

Institution: University of Exeter
Unit of Assessment: History
Title of case study: 'Connecting Cornwall: Telecommunications, Work and Locality in West Britain, 1870-1918'
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>Dr Richard Noakes led 'Connecting Cornwall', a project working with the Porthcurno Telegraph Museum (PTM) from February 2009 - July 2012, looking at the lives and careers of the 'ordinary' men who operated the Victorian and Edwardian British submarine cable network.</p> <p>The project was fundamental in building a working relationship with PTM that now paves the way for future research-based collaborations. The exhibition also raised the profile of PTM. A new section of the website was created for PTM, greatly improving its online presence and user experience. Impacts on the public have included providing access to previously unseen archival material, preserving and displaying artefacts of cultural heritage and in educating people with regards to their local history.</p>
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>Cornwall is renowned for its importance in telecommunications history. At Porthcurno in the 1870s, the Eastern Telegraph Company built the world's largest cable station and training school (now the PTM); at Poldhu in the early 1900s, Marconi staged the first trials of transatlantic radio signalling; and at Goonhilly in the early 1960s, Britain installed one of the world's largest satellite communication systems. Of all these sites, however, Porthcurno is the one whose historical significance is least appreciated. The academics agreed that Porthcurno provided an excellent opportunity to explore a much neglected area of scholarship: how the lives and aspirations of 'ordinary' men were transformed by operating the 'nervous system' of the British empire.</p> <p>'Connecting Cornwall' ran from February 2009 to July 2010 and was led by Dr Richard Noakes, Professor Alan Booth and Dr Wendy Gagen. The 'bottom-up' approach of the project differs from that found in most academic studies, museum displays, television documentaries and popular histories: there the focus is on the 'heroic' inventors and inventions, even though these depended on the skill and labour of now forgotten individuals. The academics identified a plethora of materials at PTM -- including largely unseen employment records, photographs, and diaries -- to build their new approach.</p> <p>Dr Richard Noakes (appointed History lecturer at Exeter in 2007), the Principal Investigator throughout the project, is an internationally recognised historian of nineteenth century physical sciences and technology. The project developed his existing interests in the careers of electricians employed by nineteenth-century British telegraph companies. He used archives at PTM and elsewhere to show that the foremost commercial operator of submarine cables -- the Eastern Telegraph Company -- engaged in significantly more technical research than previously assumed. He presented this research at major international conferences (at Heidelberg in 2009 and Berlin in 2011) and consolidated it in a substantial article in one of the most prestigious peer-reviewed scholarly journals in the field of history of science (section 3, item 5).</p> <p>Professor Alan Booth (appointed in at Exeter in 1988), was Co-investigator throughout the project. He is an economic historian internationally recognised for his work on the twentieth century British economy. By applying the analytical approaches developed by Booth to the business records at PTM he has transformed the way we think about the large Victorian service sector firm (e.g. section 3, item 2), and in particular how it trained, rewarded and retained employees.</p> <p>Dr Wendy Gagen was the Research Fellow on the project. Her contribution to 'Connecting Cornwall' developed her existing interests in British military service personnel and masculinity during the First World War. She used the PTM archive to extend this analysis to case of the male employees of the cable companies. She revealed that they experienced far greater anxieties over</p>

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their identities than previously claimed and transformed local life at the remote locations where they were posted. She presented this research at a major international conference at Berlin in 2011 and in book chapters (section 3, items 3 and 4).

3. References to the research (indicative maximum of six references)

Evidence of the quality of the research: this research was the result of external grant funding by the AHRC and all publications were peer reviewed.

1. £288,527 awarded to Richard Noakes for 'Connecting Cornwall: Telecommunications, Locality and Work in West Britain 1870-1918'. This was awarded by the Arts and Humanities Research Council (Museums, Archives and Libraries Scheme) and the funding period was February 2009 to July 2010. The project was graded 'Satisfactory' by the AHRC.
2. A. Booth and J. Melling, 'Workplace Cultures and Business Performance: British Labour Relations and Industrial Output in Comparative Perspective', in J. Melling and A. Booth (eds.), *Managing the Modern Workplace: Productivity, Politics and Workplace Culture in Postwar Britain* (Aldershot: Ashgate, 2008).
3. W. Gagen, 'Not Another Hero: The Eastern Telegraph Company's Creation of the Soldier Hero and Company Man', in Stephen McVeigh and Nicola Cooper (eds.), *Men after War* (London: Routledge, 2012), 92-110.
4. W. Gagen, 'The Manly Telegrapher: The Fashioning of the Gendered Company Culture in the Eastern and Associated Telegraphy Companies', in Michaela Hampf and Simone Müller-Pohl (eds.), *Global Communication Electric: Actors of a Globalizing World* (Frankfurt: Campus Verlag, 2013).
5. R. Noakes, 'Industrial Research at the Eastern Telegraph Company, 1872-1929', *British Journal for the History of Science*, available online via FirstView, 10 April 2013.

4. Details of the impact (indicative maximum 750 words)

New Exhibition at PTM

Called 'Nerve Centre of Empire', the exhibition is dominated by forty-seven large panels on which images, text and diagrams are displayed. The content of the panels, display cases and interactives were determined by the academics' research findings and the need to highlight the PTM archive's strengths in the social and cultural history of telegraphy. The text and images of the panels were reproduced in a booklet accompanying the exhibition and available for sale in the PTM: Wendy Gagen and David Dawson (ed.), *Nerve Centre of Empire: Connecting Cornwall, Expanding Empires 1870-1918* (Porthcurno: Porthcurno Telegraph Museum, 2010).

