

**A Research Framework for the Archaeology of Wales
Southeast Wales – Post Medieval
22/12/2003**

Introduction

This paper covers the period from the late sixteenth-century until the present day. The period can only be understood by a full integration of historical and archaeological sources but this paper concentrates on areas where the latter can make a significant contribution to understanding. All archaeological projects for this period need to include a large component of documentary and historical mapping work. Historical industries in this area are of such significance that studies undertaken need to place them in their international context.

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General SWOT Analysis draft

Strengths

Wales has industries of international significance (concentrated in south-east Wales) in this period of the world's first Industrial Revolution e.g. copper & iron-smelting, tinsplate manufacture and coal mining. Elsewhere in Wales only slate quarrying can be said to have been an industry of international importance. An early-developed transport system, that served these industries, was also itself of international importance. There is also an unrivalled collection of colliery winding and pumping Nineteenth century steam engines surviving in Southeast Wales. Work has also been carried out on the significant post medieval pottery manufacture in the Monmouth area.

Weaknesses

There has been a lack of excavation of shafthead mining complexes during reclamation. There have been spectacular results from elsewhere: Wrexham, Tyneside, Ironbridge.

The same is true of copper and iron-smelting sites such as early tinsplate manufacture sites developed from the copper industry, e.g. Upper & Lower Forest Coppermills at Morryston (the latter currently up for redevelopment: the Beaufort Tinsplate works site).

The knowledge base (including that of the existing databases) is locally biased, of highly variable quality and is patchy.

Opportunities

In Vernacular Architecture there are good regional syntheses available for Monmouthshire Houses (Fox & Raglan) & the Glamorgan Inventories.

Other synthetic regional appraisals are available in finished form: Buildings of Wales volumes (Archaeology; Industrial Archaeology & Architecture); the Glamorgan Inventories; 'Monmouthshire Houses'; 'Copperopolis'. The international context is being examined in the on-going TICCIH/ICOMOS Industry Reports for the World Heritage Office.

Capitalise on the fact that Wales has sites of international significance by incorporating these into broader European and International wide studies and research initiatives: such as the on-going TICCIH/ICOMOS mines, textiles and paper-mill exercises.

Opportunities are also present for further research into the significant pottery manufacture in the area of Monmouth and the unrivalled collection of Nineteenth century steam engines of Southeast Wales.

The National Assembly for Wales is encouraging partnership schemes between institutions in Wales. Projects could be developed that address gaps, and identify the strategic priorities in recording and understanding of Vernacular Architecture and Industrial Archaeology: e.g. with local authorities, CCW and university historians.

Threats

Industrial Archaeology sites are often affected by development proposals, especially with government pressure to redevelop brownfield sites: in these schemes adequate resources for large-scale investigation, even of remains of international significance, are often lacking. This is especially true of opencast Mining (now often labelled as 'reclamation') where there is a general lack of archaeologists on site (cf spectacular potential of Medieval and Post-Medieval mining finds on such sites as Coleorton, Leicestershire).

Settlement & Housing

Strengths

Established dendrochronology (tree-ring) chronology
Substantial syntheses of Vernacular Architecture completed: *Monmouthshire Houses* and the *Glamorgan Inventories*
Synthesis of industrial housing published by Jeremy Lowe. Jeremy Lowe's database of 6,000 industrial houses held by NMRW.
Studies of key industrial townships completed: Blaenafon, Morriston, Trevivian (Hafod), Landore, Grenfell Town and Foxhole (RCAHMW) and Tredegar (Hilling).
Characterisation completed of Rhondda and Merthyr Tydfil by GGAT. Study of Merthyr Tydfil (Carter & Wheatley).
DRS project has recorded known upland dwelling sites.
Parks & Gardens Register (Cadw; ICOMOS; CCW) and database (RCAHMW).

Weaknesses

Vernacular studies have not covered farm buildings to any great extent.
17th century industrial settlements not studied.
Seasonal use dwellings not yet studied to any extent by excavation.
Need a multi-disciplinary approach involving documentary and oral historians.

Opportunities

Dendrochronology offers the opportunity to investigate the evolution of the hall house into storied dwellings that took place c.1570s (part of RCAHMMW all-Wales dendrochronology project).

Forthcoming RCAHMMW study of farm buildings in consultation with CCW & Cadw. Potential to investigate the change in the cottager economy made possible by the introduction of the potato.

Potential to investigate the introduction of secure and solid cottage walls made necessary by the possession of valuable handlooms.

