Institution: The University of Edinburgh
Unit of Assessment: 30 History
Title of case study: City Development and the Management of Urban Space

1. Summary of the impact

Research on housing and property relations, undertaken by Rodger since 2007 at the UoE, has led to the following impacts. i) Web-based mapping tools, developed as part of a research agenda and available to the general public through the National Library of Scotland's (NLS) website, have enhanced public understanding of social and spatial relations within cities in a historical and contemporary context. ii)   A programme of presentations and publications has enriched public knowledge of the historical development of the built environment, neighbourhood formation and place-making, and has made a significant contribution to the designation of Edinburgh's 'colony' developments' as Conservation Areas.

2. Underpinning research

Richard Rodger was appointed as Professor of Economic and Social History at Edinburgh University in 2007**.** Through inter-linked and funded research projects, Rodger's cross-disciplinary research has focused principally on the jurisdictional and administrative structures and processes that have shaped urban development. Collaborative research on public health and public administration in nineteenth-century Edinburgh with independent scholar Paul Laxton (Rodger and Laxton, 2013)*,* on environmental and social justice with Geneviève Massard-Guilbaud of the École des Hautes Études en Sciences Sociales, Paris, (Massard-Guilbaud and Rodger, 2011), and on representations of the city with Rebecca Madgin, University of Leicester (Rodger and Madgin, 2013) has involved historical analysis of the relationship between policy, planning and the built environment. Across these research projects, spatial patterning was identified as a crucial analytical approach for examining business locations, membership clusters, concentration of listed buildings, pollution black spots.

Rodger's conception, with technical support (Stuart Nichol of UoE), of developing Open Source mapping tools in conjunction with NLS's geo-referenced historical maps was directly connected to this research, which has generated data that was fed directly into the AHRC-funded Knowledge Exchange project 'Visualising Urban Geographies' (VUG) (2009-11). Illustrative uses of historical data were provided by Rodger and remain available through the NLS hosted website. The innovative approach adopted was to reject Geographical Information Systems (GIS) software as expensive and intimidating; the originality of the Open Source Tools is that they enable all levels of users – at schools, universities and the general public – to develop and store their own data plotted on appropriate geo-referenced historical maps of the period. Methodologically, the ability to present spatial representations of historical data in 20 minutes, measure distance between points, and to calculate the area of polygons arose directly from Rodger's analyses of nineteenth-century property relations.

Rodger's research into place attachment and community identity resulted in the publication of *Edinburgh's Colonies: Housing the Workers* (2011). The underpinning research explored the appeal of a two-storey flatted housing form that produced over 2500 homes in 150 years, none of which has been demolished and all of which were located on the periphery of the city at the time of their construction – hence 'Colonies.' Illustrated, and written in accessible language, published in paperback and competitively priced to appeal to a general public, this book revealed why this design type provide a strong degree of what, in the academic literature, is termed 'place attachment.' The research project revealed the changing gender and class characteristics of Colonies residents, but it was the development of new housing forms (as represented by a co-operative building limited liability company, founded in 1862), mortgage finance, and mixed tenure that proved distinctive and to have had wider public appeal.

3. References to the research

Publications

R. Rodger, *Edinburgh's Colonies: Housing the Workers* (Glendaruel, Argyll Publishing, 2011); to be supplied on request.

R. Rodger and P. Laxton, *Insanitary City: H. D. Littlejohn and the Report on the Sanitary Condition of Edinburgh (*1865*)* (Lancaster, Carnegie, 2013); listed in REF2.

R. Rodger and G. Massard-Guildbaud, 'Reconsidering justice in past cities: when environmental and social dimensions meet' in G. Massard-Guilbaud and R. Rodger, eds., *Environmental and Social Justice in the City: Historical Perspectives* (Cambridge, White Horse Press, 2011), 1-40; to be supplied on request.

R. Rodger and R. Madgin, 'Inspiring Capital? Deconstructing Myths and Reconstructing: Urban Environments, Edinburgh 1860-2010' *Urban History* 40.3 (2013), 507-29; listed in REF2.

Grants

AHRC Knowledge Transfer Fellowship, 2009-11, (PI: R. Rodger, with partner institution NLS), £96,000, 'Visualising Urban Geographies'. Ref No: AHRC AH/G17077/1.

