

Institution: Swansea University		
Unit of Assessment: 28		
Title of case study: Copperopolis Reborn: A historic global industry, place-making and heritage-led regeneration		
Period when the underpinning research was undertaken: 1st January 2000 to 31st December 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Louise Miskell	Professor, History	At least 2013 to present
Huw Bowen	Professor, History	At least 2013 to 2019
Alex Langlands	Senior Lecturer, History	Sept 2015 to present
Period when the claimed impact occurred: August 2013 - Present		
Is this case study continued from a case study submitted in 2014? Yes		
1. Summary of the impact <p>Research conducted by Swansea University has established the global historical significance of the South Wales copper industry and has helped to preserve and develop what is left of the Hafod Morfa Copperworks, one of the last remaining substantial built heritage assets in the lower Swansea Valley. The research has had an effect on the Swansea council development plan and the targeted regional investment programme for the lower Swansea valley. It has changed the awareness and understanding of the copper industry heritage in the communities and schools of the lower Swansea Valley, as well as bringing visitor and broadcaster interest. It has had an effect on the GBP1,000,000,000 regeneration package Copr Bay, SME location on the Hafod Morfa site and copper branding of firms in the area. Overall, the research has helped Swansea to develop a holistic historically aware approach to economic regeneration and place-making to benefit the capacity of the community and economy in the lower Swansea Valley.</p>		
2. Underpinning research <p>The research underpinning the REF2014 Copperopolis case study was all about establishing the global significance of Swansea as a centre for copper smelting. Since then, Swansea historians have uncovered much more detail about the products made from Swansea copper and the markets supplied by them worldwide. This is part of a new 'turn' in writing about the history of Welsh industry which goes beyond understanding places and processes of production, to examining the supply of goods and the demands of customers buying Welsh products (R1). By using a range of business and commercial records, Miskell and Bowen have discovered more about the importance of copper in the production of key goods used in textile manufacture, maritime, transport and food and drink industries, and about product diversification over time. This new innovative research has moved the narrative away from conventional themes of mineral supply, processing and investment, towards global markets and patterns of consumption. In doing so, it has established the centrality of Swansea copper to global processes of industrialisation and modernisation. In particular, the research has shown that:</p> <p>In the early eighteenth century, the success of Swansea firms in establishing themselves at the centre of the new British copper industry, was their ability to meet East India Company orders to supply Asian markets with a range of products for domestic and decorative use. (R3)</p> <p>The production of small, portable barter items like manillas and guinea rods for West African slave traders via Bristol merchants was also part of the output of the early Swansea firms, but occupied a smaller and diminishing part of their product base. (R4)</p>		

By the late eighteenth and early nineteenth centuries, the willingness of Swansea firms like Vivian & Sons to invest in new rolling mills and steam engine technology meant that they could respond to growing demand for copper sheathing for naval and merchant sailing vessels, supplying shipbuilders and repairers with customized sheathing of different sizes and weights. (R2)

By the 1820s Swansea copper was also embedded in the growth of the mechanised textile trade with the firm of Williams & Grenfell dominating the supply of copper cylinders for printing on fabric, to Lancashire cotton manufacturers. (R.2)

The supply of copper vessels including boiling pans, stills and brewing vats to the food and drink industries provided another important source of demand for copper and saw Swansea firms supplying customers as diverse as London copper smiths who made boiling pans destined for the sugar plantations of the Caribbean, to Irish brewers and whisky distillers. (R2)

By the early twentieth century, a loss of competitiveness as a location for copper smelting saw the surviving Swansea firms focus more on manufacturing, particularly of copper components for locomotives destined for domestic and overseas railway customers. (R2)

Throughout their history, Swansea copper firms were well-informed of — and responsive to — the fluctuating demands of global markets and tailored their products accordingly in order to retain their overseas customers and remain competitive.