Abandoned cottager settlements on commonland are available for excavation.

Key early (seventeenth-century) industrial settlements identified. Detailed study and dendrochronology would reveal much about this early period in the world's first Industrial Revolution: Llanelly Forge (Abergavenny); Monmouth Forge; Pontypool Old Furnace; Angiddy Valley (Tintern) & Whitebrook.

Studies of unstudied internationally significant industrial towns and communities: particularly in the area of the world's largest ironworks of the late 18th and early 19th centuries in the Heads of the Valleys.

Synthesis of early industrial towns to build on the specific single town studies completed.

Thematic survey needed for the reappraisal of listed criteria: taking into account archaeological, economic historical and historical criteria rather than concentrating on art historical and aesthetic criteria. This would help feed the research focus on internationally significant industrial communities and their domestic and institutional buildings.

Partnership with local community heritage initiatives.

Institutional infrastructure of settlements needs appraisal: prisons, workhouses, hospitals and commercial offices.

Threats

Redevelopment and demolition of industrial settlements in the deprived but internationally important communities of the Heads of the Valleys area.

Land-use and Enclosure

Strengths

The Lisvane developer study has indicated the richness of the hedgerow resource. Many hedgerows are shown on 1760s estate maps and some are species rich indicating a Medieval date.

Gwent Levels study dating boundary banks.

Lynchets indicate where land was used for ploughing.

The recent study of commonland at Usk (Paul Courtney PhD.) has shown how the lord and commoners settled customary practice on the commons. There is documentary evidence of encroachment.

Some of the emergence of industrial-scale farming such as sheepfolds have been studied for the DRS monograph.

The DRS project has described thousands of longhut sites and identified where key excavations could take place.

Recognition of a distinctive Upland culture lacking the potato clamps found elsewhere and indicating that Upland residences were within a day's journey of lowland settlements.

Weaknesses

Land-use is largely a blank canvas.

The DRS project has described thousands of sites but failed to identify a clear chronology which can only be clarified by excavation.

The deforestation associated with the large-scale introduction of charcoal-fuelled ironworks is little understood as is its association with assarting activities.

Opportunities

The Cwm Llanwenarth area of the Blaenafon World Heritage Site has a landscape of mid to late 17th century farms: the study of which would explain the development of a mixed economy of the charcoal ironworks period in which Hanbury planted wooded hillsides for charcoal production (Uplands Survey planned for coming year).

A typology of field boundary types is needed to establish the phasing of boundaries and to date encroachment on the Uplands.

To identify areas for high potential in landscape studies such as the Gwent Levels.

Threats

Large-scale redevelopment on the urban fringe and along the M4 corridor.

Natural Resources

Strengths

Wealth of documentary evidence on the early (16th & 17th century) iron industry in the Hanbury estate office.

the standing charcoal-fuelled furnace at Abercarn has been recently identified.

Areas of survival of the mineral fields of the world's largest ironworks identified by RCAHMW.

One of the largest collection of early iron bridges in the world is known but not all located, surveyed or studied as a group.

Weaknesses

Very little is known about the coppicing of woodlands. There is a need to work with the documentary evidence.

Little is known about the early bloomery period of the south Wales iron industry.

Little is understood about the operation of areas of iron-ore scouring from the 18th and early 19th centuries.

The evolution of the mid-eighteenth copper rolling-mill and the change in copper-smelting from part blast-furnace to complete reverberatory furnace use has not been examined by survey or by partial excavation..

Some of the thick coal seams in proximity to navigable water may have had a very early and long exploitation but have not been surveyed or excavated. Sites such as the 'Swansea 5ft' seam outcrop at Graig Trewyddfa merit careful survey and possible partial excavation.

There is no ranking of importance of copper-smelting and tinplate works in their south-Welsh or international contexts.

The very quick acceleration of output in late eighteenth and early nineteenth century ironworks, reflected in the many surviving blast-furnace structures, is not understood.

The south-Wales evolution of the iron rolling-mill; blowing-engine and blastfurnace is not understood, either in its own right, or in its UK and international contexts.

The earliest large-span iron roofs in the world were built over the south Wales ironworks rollingmill and forges (and in other buildings constructed by the ironmasters) but the surviving roofs at Sully, Nantyglo, Newport and Treforest and elsewhere have not been studied as a group. Others are still being discovered and the complexes need survey and study in their UK and international context.

There has been no comparative study of the remains of the clay industries: porcelain, silica, refractory and types of kilns such as the Hoffman Kiln.

