Cardiff anyway, and ore could be offloaded directly from the ships into the works. The decline in iron production went in tandem with a general decline in heavy industry. The death was slow and lingering but the nadir was reached in the late 1980s and early 1990s, when the few remaining deep mines were closed.

The expansion of the ironworks had been accompanied by an exponential growth of the villages and towns in the region. The iron towns still supported large populations even after the industries had gone. The regeneration of these areas became a government priority. Initiatives, many state- and European-sponsored, to introduce alternative employment, mainly in the service and retail industries, together with the growth of home ownership in recent years and the increase in car ownership and road haulage requiring an improved road infrastructure have been the principal factors in putting pressure on land. Land was always at a premium on the narrow river bottoms; many of the lower slopes were already occupied by earlier housing. Most of the ironworks sites were too polluted to use as anything but open land.

New development on reclaimed land – old coal workings in background.

These pressures continue today. Expansion has inevitably spread out onto the areas adjacent to the former ironworks. Alongside this expansion is a strong desire in some influential quarters, to expunge the scars of what is perceived to be an ignominious and labour-exploiting past. The

pressure is on the industrial hinterlands; from our standpoint, the pressure is on the industrial archaeology!

An additional incentive for developing these areas has been the change in South Wales and other parts of Britain to mining coal by opencast methods. The earliest mines, working as surface pits and later by the gallery system, left large areas of coal untouched, pillars were left as supports, and some thin or discontinuous seams were ignored. Using opencast methods it has became economic to rework these areas and remove all of the coal. The money generated by the extraction goes some way to offsetting the costs of reclamation and subsequent development and a number of current schemes offer a complete package, combining opencast extraction and the reclamation of former industrial land with real-estate development.

In many areas of industrialised landscape there is a lack of detailed knowledge as to what actually survives archaeologically. Historic mapping can only give a rather generalised view of what existed and in any case is only a snapshot in time. Many features of interest and importance to archaeologists will not have been portrayed, because they were already out of use by the date of the survey, or they were too insignificant from a cartographic point of view, or they had not then been constructed. Correlating what is depicted with what remains is not at all easy, even with the use of aerial photography. Limited areas have, of course been subjected to detailed study but inevitably, their geographical extent is small. The Royal Commission's long-term Uplands Initiative has included some quite extensive areas of industrial landscape. The initiative funds the systematic, intensive fieldwalking of a substantial number of hectares of upland terrain and the spot identification of surface evidence of human activity, but the programme has to fit industrial landscapes in with all other types and can only concentrate on areas deemed from current knowledge to be important or areas under immediate threat. In those areas that have been covered by the Initiative, a rapid but thorough identification methodology combining the interpretation of aerial photography with intensive field interrogation has resulted in the identification of numerous industrial, pre-industrial and non-industrial components of the historic environment. The resulting data is made readily available through an electronic database accessible via the internet (www.coflein.gov.uk).

The Royal Commission is consulted, along with other heritage organisations, about the archaeological significance of areas proposed for development, but there is an understandable urgency in government to get these schemes up and running as quickly as possible and often a very rapid ground assessment is all there is time for before submissions have to be made to the planning regulators regarding the importance of the surviving archaeology. Inevitably, such submissions are often put forward on the basis of incomplete or insubstantial evidence and so the case is frequently fundamentally flawed. It should be noted therefore that, with the notable exception of the Uplands Initiative, detailed intelligence gathering in these areas tends to be reactive.

Wales, as part of the United Kingdom, has a number of statutory and advisory instruments to afford protection to archaeological remains that have been identified as being of particular significance or importance. Foremost amongst these is Statutory Listing and Scheduling. Listing adds a level of protection additional to the normal planning process by requiring that special planning procedures must be gone through before any alterations are permitted. Scheduling is aimed at ensuring the long-term preservation and protection of a monument and is generally

applied to sites for which there is little prospect of economic reuse. One problem common to both these measures is that they are designed for individual sites or discreet groups. They pay little regard to the wider physical context of a site and are thus unsuitable for dealing with areas of landscape. Therefore, while the physical remains of a site may be protected, it is often difficult to maintain and preserve its context. Mechanisms for protecting landscapes do exist, such as the designation of Areas of Outstanding Natural Beauty (AONBs) or Sites of Special Scientific Interest (SSSIs), but these are heavily orientated towards the natural environment. In an attempt to redress this imbalance, the Register of Historic Landscapes was initiated in 1998 by Cadw Welsh Historic Monuments, in conjunction with the Countryside Council for Wales and ICOMOS (UK) (International Council on Monuments and Sites). A number of areas of industrial landscape have been included on the register, including those around the former Dowlais and Cyfarthfa works. The main register is being backed-up by a more detailed landscape characterisation report for each area. Regrettably, at present these designations are non-statutory and are of an advisory nature only.