AHRC Standard Research award, 2013 for 3 years, (PI: Rodger, with partner institutions Edinburgh City Council, National Library of Scotland, Royal Commission on the Ancient and Historic Monuments of Scotland, Edinburgh World Heritage Trust, James Simpson and partners (Conservation Architects)), £663,000. 'Mapping Edinburgh's Social History 1000 – 2000 (MESH) A Capital Digital Resource'. Ref No: AHRC AH/K002457/1.

4. Details of the impact

i*) Development of accessible web-based mapping tools to enhance understanding of social and spatial relations.*

For arts and social sciences academics, and even more so the general public, conventional GIS requires a steep learning curve. Instead, Open Source web-based tools specially developed by our VUG project are easy to use for the purpose of spatial analysis. These tools include: address-based plots; area-based charts or 'chloropleths'; tools to measure distance from a specific point (to explore dispersion), and distance between points; graphical representations of gradients; and calculation of hectares/acres for polygons. Each has been developed assisted by a technician and the Senior Mapping curator at the NLS (see 5.1), using a spreadsheet or database driving a Yahoo geo-coder, and overlaying grid-references on historical maps of different periods. A 'one-stop' approach means spatial data of any historical period can be represented easily and cheaply. It takes spatial analysis out of the preserve of the GIS specialist.

In 2010-12 dissemination of the mapping tools took place through the VUG website (5.4), workshops (100 people), posters and fliers (2000), and a widely publicised launch (120 people) (5.5). The VUG project also featured in the national press (*The Times* 3/12/10*),* a local newspaper (*Edinburgh Evening News* 4/12/10), and in several NLS Newsletters (called CAIRT, circulation *c.*400; 5.6) to the general public. Presentations were made to local history societies (e.g. North West [Edinburgh] Heritage Group, Borders Family History Society, Wester Hailes Community Group); U3A; and to organisations – EDINA (JISC-designated national data centre at the University of Edinburgh) (5.7); Royal Geographic Society (Scotland); library professionals (BRICMICS; UK National and University Library forum). Poster exhibitions were set up in public libraries in Perth and Edinburgh. A talk was given to the Lothian and Edinburgh Access Partnership for Schools (LEAPS), and a poster with VUG website details was sent to over 100

Scottish secondary school-teachers of history. In the HE Sector, conference papers were given in person by the PI, technician as part of his professional development, and by the map curator. Skype and live videocasts were made to public audiences and conferences in Durham, London and Edinburgh. The VUG mapping tools were presented at an Heritage Lottery Fund sponsored public event (Leicester, July 2012) where representatives from 50 different community organisations were informed about mapping data; 25 individuals took part in a lab session and successfully used the tools.

NLS data shows that the VUG website generated 48,600 unique page views (use of site page by an individual computer in any one session) between July 2010 and January 2013. More specifically there were 2,146 unique pageviews (of an average of 2 mins 31 secs) of the 'Mapbuilder'. This tool enables the user to use a geocoder to obtain latitude and longitude for their address-based data and plot it on a suitable historical map; thus the figure is evidence of actual use to map specific data. Online 'guides' have also been very popular; the guide to 'Using Quantum GIS' received 4,214 unique pageviews in the equivalent period, demonstrating active engagement with the materials and tools. The Borders Family History Society has used the tools to map poor relief recipients in Melrose and Jedburgh (5.8); the Wester Hailes Community Group has published a booklet of local history walks, with maps generated through the VUG tools.

ii) *Programme of presentations and accessible publications to enrich public understanding of the built environment.*

Published research on 'The Colonies' has contributed directly and successfully both to residents' demands for conservation status, and Edinburgh City Council planning department interest that has led indirectly to an initiative for a council housing design that draws significantly on the 'colony' design principles. Private architectural practices have begun to style their designs as 'New Colonies' as they seek to make connections to the nineteenth-century housing form as revealed by Rodger's research.

