Institution: University of Portsmouth
Unit of Assessment: UoA14: Geography and Environmental Studies
Title of case study: Presenting Places: connecting with, and preserving, the past
Period when the underpinning research was undertaken: 2001 - 2019
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:
Humphrey Southall	Professor of Historical Geography	01/01/2000 - date
Paula Aucott	Senior Research Associate	01/12/2000 - 30/09/2005 & 20/02/2006 - date
Michael Stoner	Senior Research Associate	01/08/2013 - 08/03/2017

Period when the claimed impact occurred: 01 August 2013 - 31 December 2020
Is this case study continued from a case study submitted in 2014? N

1. Summary of the impact

Research by Professor Humphrey Southall has pioneered the creation of accessible and searchable digital web databases that reflect how places have changed with time. These have been used directly by national and international libraries to improve access to their archives and collections and to extend their services. Data from 'GB1900', the world's largest historical gazetteer, has been included in national regulation to preserve Welsh naming of properties and streets and in the identification of 49,000 miles of missing rights of way in England and Wales. These projects, and volunteer engagement with citizen geography, have enhanced cultural understanding and awareness of cultural heritage.

2. Underpinning research

Gazetteers organise knowledge and details about named places; used with maps or an atlas, they link geographical names with spatial co-ordinates. Digital gazetteers act as bridges between formal geographic information science (GIS) (the geospatial web) and the use of placenames in informal discourse (the semantic web). Gazetteer-based services are applied in fields such as public health, natural history data management and cultural history, but their value is frequently limited by the need to know about places whose locations may be uncertain or whose names may have evolved over time.

Between 2001 and 2004, **Professor Humphrey Southall** led the rebuilding of the Great Britain Historical GIS (GBHGIS) to address these issues (**G1**). The GBHGIS is a spatially enabled database that documents and visualises the changing human geography of the British Isles over the last 200 years. The new architecture developed by **Southall** organised complex information around named entities and explicit spatial relationships to link legally defined administrative areas and statistical reporting units with a less formal geography of 'places' contained in old maps, descriptive gazetteers and a library of travel writing (**R1**). Launched in 2004 as '[A Vision of Britain through Time](#)', this rich gazetteer not only mapped changes to administrative boundaries but also presented a range of approaches to searching for, and accessing, information from diverse historical sources linked to a geographical location.

Through 'A Vision of Britain through Time', **Southall** established digital gazetteers as a central research focus in the digital humanities and became a recognised leader in the spatial humanities. In April 2011, **Southall** organised a workshop on Gazetteer Construction at the Association of American Geographers meeting, Seattle, which considered the extent to which existing gazetteers and gazetteer standards adequately reflected the historical, textual, cultural, and multivalent character of past places (**R2**). The Seattle workshop led directly to the *Placing Names* book (**R3**) and led Southall to conclude: (i) that future historical gazetteers should be based on "attested place names", i.e. particular text strings being used to refer to a place in a specific, and usually dated, source; and (ii) that crowd-sourcing was the most cost effective and pragmatic way to harvest this information on the necessary scale. In May 2011, at a meeting at the National Library of Wales (NLW) on how best to advance a systematic survey of Welsh place names, **Southall** contributed his significant experience with Vision of Britain of combining maps at different scales and proposed crowd-sourcing from historical 6 inch maps. This meeting led directly to 'Cymru 1900', a uniquely crowdsourced Welsh historical place name gazetteer, developed by a consortium of Welsh agencies and launched in October 2013 (**R3**).

In 2015, **Southall** led the Great Britain Historical GIS team (**Aucott**, **Stoner**) at the University of Portsmouth on the 'GB1900' project. Project partners included the National Library of Scotland (NLS) and the NLW. 'GB1900' re-located 'Cymru 1900' to a Portsmouth server, where the software was revised to improve the transcription process and enable volunteers to computerise all the place names and other text on mapping provided by the NLS and covering the whole of Great Britain. 'GB1900' crowd-sourcing ran from September 2016 to January 2018 and the final dataset, consisting of 2.55 million coordinates and text strings, was launched under a Creative Commons license in July 2018: http://www.visionofbritain.org.uk/data/#tabgb1900. 'GB1900' is the largest historical gazetteer in the world, providing a detailed textual description of Britain around 1900 and enabling diverse geo-semantic analyses of Britain's historic environments (**R4**, **R5**).

Finally, since 1990, hundreds of thousands of historical maps held in map library collections worldwide had been made viewable online. However, they remained difficult to find; users needed to know which libraries to search, and library search interfaces generally required knowledge of map titles. In October 2011, **Southall** led the Old Maps Online (OMO) project (**G2**). Working with an innovative software company, Klokan Technologies Gmbh, OMO gathered detailed metadata about over 100,000 online historical maps to create an open access digital repository that could be searched by either 'name attestation' or geo-reference (**R6**).

