

Later Post Medieval & Industrial 1750 to 1900

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With input from attendees at a session
at the Post-Medieval Archaeology Congress
in Swansea, 2024

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1. Existing Priorities

Contributors to the 2024 update of the Research Framework have agreed that the overarching priorities identified in 2016 remain relevant. In summary, already-identified priorities include assessment of:

- The significance and scale of technical change within the major industries of coal, iron, copper, tin, lead and slate, and the impact of that change within the landscape; their context and significance in terms of similar sites elsewhere in the world; their relationship with the markets they served
- The extent to which some industrial sites might have origins predating 1750
 - The significance of military and defensive sites
- The erosion or survival of local and regional characteristics in domestic building from the later eighteenth century onwards; the varieties of planned and unplanned settlement; evidence for migration and social diversity in housing stock
- The extent to which the proliferation of social infrastructure and communal institutions such as chapels, churches, institutes is a distinctive feature of the period and in what ways these structures might be distinctive to Wales
- The significance, form and archaeological survival of transport corridors – turnpikes, government-sponsored roads, canals, railways – their engineering, the industries they served and the settlements they sustained
 - The significance, form and archaeological survival of major dock systems; their context and significance in terms of similar sites elsewhere in the world

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2. Introduction

"Industrial archaeology, at least in Great Britain, focuses primarily on studying, recording, and preserving the remains of the Industrial Revolution, which was a unique and large-scale phenomenon " (Trinder 1982, 350).

The definition of industrial archaeology could be discussed at length, however **for the purposes of this framework the term industrial refers to the period 1750 – 1899**. The quote from Trinder (1982) highlights the significance of industrial archaeology in Great Britain, particularly in the context of studying, recording, and preserving the remains of the Industrial Revolution. Industrial archaeology focuses on understanding the unique and large-scale phenomenon of the Industrial Revolution, which transformed societies through advancements in technology, manufacturing, and infrastructure.

In the context of Wales, the later post-medieval and industrial period (1750-1899) played a crucial role in shaping the landscape, economy, and social fabric of the region. During this time, Wales experienced significant changes as it transitioned from an agricultural and pastoral society to a leading industrial export economy.

The industrialisation of Wales encompassed various aspects, including:

- **Extraction, Production, and Processing:** Wales became known for its extraction and processing of raw materials such as coal, iron, copper, tinplate, lead, granite, and slate. These resources were vital for manufacturing industries both domestically and internationally.
- **Manufacturing and Marketing:** Welsh industries were involved in manufacturing a wide range of products, from iron and steel to textiles and ceramics. These products were marketed both domestically and abroad, contributing to Wales' economic growth.

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- **Infrastructure:** The industrial period saw the development of extensive infrastructure including railways, canals, ports, and roads to facilitate transportation of goods and raw materials.
- **Settlement and Utilities:** The growth of industrial towns and villages led to the establishment of new settlements, along with the development of utilities such as water supply and sanitation systems.
- **Transport and Communications:** Improved transport networks enabled the movement of goods and people, connecting Wales to national and international markets.
- **Migration and Cultural Exchange:** Welsh migrants took their skills and expertise to other parts of the world, contributing to industrial development in countries such as the USA and Russia. Conversely, Wales also experienced migration from other regions, influencing its cultural landscape.

The later post medieval period in Wales was characterised by narratives of innovation, renewal, transformation, and social conflict. It was a time of rapid change and adaptation, with communities grappling with the challenges and opportunities brought about by industrialisation. Despite these changes, strong cultural continuities, such as the growing strength of the Welsh language and the vitality of rural communities, persisted.