Interest in the paperback *Edinburgh's Colonies: Housing the Workers* has exceeded all expectations. In addition to presentations to local residents' groups in several 'Colony' locations, the publication sold out (2000 copies) in 12 months (publisher's royalty statement, January 2013) and it was featured in the Scottish national press (eg. *Scotsman*, 13/12/2011, 5.9). Further public lectures on the 'Colonies' in 2012 included the Edinburgh International Book Festival (220 attending); 'Doors Open' Public Lecture (100); Radical Book Fair (40); and the Edinburgh History Festival (225), through a public event organised by Rodger to bring his scholarly research to the attention of an audience of all ages and backgrounds. *Edinburgh's Colonies* has also been produced as an audio-book by the Royal Society for the Blind.

Rodger has provided significant input (at the request of a number of bodies) to discussions about the designation of the 11 Colony sites in the city as of 'Conservation Area' status. In the first instance, he was approached by individual 'Colony' area Residents' Associations for advice, which he gave, regarding Conservation Area status. Initial assessments of the 'Colonies' was carried out by 28 students in Building and Conservation at Heriot-Watt University (as well as University of Edinburgh planning students); *Edinburgh's Colonies* was the course reader. Their practical design work was presented to the public in the Council's exhibition space. At the request of Edinburgh City Council, Rodger recorded a videocast on 'Colonies' research stressing the significance of neighbourhoods in relation to community building; the videocast was promoted as part of a consultation process organised by the Council (5.10). The designation for conservation status of eight of the 'Colony' developments was finally approved by the City Council's Planning committee, 6 December 2012 (5.11). The Principal Practitioner with Edinburgh City Council's Planning Department has commented: 'Your book, *Edinburgh's Colonies,* and your personal involvement in the Council's video on the Colonies which was used as part of the community consultation, were invaluable to the Council's assessment of the Colony developments in Edinburgh for conservation area status' (email to Rodger, 6 March 2013) (5.2).

Rodger was also approached by the Cockburn Association (Edinburgh Civic Trust) for comments on Conservation Area status, as well as comments as part of historical input to the Scottish Government's consultative paper, 'A Policy on Architecture and Place-making for Scotland: Public Consultation 2012'. (5.3). At the request of the City's Planning Department, Rodger ran CPD sessions in April 2013 (5.3); he has also delivered CPD sessions on the Colonies' design principles [text removed for publication] and Architects. Both events addressed the relationship between design features and community and neighbourhood.

5. Sources to corroborate the impact

People

5. 1 Senior Map Curator, National Library of Scotland: to corroborate collaboration with NLS to produce VUG.

5.2 Principal Practitioner, Built & Natural Heritage, Services for Communities, City of Edinburgh Council: to corroborate Rodger's impact on the designation of the Edinburgh colonies as of conservation area status.

5. 3 Director, Cockburn Association: to corroborate Rodger's work with the Cockburn Association in providing comments for consultation regarding conservation area status.

Web sources

5.4 Visualising Urban Geographies website (hosted by NLS): http://geo.nls.uk/urbhist/ or http://tinyurl.com/pwnxc2a

5.5 Launch of VUG website (Feb 2011): http://www.youtube.com/watch?v=NoJYO5FsHZ4

5.6 CAIRT Newsletters 17 and 18: http://www.nls.uk/collections/maps/collections or http://tinyurl.com/qgknamj

5.7 Launch of EDINA's JISC funded project (Nov 2010): http://www.youtube.com/watch?v=lXRx2r6WHj4 and http://www.flickr.com/photos/addressinghistory/5189529382/

5.8 Borders Family History Society blog, including poor law mapping project using VUG: http://blog.bordersfhs.org.uk/2011/03/visualising-urban-geography-launch.html or http://tinyurl.com/oldzg93

5.9 *Scotsman* article on Edinburgh's Colonies (13 Dec 2011): http://www.scotsman.com/news/new-book-about-edinburgh-s-colonies-follows-enterprising-group- of-stonemasons-1-2005919 or http://tinyurl.com/nlpv6jb

5.10 Videocast on Colonies research, used as part of Council's consultation process: http://www.edinburgh.gov.uk/info/1220/conservation/1770/edinburgh_colonies_character_apprais al s/1 or http://tinyurl.com/q5szoy2

5.11 Edinburgh City Council, Report on the Consultation on the Designation of Edinburgh's Colonies as Conservation Areas (which references Rodger's research). http://www.edinburgh.gov.uk/downloads/file/9421/colonies_conservation_areas_6_december_co m mittee or http://tinyurl.com/orxwn6o