The opening of the exhibition has generated local interest. Between July 2010 and Feb 2013 59,783 people visited the PTM, as documented in the museum's 'Key Performance Indicators' spreadsheet, along with website hits and remote archive inquiries (section 5 reference 1). In the same period there have been school visits which brought 507 children to the museum. The visitors' book in the museum provides largely anonymous and undated comments, including many on the content and design of the 'Nerve Centre of the Empire' exhibition and these are generally very positive. They include examples such as: "It's very informative. Lots of interactive sources. BRILLIANT! ...It's enjoyable and helps learning"; "I really enjoyed my day here and learned a lot about communication and electricity. It is good for all the family because there is stuff for kids to do as well. I think it would be good if volunteers from the audience could take part in some demonstrations so kids would enjoy them more"; and "Super activities for the children which helped them understand the exhibits or keep them occupied. Wide ranging and diverse. Thank you!" (section 5 reference 2).

The exhibition also influenced those who work in the industry, an instrument engineer writes: "Having experienced the Porthcurno 'Nerve Centre of the Empire' exhibition I found it a valuable

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backward glance into the forward thinking lives of British innovation. We must continually preserve and protect this historic information to enable future generations to appreciate the giant steps taken in effective telecommunications. The laying and successful operation of the cable trunk networks showed British ingenuity and its determination to succeed and lead the way in this new technology. It wasn't always mobiles, Skype, iphones and sat-navs. My thanks to you and your team for your work in the field of saving our history." (section 5 reference 5).

The exhibition attracted national and international interest, as Dr Richard Noakes was interviewed about it for the *BBC History Magazine* and also for a podcast (section 5 references 6-9). All the coverage emphasised the exhibition's focus on the importance of Porthcurno in particular, and Cornwall in general for the history of telecommunications. Noakes drew on project findings about telecommunications research in his contribution to the BBC2's *Genius of Invention* series, broadcast on 7th February 2013 (section 5 reference 9).

A research fellow at the Science Museum, London, has been a champion of the exhibition at PTM: "Since my first visit to the Porthcurno Telegraph Museum more than 10 years ago it is quite evident today, that investment and, no doubt much hard work has transformed it into an unrivalled collection and research archive for the history of submarine telecommunications. This, in no small part, is due to their collaboration with Exeter University to encourage post-graduate research into the extraordinary archive collection. This has been further enhanced by creating appeal to a broad section of the public through its imaginative exhibition and its much improved web-site." (section 5 reference 3).

The exhibition has helped forge a strong working relationship with PTM and its staff. According to PTM staff, 'the opportunity to work with the University has had ongoing positive impacts for the museum – not least by helping to support our bid for a £1.4 Million Heritage Lottery Bid to development the museum. The exhibition was seen by the HLF assessors and helped to show our commitment to providing access to our collections at a variety of levels – from 6 years to 106.' (Section 5 reference 10)

Enhanced Website (<http://www.porthcurno.org.uk/nerve-centre/>)

Officially launched with the exhibition, the website is the means by which the research has had its greatest geographical reach. The academic and museum partners selected specific archival materials that, after being digitally scanned and uploaded onto the museum website, would be most effective in highlighting the social and cultural aspects of the PTM's collections. These included the detailed diaries of an obscure 'cable man', staff records, and photographs of life aboard cable laying ships and remote cable stations. Owing to their richness, the textual materials were also transcribed allowing website users to conduct full-text searching. To give context to these materials and to make them altogether more interesting to users, the 'Connecting Cornwall' project linked them with the text and images from the museum, and several interactive features, including a sensitive map and timeline. Between July 2010 and Feb 2013 the PTM website has received 215,000 hits with 84,476 unique visits.

Improved Archive

The Cable and Wireless Archive at the PTM is used by non-academic and academic enquirers. The enormous number of people who worked for Cable and Wireless means that its staff and other records have become an important resource for family history. Between July 2010 and May 2011 there were 269 remote enquiries made regarding the archive (section 5 reference 1). The archivists in the 'Connecting Cornwall' team recognised that they could significantly improve their service to *all* future users by making changes initially designed to benefit the academic research, exhibition and website aspects of the project. Accordingly, they used a portion of the AHRC grant allocated to the museum for four key initiatives. First, they added internet access to and significantly increased the size of the room at the PTM in which archive users work. Second, they purchased new archive boxes to improve the preservation of (often fragile) historic materials. Third, with the help of the researchers, they were able to identify gaps and errors in the electronic archive catalogue which stimulated a long-term overhaul of this crucial database of information. Fourth, they constructed a small enclosed area within the archive for digitally photographing and scanning

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archival materials that can then be mounted on the website or sent electronically to any enquirer. All four initiatives have long outlasted the project and are appreciated by users outside the project (section 5 reference 3). To date, there have been 186 onsite researchers and 489 museums enquiries using the archive remotely for research.

5. Sources to corroborate the impact (indicative maximum of 10 references)

1. Key Performance Indicators spreadsheet, Porthcurno Telegraph Museum
2. Visitors' Book, Porthcurno Telegraph Museum
3. Supporting email from a Research Fellow at the Science Museum, London, 18 September 2011
4. Supporting email from an archivist at the Institution of Engineering and Technology, 22 September 2011
5. Supporting statement from an instrument engineer, 23 September 2011.
6. Exhibition opening covered on BBC Radio Cornwall, 28 June 2010 (includes an interview with Noakes).
7. 'Das Kommunikationszentrum am ende der Welt', *Der Spiegel*, 8 August 2010
8. *BBC History Magazine*, vol. 12 (August 2011), pp. 84-85 (also published in *100 Places that Made Britain* (London: BBC Books, 2011) and downloadable podcast interview with Noakes, <<http://www.historyextra.com/podcast-page/>>.
9. *Genius of Invention*, Episode 3, BBC2 television, broadcast 7 February 2013 (discussion with Noakes)
10. Supporting email from staff at Porthcurno Telegraph Museum