The influx of people into Wales during this period had a profound impact on the region, shaping economic, social, and cultural dynamics in significant ways. The industrial revolution attracted a people into Wales, particularly to areas with burgeoning industries such as coal mining, ironworks, and slate quarries. This population growth placed significant pressure on local economies and resources, as demand for housing, food, and other essentials surged. Rapid urbanisation led to overcrowding in industrial towns and cities, exacerbating social and economic challenges. This period also saw the transformation of rural landscapes as agricultural land was repurposed for industrial development. Traditional farming communities faced competition for

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land and resources from expanding industries, leading to changes in land use patterns and agricultural practices. Rural areas experienced a shift towards commercial farming and specialization in industries such as sheep farming and dairy production to meet the demands of growing urban populations.

The rise in population fuelled the growth of urban centres in Wales, as people migrated from rural areas to seek employment opportunities in industries. Industrial towns and cities expanded rapidly, with new factories, mills, and housing developments springing up to accommodate the influx of workers. Urbanisation brought about profound changes in urban landscapes, architecture, and social structures, as well as the emergence of new forms of social organisation and community life.

The influx of people from diverse backgrounds into Wales brought about social and cultural change, immigrant workers bringing with them their own cultural traditions, languages, and customs, contributing to the rich cultural tapestry of industrial Wales. The position of the Welsh language saw change in this period, how far did migration impact this and can this be traced archaeologically; for example, with the establishment of Welsh language community chapels.

Migration into and out of Wales also had implications for traditional industries such as agriculture and small-scale manufacturing. As rural populations declined and agricultural land was repurposed for industrial use, traditional farming communities faced challenges in sustaining their livelihoods. Many rural industries, such as cottage industries and craft production, declined in the face of competition from larger industrial enterprises.

The later post-medieval and industrial period continues to inform the contemporary sense of Welsh identity, serving as a reminder of Wales' industrial heritage and its contributions to the wider world. Of the four World Heritage

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Sites in Wales, three are industrial the establishment of the world-wide significance of Blaenavon, Pontcysyllte and Gwynedd Slate Quarries cementing in global consciousness the role of Wales in historic industry. Industrial archaeology plays a crucial role in documenting and preserving this heritage, ensuring that future generations can understand and appreciate the significance of Wales' industrial past.

It could be argued that industrial studies have dominated archaeological study of post-medieval Wales, and this warrants critical examination in the context of this framework review. In order to foster a more comprehensive understanding of post-medieval Wales, there is a need to rebalance the existing framework away from its predominant focus on industrial archaeology and towards a more inclusive incorporation of cultural and community studies. This shift would allow for a holistic exploration of Wales' rich heritage, encompassing not only material remains but also intangible aspects such as social practices, cultural traditions, and community experiences. That is not to say that the study of industrial archaeology should cease, or has been unwarranted simply that a renewed framework should seek to incorporate the bigger picture.

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3. Relevant Recent Research

Active archaeological research is being undertaken in a number of areas. These include industrial era site types such as canals, early (pre-1850) railways, the slate industry, copper mining and processing, and in Wales' international trading links in industrial materials and products. There is also a considerable amount of research being undertaken into the buildings of Wales, including chapels, urban townscapes, vernacular dwellings, and to some extent into industrial and institutional buildings, through individual study, the Pevsner series and urban characterisation process. Sites investigated since 2016 are too numerous to list in full, however a few key sites and projects which relate to this period noted in *Archaeology In Wales* and elsewhere for the period 2016 - 2022 follow;

• Glamorganshire canal warehouses (PRN 01682.0s) of the Cyfarthfa ironworks (PRN 01169m, SM GM425)

- Former Dewhurst Factory Ystalyfera (PRN 01207w)
- Felindre Weir in Montgomeryshire (PRN 20921) and Caergwrle Weir in Wrexham (PRN115576)
- Ffos Y Fran and Ynysfach Ironworks (PRN 01263m) in Merthyr Tydfil
- Taibach and Ffrwydwyllt Tinplate works and Margam Copperworks in Neath Port Talbot • Dylife Lead Works in Montgomeryshire (PRN 142101)
- Buckley Potteries in Flintshire (PRN 101664)
- CALCH in Black Mountain (PRN 106563)
- Parys Mountain survey in Anglesey
- Copper Slag Project, Swansea