These key research insights have helped the story of Swansea copper to reach a new range of audiences in the public, private and third sector and have provided a stimulus to the next phase of grant capture and development planning for the Hafod Morfa Copperworks site. This is one of the last remaining built heritage legacies of the copper industry in the lower Swansea Valley, an area once popularly known as Copperopolis. Bowen and Langlands have worked to preserve the site in conjunction with Swansea Council. Since 2014 their grant capture has sought to focus on continued site restoration as well as initiating the regeneration potential of this built heritage to the redevelopment of the lower Swansea Valley. (G1, G2, G3, G4, G5)

3. References to the research

The underpinning research is based on peer-reviewed funding, three peer-reviewed books, including a monograph, an edited collection of essays, and a scholarly edition of a primary source, and a peer-reviewed book chapter.

Publications

(R1) L Miskell (ed.), *New Perspectives on Welsh Industrial History* (Cardiff: University of Wales Press, 2020) [peer reviewed by two referees at pre-publication stage]

(R.2) L. Miskell & C. Evans, *Swansea Copper: a Global History* (Johns Hopkins University Press, 2020) [peer reviewed by two referees at pre-publication stage]

(R.3) H. V. Bowen, 'Asiatic Interactions: India, the East India Company, and the Welsh economy, 1750-1830', in H. V. Bowen (ed.), *Wales and the British Overseas Empire: Interactions and Influences, 1650-1830* (Manchester University Press, 2011) pp. 168-93 [peer reviewed by two referees at pre-publication stage] <https://ris.swan.ac.uk/risOutputs/Details/11478>

(R.4) L. Miskell, *The Origins of an Industrial Region. Robert Morris and the first Swansea Copper Works, c.1727-1730*, South Wales Record Society Publications, no.23 (South Wales Record Society: Newport, 2010), xii +127. [Peer reviewed at pre-publication stage by one referee; and subsequently by journal reviewers]

<https://ris.swan.ac.uk/risAdmin/Details/11493>

Grants

(G1) H. V. Bowen (PI) – in partnership with Swansea Council, 'Hafod-Morfa Copperworks Powerhouse', Heritage Lottery Fund, Enterprise Scheme, (June 2016 – June 2022 development and delivery phase), NLHF Ref: HE-15-01729, **GBP3,567,400** (+ GBP985,550 match funds from SC)

(G2) H. V. Bowen (Theme leader) 'Resource Constrained Communities', Hafod-Morfa Copperworks is embedded in Cherish-DE, committed to invest in digital innovations for the copperworks site, (April 2016 – Oct 2020) EPSRC grant number EP/M022722/1, **GBP25,000**

(G3) A. J. Langlands (PI) 'Twenty-First Century Reverberations: Restoring Industrial Heritage in the Swansea Valley'. Heritage Lottery Fund, Our Heritage, (Sept 2018 – Oct 2019) NLHF Ref: OH-17-00460, **GBP49,100**

(G4) A. J. Langlands (PI) 'Copperopolis: Place-making, Engagement and Heritage-led Regeneration'. UKRI Public Engagement - Enhancing place-based Partnerships in Public Engagement, (Dec 2019 – June 2020) **GBP26,280**

(G5) A. J. Langlands (PI) 'Art and Science: The Copper Crucibles Project', in partnership with Crisis Homeless Charity and The National Waterfront Museum. Royal Society of Chemistry Outreach Fund, (Nov 2020 – Aug 2021) **GBP9,850**

4. Details of the impact

The uncovering of the historic and global significance of Swansea's industrial copperworking heritage continues to inform publicly funded programmes resulting in a profound change in attitude across public, private and third sector institutions. Not only has the research been matched to community and enterprise need in the drawing down of over GBP3,600,000 of grant funding [**G1 – G5**], it has impacted upon planning and regeneration policies [**C1**], attracted SME investment [**C7**], and enriched the cultural life [**C4, 5, 6, 8, 9**] of wards in the lowest two quintiles of the Welsh Indices of Multiple Deprivation.