3. References to the research

3.1. Research outputs

R1. **Southall, H**. (2014). Rebuilding the Great Britain Historical GIS, Part 3: Integrating qualitative content for a sense of place. *Historical Methods: A Journal of Quantitative and Interdisciplinary History*, *47*(1), 31-44. https://doi.org/10.1080/01615440.2013.847774

R2. **Southall, H**., Mostern, R., & Berman, M. (2011). On historical gazetteers. *International Journal of Humanities and Arts Computing*, *5*(2), 127-145. https://doi.org/10.3366/ijhac.2011.0028

R3. Ell, P., Hughes, L., & **Southall, H. R**. (2016). Digitally exposing the place names of England and Wales. In Berman, M. L., Mostern, R., & Southall, H. (Eds.) (2016). *Placing Names: Enriching and Integrating Gazetteers*. (Spatial Humanities). Indiana University Press. https://researchportal.port.ac.uk/portal/en/publications/digitally-exposing-the-place-names-of-england-and-wales(cca82f1f-e198-4850-a3c8-464bbb196eb5).html [PDF available on request]

R4. **Southall, H.**, **Aucott, P.**, Fleet, C., Pert, T., & **Stoner, M**. (2017). GB1900: engaging the public in very large scale gazetteer construction from the Ordnance Survey "County Series" 1:10,560 mapping of Great Britain. *Journal of Map & Geography Libraries*, *13*(1), 7-28. https://doi.org/10.1080/15420353.2017.1307305

R5. **Aucott, P.,** & **Southall, H**. (2019). Locating past places in Britain: creating and evaluating the GB1900 Gazetteer. *International Journal of Humanities and Arts Computing*, *13*(1-2), 69-94. https://doi.org/10.3366/ijhac.2019.0232

R6. **Southall, H**., & Pridal, P. (2012). Old maps online: enabling global access to historical mapping. *e-Perimetron*, *7*(2), 73-81. http://www.e-perimetron.org/Vol_7_2/Southall_Pridal.pdf
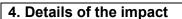
3.2. Evidence for the quality of research

The outputs that underpin this case study have been published in international peer-reviewed academic journals or are peer-reviewed book chapters. R1, R2 and R5 have been cited internationally (USA, Italy, Germany, Netherlands, Denmark, Sweden, Romania and Poland). R1 is returned to REF2 with Output ID 11265495. The research has been supported by grants secured through competitive, peer-reviewed funding sources.

3.3. Relevant grants

G1. **Southall, H**. *Great Britain Historical GIS/Gazetteer/Atlas – A Vision of Britain through Time*. Funded by the National Lottery Fund, October 2001 - September 2004 (GBP706,271)

G2. **Southall, H.**, **Aucott, P**. & Westwood, J. *Old Maps Online*. Funded by the Joint Information Systems Committee, November 2011 - January 2013 (GBP140,000)

4. Details of the impact

Improving access to historical information held by national and international libraries

Over the last 20 years, Southall has delivered his pioneering vision for digital gazetteers, based on a deep understanding of how to link maps with searchable databases working on text. This has changed the way in which national and international libraries think about their geographical resources and prompted them to reconsider how geographical content within their collections can be discovered and searched. For example, Southall's GBHGIS and 'Vision of Britain' projects (**R1**) made information on changes to administrative boundaries available in an accessible form as GIS Shape files (see Vision of Britain Data Access) to the National Library of Scotland (NLS). The NLS is one of Europe's major research libraries and holds one of the largest map libraries in the world. Access to this boundary data enabled the NLS to create a map of the boundaries of parishes, counties and unitary authorities in Scotland. Launched in December 2017, the NLS *Boundaries Viewer* has seen over 63,000 page views, with users on average spending 2 minutes, 19 seconds on the site. Similarly, in April 2018, the NLS used 'GB1900' data to create a searchable place-name index, maps.nls.uk/geo/find, for its online map collection that improved the indexing and retrieval of NLS maps by allowing people to search for historic names, gathered on maps from a century ago. '*For many of our users, this is a huge step forward, unlocking some of the rich content of our scanned historical maps, as the names on them often do not appear in standard modern gazetteers*' (**S1**). The 'GB1900' gazetteer is also available in NLS's Explore Georeferenced Maps Viewer, which receives over 3.2 million page views per year, with users on average spending 4 minutes, 12 seconds on the site. **'*These innovations have improved indexing and retrieval of NLS resources and enabled the NLS to expand the services it offers its users. These have raised the reputation and visibility of our Library and online maps, and allowed us to reach new communities and audiences'*** (**S1**).