Gwyn et al noted in 2011 that the Research Framework had informed much of the work that has been carried out on industrial sites, transport links and to some extent on industrial settlements. The international context of Wales'

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industrial past in this period (1750-1899) was also emphasised and the importance of ensuring the value of potentially internationally significant sites is understood prior to their loss or redevelopment was highlighted, specifically in relation to the role that Wales' industrial past plays in its modern economy. This aspect of the value having a research framework for industrial heritage is particularly relevant to Wales as it was noted the successful process of nominating the Llangollen canal and its aqueducts for World Heritage status was informed by the Research Framework, as was the addition to the DCMS for the UK tentative list of World Heritage Sites of the slate industry of northwest Wales. However, it is important to note that vernacular traditions are equally relevant in terms of our understanding of this period.

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4. Amendments to the research questions; a proposed new thematic framework.

At the time of the first review in 2011 Gwyn et al observed that much of the research being undertaken largely focused on the industrial and innovative aspects of the period 1750-1899. In particular new technologies of production and transport, and new types of religious and social organisation had been subject to the most investigation. Gwyn et al (2011) and Gerrard & Bailey (2017) noted the sheer scale of the remains of this period makes any sort of absolute study of Welsh industrialisation difficult; and this remains the case. The research undertaken at the key sites identified above and elsewhere have further addressed the questions posed in 2007 and at the time of the reviews in 2011 and 2017, and knowledge of the 'industrial' element of the period has increased. Gerrard & Baily 2017 noted a gap still exists in our understanding of the 'scientific' elements of past industries, particularly metallurgical industries where limited scientific investigation has been undertaken as there has tended to be a reliance on contemporary documentary accounts to tell us 'what we need to know'. An opportunity exists to pursue an avenue of research in the identification of waste products from the metallurgical industries; more specifically collaboration with metallurgists would be worthwhile to establish if it is possible to identify the unique qualities and origin of these wastes and whether anything could be understood about the processing of these materials. Further the investigation of below ground archaeology of the period remains limited. Across Wales opportunities to investigate subterranean remains have been lost as issues of safe access associated in large part with contamination risk have proved insurmountable. Any future work in this area needs to consider how information can be gleaned safely and effectively, possibly using innovative technologies.

Following the theme of contamination raises the question of waste and pollution more broadly. The period is characterised by an exponential increase of waste produced by human society, which has both provided the means of

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transforming landscapes, particularly in towns. In the countryside the use of “artificial” fertilisers and more intensive cultivation in agriculture has affected habitats and wildlife. The rise of the 19th- and 20th-century chemical industries produced significant pollution and contamination. Transport corridors have taken up much land and exhaust gases and smoke add to pollution. The “Industrial Revolution” marked a significant change in our relationship with the environment; it is suggested by the author that a broad theme addressing the impact of waste and pollution should feature in a revised framework. Not least in respect to the relationship of waste and pollution in the environment with the growth of the conservation movement, but also in light of the need to mitigate the impact of these impacts today, and in the future. Archaeology should feature in developing understanding of how to manage impacts of pollution on the environment.

Gwyn et al (2011) and Gerrard and Bailey (2017) agreed that whilst industrialisation stimulated new regional styles it also sustained cultural distinctiveness, and that both agriculture and industry should be considered within broader patterns of social change in this period. An emphasis on the transformative nature of industrialisation in Wales (1750 -1899) must continue to be a focus for the research framework as it evolved, along with social and economic change; aspects of the local character and distinctiveness of Wales that survived amongst this change. These topics remain relevant, and should form an integral part of the research framework. Notably the investigation of supporting industries, infrastructure and communities, whilst a part of the previous research frameworks for this period, have not enjoyed the same attention as the core processing industries themselves. This is perhaps understandable, as the greatest threat of large-scale change has tended to be posed by the reclamation of the landscapes of Wales’ industrial past, and as a result there has been a greater threat of loss in terms of these remains. Thus, the majority of threat led research in this period has been limited in this aspect, with those features of supporting infrastructure (particularly agriculture and