Mynydd Aberdar, west of Merthyr Tydfil showing the encroachment of modern housing development on an area of late eighteenth/early nineteenth century coal mining and ironstone quarrying.

During the planning process, when the pros and cons for development are examined, unless there is an overwhelmingly strong case for retention or preservation of the archaeological remains, the economic arguments will prevail. In many cases there is a strong argument for preservation by record. This is also valid where features themselves may be retained but their context lost. Provisions can be made for detailed archaeological recording to be included in the costs of the reclamation or regeneration scheme, but, again, the case can be undermined by the weakness of

the intelligence. Such recording must be carried out to a professional standard. Specifications for recording industrial landscapes are notoriously difficult to define but an attempt was made by the Royal Commission for the landscape of Dowlais Common/East Merthyr. As with any archaeological investigation, the physical recording of the remains should form only a part of the process and should be supplemented with research from documents and other sources and by analysis and synthetic interpretation. These aspects of the project can be very difficult to resource, developers often, understandably feeling that their obligations have been met by the recording element alone.

There is also a need to maintain recording once the process of reclamation has started. The process, whilst essentially destructive, does reveal archaeology that might otherwise remain undisclosed. Very often this is recorded as an adjunct to the mining operation, for example ancient galleries and levels are surveyed accurately across a coal seam so that the amount of coal extracted can be calculated. In so doing a record of hitherto unseen mining activity suitable for archaeological interpretation is created. However, although these surveys are made and kept as a statutory requirement, it can be difficult to gain access to them for academic purposes.

Stone blocks on a former plateway to ironstone quarries, Heolgerrig, West Merthyr; the pressure of urban development on the monument is clear.

There is no doubt that the economic arguments for regeneration and development are very powerful and it is up to the heritage community to make the case for due consideration to be given to the existing archaeology whether it be for physical preservation or, at the very least, for preservation by record.

There exists a Heads of the Valleys Strategy initiated by the Welsh Assembly Government. The evaluation of the archaeological resource should be an integral part of this strategy. What additional safeguards might be considered?

- A longer lead-in time is needed to proposed reclamation schemes in areas of industrial landscape, together with a resource commitment for a systematic programme of detailed intelligence gathering. This could be achieved by involving the archaeological bodies from the very start of the process and should result in the responses from the historic environment lobby, and thus the planning process, being better informed.
- A review of existing statutory protection is necessary to enable an element of contextual preservation to be included in some sites as well as just the physical features. The current review of monument protection underway in England and a subsequent review in Wales provide the opportunity for this problem to be addressed.
- A close working relationship is required with the reclamation agencies to ensure that all necessary data is made available to the archaeological record and to avoid duplication of recording effort. The results of recording, certainly that which is derived from publicly-funded heritage bodies, already passes into the public domain through public record offices and depositories. It is essential that the whole archaeological and historical record should be available in this way.

The challenge is there for those of us involved in heritage and archaeology. Our aim should be to reach a situation where most of the archaeological heritage, even if only recently found, is not irretrievably lost, but is preserved, if not physically, then at least in the record. It is essential that this record is made freely available. The Royal Commission is taking a lead in disseminating the record to a wider audience and a fundamental part of this is the use of the Internet. Coflein, the National Monuments Record of Wales' online database contains details of many hundreds of industrial sites as well as archaeological sites, historic buildings and maritime heritage locations of all periods in Wales, together with an expanding selection of images, and an index to drawings, manuscripts and photographs held in the NMRW's extensive archive collections. Encouraging the use of the data will not only inform about what used to exist in areas since redeveloped, but hint at what might exist in those areas under threat.

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