The Old Maps Online (OMO) project, led by **Southall** (**G2**, **R6**), created the broadest single virtual collection of historical maps in the world (http://www.oldmapsonline.org/). This included contributions from 20 national and international libraries, including the British Library, the National Library of Wales, the NLS, the Dutch National Archives, the Moravian Library in the Czech Republic, the Biblioteca Nacional de Colombia in Bogota, the David Rumsey Collection in California, Harvard University and the New York Public Library. Using metadata in a prescribed format, OMO enables people to find a map of a specific location in a collection, without having to search for an individual map sheet by name or to know which library held the map and go to their website/database to find it. OMO, therefore, provided a simple and intuitive way for thousands of people to access old maps and map collections, whilst allowing map libraries to retain control of their collections and the way in which maps are viewed, accessed, copied etc. In doing so, **it has supported national and international libraries to improve access to their unique collections, services and expertise**. In 2020, the NLS received 11,868 direct referrals (5.86% of their user acquisitions) from Old Maps Online (**S1**).

Engagement with public – enhanced cultural understanding

The 'GB1900' project (**R4, R5**) pioneered the geographical application of 'citizen science', working with volunteer transcribers. Between September 2016 and January 2018, 'GB1900' recruited over 1,000 online volunteers, and the ten most active volunteers each worked the equivalent of six full-time months. An evaluation of 'GB1900' volunteer motivations identified that, unlike volunteers in physical science 'citizen science' projects, motivation was linked to personal interest in the maps, in places that held meaning for them, and in how places had changed (**S2**). In particular, the names of places unlocked the social and linguistic history of the land, recalling local industries, changed landscapes and preserving a rich heritage of Welsh- and Gaelic-language forms from across Wales and Scotland. Volunteers tended to start transcribing in places that were known to them, but then moved to other areas, **deriving great pleasure from learning about new areas and about cultural aspects that they were previously unaware of**. For example, volunteers reported: '*As soon as we started working in Scotland, I became fascinated about how many things there were to do with water supply... and how much industry across the central belt had died off already by the late 1890s. It was extraordinarily interesting to uncover that*' (Volunteer 7734); '*I found the link between Welsh and Gaelic interesting. I didn't realise there was so much overlap*' (Volunteer 7725); and '*You don't know what you're going to come across next, an interesting place*

or an historic aspect… so many trains, even under construction, but no airfields. I was constantly amazed… I think I have had a blinkered past where history is concerned…' (Volunteer 8094) (**S3**). Since its launch in June 2018, there have been a total of 1,044 data downloads from the 'GB1900' site by people with a wide variety of interests. These include: for personal research by local history organisations or individuals interested in their family history (56%); for academic or professional research (31%); and downloads from individuals working in libraries, archives and across the public, private and voluntary sectors.

Preservation of culture, history and rights connected to place

(i)   Preserving Welsh Historic Place Names

In October 2013, a consortium of Welsh agencies, the People's Collection of Wales, University of Wales' Centre for Advanced Welsh & Celtic Studies, National Library of Wales and the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW), together with the citizen science platform, Zooniverse, launched 'Cymru1900'. Between 2013 and 2015, using historical Ordnance Survey maps of Wales, online volunteers recorded and geo-located over 294,000 transcriptions of text, i.e. the names of towns, villages, woods, farms, rivers and dwellings. In 2015 and led by **Southall**, 'Cymru 1900' was scaled up into 'GB1900': higher quality map scans and an enhanced interface enabled volunteers to verify place names, and to identify and include additional Welsh place names (**R4, S4**). Recognising the importance of historic place names to the history and culture of Wales, the Welsh Government included a provision for a statutory list of historic place names in the Historic Environment (Wales) Act 2016. **In May 2017, the RCAHMW created the List of Historic Place Names of Wales: this contains 675,000 names of which 43% were contributed by 'Cymru1900' and 'GB1900'**. This List has:

- raised public awareness of the rich legacy of historic place in Wales: in one month alone (September 2019), 5,450 public users conducted 6,642 sessions on the website (**S5**);

- informed decisions on the management of the historic environment. Incorporation of the List into the 2016 Act mandated that local authority Planning and Street Naming and Numbering departments must use the List to review development proposals and recommend the use of Welsh names on properties and streets. Local Councils have readily complied (see, for example, instructions on property naming by Ceredigion, Powys and Gwynedd Councils) and Ceredigion Council specifically encourages homeowners applying to rename properties to retain historical Welsh names, even if the new suggested name is also in Welsh.