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food production) and communities being left largely uninvestigated in this sphere, simply because of the nature of change. There are opportunities to consider the relationship between industry and agriculture in this period, specifically in terms of the industrialisation of agriculture and the development of model farms such as Leighton Farm in Montgomeryshire and Wolvesnewton in Monmouthshire. The agricultural sector remained important in Wales in the period between 1750 and 1899 and saw many fundamental changes in this period, including enclosure, the development of courtyard farms and even of mechanised farming in some places. Improved transport links altered much of the character of Welsh agriculture in this period. Study of the many new farm-yards and agricultural buildings of this period should be a high priority.

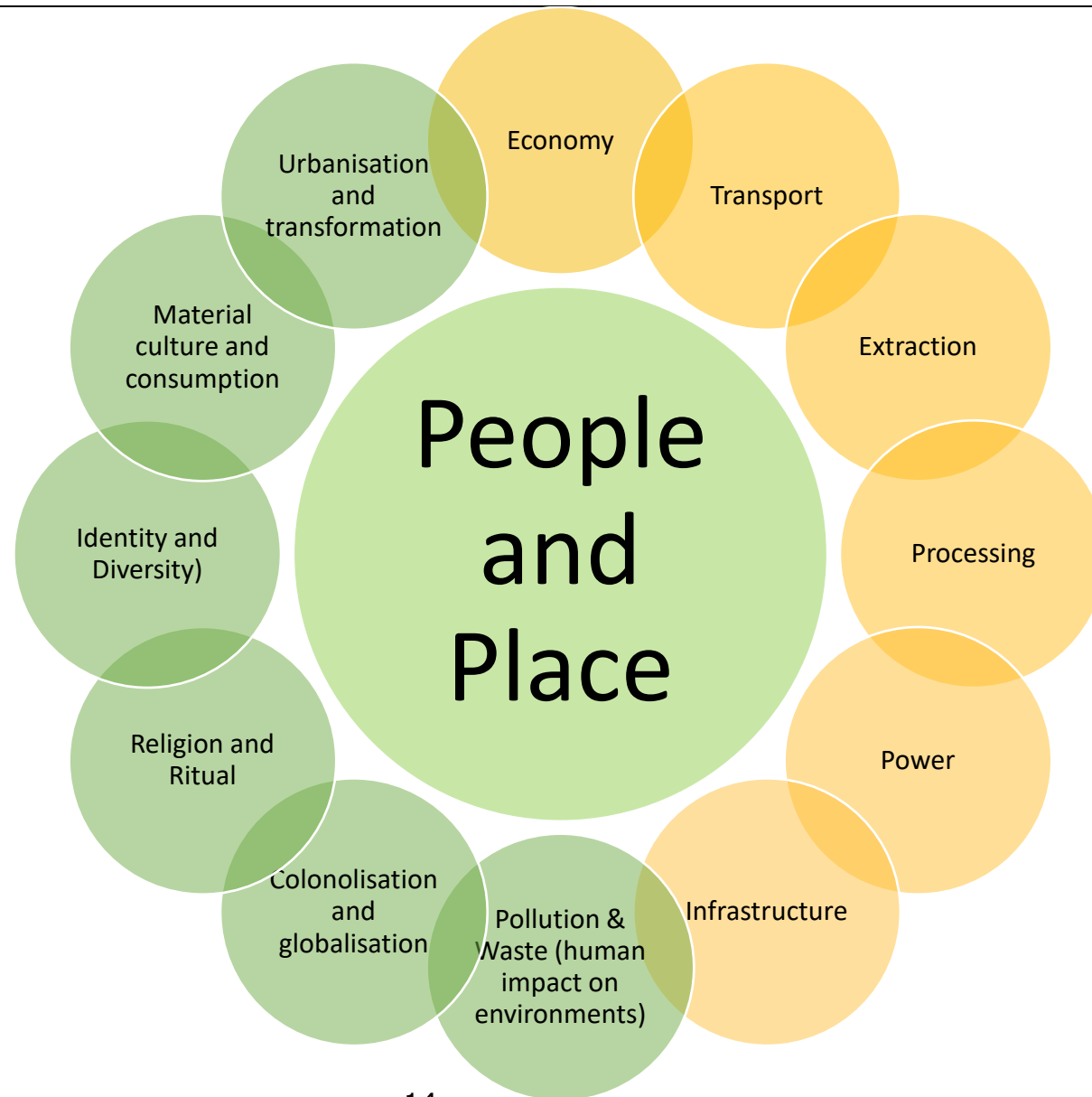
Tourism and recreation have remained peripheral to the study of this period. Certainly, there is a risk that without including these as topics within the research framework the opportunity to understand this aspect of the period will be lost. Tourism and recreation in this period have left its mark in transport links, distinctive structures and settlements, swimming pools, football and rugby stadia etc and are particularly important as the archaeology of what is now Wales' most significant industry. Study of the local has to a point been missed in much of the recent work looking at this period. There are opportunities to study the daily lives of those living in this period more closely; particular consideration should be given to domestic housing (rural and industrial), food production and consumption (in terms of economics and accessibility). The extent to which allotments, kitchen gardens (associated with rural and industrial settlements), and tied "company truck" subsistence were a feature in everyday life in this period would merit further research. Further there is a need to consider how the increasing separation of the industrial working class from the industrial owning class, where the industrial working class can be found living in close proximity to their place of work and the industrial owning class can be observed moving to more bucolic surrounds, is reflected in the archaeological remains of this period. In order to attempt to