Influence on public planning and regeneration policy

The period between 2008 and 2020, has witnessed a sea change in the approach to economic regeneration in the city [**C1**]. In the **Swansea Bay City Region Economic Strategy 2013-2030 (2013)**, not a single reference to heritage nor the historic environment was made. The City and Council of Swansea's own **Unitary Development Plan (2008)** made only a passing reference to the role industrial heritage can play in the tourist economy. Even in the **Swansea Local Development Plan Topic Paper: Culture and Heritage (2013)**, 'heritage-led' regeneration consisted of limited opportunities within the tourism and built heritage construction sectors. However, the statutory heritage body of Welsh Government, Cadw, sought the help of the university to provide the underpinning historical research for its 2016 Urban Characterisation report on the Lower Swansea Valley [**C3**]. This study identified and set out the significance, distinctiveness and unique historic character of the local region. Concurrently, research undertaken by Swansea University historians heavily influenced the production of the 'master plan' produced by heritage consultants Purcell for a 'copperworks' enterprise and mixed-use park [**C1**].

The City and Council of Swansea's **Local Development Plan 2010-2025 (Deposit Plan, July 2016)** drew directly on both of these documents in setting out its ambitions for the Hafod-Morfa Copperworks site and its links to the 'River Tawe Corridor', listing a 'heritage-led project' to include 'restoration of historic buildings' and a 'heritage visitor centre' [**C1**]. The renewed historic significance of the surviving monuments created the case for World Heritage Site status, and this impacted greatly on policy and decision makers in the region [**C1**]. Listed buildings that had been subjected to neglect for decades, despite many attempts to rescue them, now 'represent a significant regeneration opportunity' with proposals for the heritage led regeneration of the site being driven by 'The Hafod/Morfa Copperworks Project', a partnership project between the Council and Swansea University [**C2, C10**]. This regeneration is now being realised publicly by the **Targeted Regeneration Investment Programme (TRIP) 2018**, through which the Hafod-Morfa Copperworks is set to receive over GBP2,000,000 of investment from a total of GBP27,000,000 for the south-west region [**C1**]. Head of Economic Development and External Funding at Swansea Council says: *'This is a major turnaround from 10 years ago when the site was covered in vegetation, forgotten and decaying. It can now look forward to a bright, collaborative future, part of a regional investment campaign, understood by key national and regional investment partners, and a place to live, work and play, celebrating the extensive heritage both of the works itself, and the wider legacy in the Lower Swansea Valley'* [**C2**]. From 2015 through to the present day, Swansea University research staff have sat on the project boards for regeneration projects in the area and attended key decision-making meetings on a range of issues relevant to redevelopment,

restoration and public engagement in the Lower Swansea Valley [C10]. This has served as a key corollary through which the historic significance and heritage potential of the surviving assets has been communicated, in turn supporting the case for TRIP funding. These funds, traditionally reserved for investment in commercial and economic zones (such as town centres/high streets), have been targeted at ‘shell and core’ restorations of the physical heritage assets, in a plan to attract high-end commercial ‘anchor tenants’ to further stimulate economic growth in the region.

In a climate where even in Cadw’s own report on **Valuing the Welsh Historic Environment (2010)**, primacy was given to the direct ‘economic value’ of the historic environment, the Lower Swansea Valley is experiencing a shift in approach to one that identifies the route to true sustainable economic growth lying first and foremost in the recognition of the historic significance and sense of place. The significance of Miskell and Bowen’s research has been identified by Cadw and the National Lottery Heritage Fund [C3]. The historical research that has established the importance to Britain of Swansea’s copperworking industries underpins place-making policies now being advocated at regional and national governmental levels [C6].