(ii)   Extending Britain's footpath network

Walking is the most popular recreational activity in the UK, with over 20 million adults in England walking for leisure each year (Sport England, October 2020). Such mass activity is only possible through an extensive network of rights of way across the country. In 2000, the UK government set a deadline of 1 January 2026 for all historic paths to be registered for inclusion on official maps; non-registration will mean that the rights of way will be lost forever. Southall recognised the value of the 'GB1900' data in this context, based as it is on computerised, historical maps of England and Wales and including over 300,000 footpath (F.P.) and 15,000 bridle road (B.R.) markers, and contacted the Ramblers Association (RA) in 2018. Southall provided the RA with access to the 'GB1900' data, as well as his experience of running a crowd-sourced mapping activity. The RA launched a 'citizen geography' campaign, '*Don't Lose Your Way*' (DLYW) in January 2020. DLYW used an online platform that combined the 'GB1900' data, historical maps of England and Wales from the NLS, and current Ordnance Survey maps. Members of the RA and the public were asked to compare the historic and modern maps, paying particular attention to F.P. and B.R. markers from the 'GB1900' data, and to use these abbreviations to build a more detailed vector layer, showing the actual routes of the footpaths and identifying paths that were missing from the modern rights of way network.

The DLYW campaign was launched in February 2020 and attracted 260 pieces of press coverage, with a total circulation of 52,641,646, and over 2,000,000 impressions on social media. It was covered by national newspapers (Daily Mail, Times, Guardian), magazines (Country Living, Waitrose) and TV and Radio (BBC Breakfast, Sky News, Radio 4), supported by the National Trust and Cycling UK and endorsed by high profile environmental campaigners, such as Chris Packham, CBE. Over a 6-week period, a total of 154,298 1km^2 squares of England and Wales

were reviewed (each square reviewed twice) by 3,447 volunteers. *'This (response)... has shown us that this issue isn't just of interest to Ramblers members, it inspires people far more widely. It's about becoming a detective, delving into history to reclaim a right of way and safeguard it for generations'* (DLYW Programme Manager, **S6**). As well as being individually useful as evidence of an historic right of way, the F.P. and B.R. markers from 'GB1900' helped to identify areas where previous path registration was particularly inadequate, enabling the DLYW project to better target resources for further investigation.

As a result of DLYW, more than 49,000 miles of potentially missing rights of way have been identified, nearly five times the original estimate. According to the DLYW Programme Manager, *'The F.P. and B.R. markers from the GB1900 project were a central element of our criteria for identifying potential lost rights of way and, without them, I am sure we would have overlooked many of these lost paths'* (**S7**). Further work is now underway to collate documentary evidence of these missing rights of way and to lodge applications with local authorities. **If reinstated, these will increase the path network in England and Wales by 30%.**

5. Sources to corroborate the impact

S1. Testimonial from Map Curator, National Library of Scotland, confirming the value of historical administrative data provided by the GBHGIS Team at Portsmouth, and of the "GB1900" and OMO projects to the NLS (15 February 2021)

S2. **Aucott, P.**, **Southall, H.**, & Ekinsmyth, C. (2019). Citizen science through old maps: volunteer motivations in the GB1900 gazetteer-building project. *Historical Methods: A Journal of Quantitative and Interdisciplinary History*, *52*(3), 150-163. https://doi.org/10.1080/01615440.2018.1559779

S3. Report on Interviews with GB1900 Volunteers, University of Portsmouth, March 2018 (extracts taken from pages 5, 18 and 97)

S4. Testimonial from On-line Development Manager, Royal Commission on the Ancient and Historical Monuments of Wales, corroborating Southall's contribution to "Cymru 1900" and the subsequent contribution of "GB1900" to the List of Historic Place Names in Wales (22 January 2021)

S5. Update on The List of Historic Place Names of Wales for the Culture, Welsh Language and Communications Committee, Royal Commission on the Ancient and Historical Monuments of Wales, October 2019 http://www.senedd.assembly.wales/documents/s95024/RCAHMW%20paper.pdf

S6. Quotes from Programme Manager "Don't Lose Your Way", Ramblers Association in 'Join the Hunt for Lost Paths', Article, Ramblers Association Walk magazine, Spring 2020 (pp.24-27). https://www.ramblers.org.uk/news/walk-magazine/current-issue/2020/february/spring-2020/dlyw.aspx

S7. Letter from Programme Manager "Don't Lose Your Way", Ramblers Association, confirming the value of "GB1900" data to the DLYW campaign (03 February 2021).