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redress this balance and provide an opportunity to broaden the focus of research in this period we propose to look at this period thematically. Central to all elements of future research into Post Medieval and Industrial Wales should be the life of individuals and society more broadly.

An initial list of themes is suggested below.

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OVERARCHING THEME	People and Place
SUB THEMES	TOPICS WITHIN THEME
Transport	Canals Bridges Docks/ports/harbours * covered by maritime in part Road and rail, Railways/tramroads turnpike roads/roads
Extraction	Coal Lead Slate Stone quarrying
Processing	Metal Textiles Stone Food production (milling, breweries)
Infrastructure	Warehousing & storage Industrialisation of agriculture, model farms show grounds Industrial housing, Places of worship Social infrastructure, work houses, Institutes, theatres, pubs, hotels, Hospitals Cemeteries, Burial grounds & Crematoriums
Power	Water Steam Mineral Electricity Gasworks
Economy	Employment Food production and consumption, company truck/allotments/kitchen gardens Tourism
Pollution & Waste (human impact on environments)	Investigate the impact of post medieval society (industrial activity, development if transport infrastructure, farming practice, other) on the environment

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Colonialisation and globalisation	Examine the impact of colonialism and globalisation on post-medieval societies, including cultural exchange, economic exploitation, and resistance movements.
Religion and Ritual	Explore the role of religion and ritual in post-medieval societies, including changes in religious beliefs, practices, and iconography. investigate how post-medieval societies negotiated identities and social hierarchies based on factors such as ethnicity, gender, and class.
Material culture and consumption	Investigate the material culture of post-medieval societies, including changes in production techniques, trade networks, and consumption patterns.
Identity and Diversity	Investigate how post-medieval societies negotiated identities and social hierarchies based on factors such as ethnicity, gender, and class.
Urbanisation and transformation	Explore how post-medieval societies transformed urban landscapes, including changes in architecture, infrastructure, and social organization.