There has been no analysis prepared of the remains of the quarrying industries (limestone; Pennant Sandstone and tilestone) in south Wales and a synthesis could be prepared from such remains if undertaken together with adequate documentary work (the methodology evolved by Peter Stanier could be used).

Opportunities

The linking of placename evidence with archaeology may help to identify early industrial locations used for scouring, opencast, etc.

Threatened Elizabethan Iron-ore Mines have been identified at Gwaelod y Garth and worthy of study.

The 16th century furnace at Tintern has been excavated but those at Trelech and Landogo as well as the Old Furnace at Pontypool have not been and a study of the furnaces as a group would be worthwhile.

A thematic study of what is the world's largest concentration of late eighteenth and early nineteenth blast-furnace structures would be worthwhile.

Threats

The last surviving early areas of mineral scouring on the urban fringe are being reclaimed.

Natural Resources (Transport)

Strengths

Eighteenth century canal system in Glamorgan surveyed and a synthesis of the Swansea Canal and its early railways, placed in its international context, prepared for publication (RCAHMW).

Early internationally important experimental railway system of the late eighteenth and nineteenth centuries that had the largest interconnected mileage, the first all-iron track, the first iron railway bridges, the first and longest tunnels, the first high railway viaduct, the first recorded run of a railway steam locomotive, the first rack railway to climb steep gradients and the world's first passenger railway service.

Study of part of the world's largest concentration of mineral extraction and smelting railways in the heads of the valleys area completed by John van Laun. Gazetteer of Early Railway sites published (RCAHMW: *The Archaeology of an Early Railway System*).

Weaknesses

Little is known about some of the most important pre-industrial ports such as Aberthaw, Port Eynon, Newport and Tintern.

Post Medieval and Modern

Little is known about the infrastructure of ports that developed and served the biggest coal-exporting coalfield in the world and the international centres of the copper and iron smelting and the tinsplate industries.

Cardiff was the biggest ship repair port in the world but this has been little studied from either archaeological or documentary sources.

Little work done on the civil-engineering infrastructure of the many public locomotive era railways, some by internationally known engineers such as Isambard Kingdom Brunel: Taff Vale Railway; South Wales Railway; Vale of Neath Railway.

Opportunities

The completed syntheses of internationally important early railways in Monmouthshire, and in Merthyr Tydfil, both of which were prepared for publication (by the late Gordon Rattenbury) could be published.

Archaeological/historical projects needed to understand the process by which early harbours were abandoned and replaced by the large industrial-period ports. Reappraisal of every port using documentary sources, early maps and the remaining structures of piers, wharfs and warehousing. Synthetic analysis in UK and international context.

Appraisal of the world's longest undersea (Severn Estuary) tunnel until the mid twentieth century and of the fan, pumphouses and near complete contractors' village at Sudbrook.

Threats

Many locomotive railway engineering plans disposed of or sold to unknown locations in the USA.

Many nineteenth century port engineering drawings disposed of.

Environmental Archaeology

Weaknesses

Not enough work done on slag analysis from the internationally important copper and iron smelting industries.

Opportunities

Pollen analysis of the Post-Medieval period layers in bogs would suggest the extent of deforestation in the charcoal-fuelled ironworks period of the 16th to the 18th centuries.

Sampling of bogs would also indicate the amount of pollution from smelting works.

Religious or non-secular archaeology

Strengths

Family History Groups recording of gravestones and sculpture: needs linkage to SMRs & NMRW.

Buildings of Wales volumes on Glamorgan and Gwent/Monmouthshire.

Cadw/Trusts survey of churches.

Mid Glamorgan Survey of nonconformist chapels.

RCAHMW & Board of Celtic Studies databases of nonconformist chapels.

Weaknesses

Cadw/Trusts churches survey does not cover churches established in the 19th century.

Opportunities

Study of the use of Holy Wells in the Post-Medieval period (as recorded by Francis Jones).

Survey of key early and significant nonconformist chapels and chapels of key architects identified during the RCAHMMW chapels survey.

Liturgical study of the change in position of pulpit and altar in Anglican churches from the Puritan period onwards from archaeological and documentary sources.

Threats

Continued large-scale redundancy of nonconformist chapels and loss of interiors through conversion to secondary use (where demolition is avoided).

Defence

Strengths

Results of *Defence of Britain* project.

Guns Across the Severn publication on Palmerston forts (RCAHMMW)

Threats

Redundancy of twentieth-century defence installations such as the propellants factory at Caerwent.

Paper prepared by Stephen Hughes (RCAHMMW)