The Cultural Impacts of Historic Significance

Swansea historians led a sustained collaborative engagement campaign ranging from national events with 6,000 visitors (The Man Engine Cymru, April 2018), to National Lottery Heritage Fund-supported renovation work. This has resulted in far greater public appreciation of the historic and global significance of Swansea’s copperworking industries [C4, C9]. Not only have these enriched the social and cultural life of a deprived area, but they have served to sharpen a sense of distinctive identity shaped by copper heritage, which has drawn the attention of a number of national broadcasters [C5]. This is also evident from the large number of volunteers and visitors to the site over the past 5 years [C4], which includes a group of committed people who have formed the Friends of the Hafod Morfa Copperworks group who take care of the site and offer guided tours [C9]. One of the group’s founders and current Chair, engineer Tom Henderson outlines the long-term value of Swansea University’s instigation of the regeneration process: *‘the awareness of Swansea’s past industrial process that Huw Bowen helped kickstart, [...] the archaeology, [...] archives searches and the oral histories [...] that the friends group have carried out have all helped clear the path to tangible progress in regenerating the former copperworks sites in the lower Swansea valley’* [C4]. The success of this research-informed University and volunteer partnership is set out by the Economic Development Officer, Swansea Council stating: *‘The collaboration between the council, university, friends and volunteers has shown that the model works well and can achieve excellent results and prove good value for money. We believe that this model can be used in the future for further phases of restoration’* [C2].

Research into the investment of Swansea copper firms in the latest plant and machinery has given impetus to the Musgrave Engine restoration project [G3]. The Musgrave Engine – the last surviving remnant of the advanced steam-powered rolling technology in use on the Hafod Morfa site – is now being refurbished and rehoused as a visitor attraction. Involving primary school children in this process has done much to enrich local awareness of this vital cultural asset. As one teacher from Hafod primary says, *‘We have also learned a lot from our involvement in the Musgrave restoration project. Outreach workshops, creative sessions and trips are very beneficial to us in our learning.’* [C8]

An Attraction for Regional and SME Investment

Swansea University’s research on the historical significance of the copper working industries to the Lower Swansea Valley has led ultimately to the iconic metal itself playing a major role in the construction, branding and public communication of a GBP1,000,000,000 regeneration package for a new district in Swansea: **Copr Bay**. The landmark construction of the new district will be a copper bridge, and artist and designer Marc Rees notes that it, *‘represents the transition from the past to the future. It symbolizes Swansea’s aspiration to evolve, grow, flourish and become even more exciting but still very much rooted in a sense of place’* [C7]. The process of public consultation for this project is set to be informed by technologies developed through EPSRC funds allocated by CherishDE to the Hafod Morfa Copperworks as a ‘Resource Constrained Community’ [G2] [C7].

The historic significance of the copperworks, and the role the metal played in the emergence of a global distilling industry [R2], is a key attraction for Penderyn's desire to build a new distillery and visitor centre on the site [C7]. Research carried out at Swansea University has established the historic importance of whisky distilling firms as customers of Swansea copper firms, and is set to inform the content, interpretation and display within that visitor centre, creating a new narrative around how the copper goods produced in Swansea went on to have a global impact [R2]. Drawing on GBP3,500,000 of NLHF investment and an additional GBP4,000,000 of private sector investment, the future of the Power House, one of the site's most important heritage assets, has been secured for at least another 100 years [C6]. Within, copper equipment and technology will be utilized as part of an industrial process, 15 FTE jobs will be created and a 50,000 visitors will be attracted per annum.

An increased affinity for the copper 'brand' was exemplified by Swansea City FC's adoption a copper heritage theme (2015) within the hospitality part of their Liberty Stadium (located on part of the Hafod-Morfa site), a process informed by our researchers. A new white and copper playing kit for season 2015-16 was also launched accompanied by a promotional video drawing directly on research by Swansea historians. Indeed the region is now furnished with a range of SMEs trading on the copper brand, including Copper Bar, Copperfish, Copper Bay Digital, Coppergate and the Copper Jack - an illustration of how the historic and global significance of copper to the region, a narrative largely promoted by research at Swansea University, has created a brand identity that local businesses take pride in trading on [C7].

5. Sources to corroborate the impact

- C1 Economic regeneration planning policy documentation
- C2 Sources detailing the partnership with Swansea Council
- C3 Influence on national heritage organisations
- C4 Events & projects: details and responses
- C5 National broadcast attraction
- C6 News and organisational information about the redevelopments
- C7 Evidence of SMEs and cultural organisations using the Copper story as part of their branding
- C8 Testimonial from a school
- C9 Testimonial from volunteers
- C10 Schedule of meetings held between Swansea University research staff and key members of Swansea Council's Economic Regeneration, planning and project management teams.