

‘Navigable Waterways of England and Wales 1600-1948 time dynamic GIS shapefile documentation’
by Max Satchell

This dataset was created by Max Satchell between 2006 and 2016 under a series of grants held by Dr Leigh Shaw-Taylor.¹ Initially the aim was to produce GIS snapshots of rivers and canal network at four dates c. 1820, 1851, 1861 and 1881 which was achieved thanks to generous funding from the ESRC from 2006 and 2009. Generous funding from the Leverhulme Trust in 2009-2012 enabled the dataset to extended back in time to c.1600 and made time dynamic i.e. the GIS captures episodes were a waterway was navigable or not for each year from 1600 to 1948. From 2014-2016 further upgrades and making the waterways GIS suitable for network analysis were made possible by the Leverhulme funded project 'Transport , urbanisation and economic development in England, c.1670-1911'.²

Method

Initially Owen Tucker of the Cartography Unit of the Department of Geography under the direction of Max Satchell concentrated digitising the major navigable rivers of England from geo-rectified scans of the Ordnance Survey 1:10560 first edition. Zoe Crisp under the direction of Max Satchell produced a digitisation of all waterways shown on Richard Dean's *Inland Navigation. A Historical Waterways Map of England and Wales*. The c.1:536,448 scale of this map meant that in itself, it was not sufficiently detailed to produce a high standard GIS. As a consequence, the Dean digitisation as a guide to locate the historical waterways on geo-rectified scans of the Ordnance Survey first edition 1:105606 inch map series (surveyed 1840-1890), and the waterways were digitised directly from this map series For the modest number of waterways which had disappeared before being surveyed by the Ordnance Survey 1:10560 series earlier mapping principally sheets 1-90 of the Ordnance Survey 1:63,360 Old Series (surveyed 1789-c.1840). This work was done by Max Satchell using each of Hadfield regional volumes in succession. The regional volume for the South-West and part of the South and South-east volume were done by Ellen Potter with checking and further editing by Max Satchell.³ In every instance emphasis was on establishing as far as possible when each section of the waterway was in commercial use. In addition to the sources already mentioned, usage dates were derived from T.S. Willan, *River Navigation in England 1600-1750* (1936), the *Royal Commission on Canals and Waterways*, BPP, 11 vols, (1906-1911) and H. de Salis, *Bradshaw's Canals and Navigable Rivers of England and Wales* (1904). Where available secondary studies of particular regions and individual waterways were also consulted. Opening, closing and commercial disuse dates for each section of waterway linked to the GIS polyline were entered in an excel table. Gill Newton used this to create an Access database which enabled the network of navigable waterways for any given year from 1600 to 1948 to be generated.

Citation

Satchell, M., Newton, G, and Shaw-Taylor, L., 'Navigable waterways of England and Wales Time Dynamic GIS 1600-1948' (2017). A description of the dataset can be found in Satchell M., 'Navigable Waterways of England and Wales 1600-1948 time dynamic GIS shapefile documentation' available at <http://www.campop.geog.cam.ac.uk/research/projects/occupations/datasets/documentation/navigablewaterwaysofenglandandwales1600to1948dynamicgisdraftdatasetdocumentation.pdf>

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² Grant number needed here

³ The *Canals of the British Isles* series by Charles Hadfield et al., 11 volumes (1967-1985), T.S. Willan, *River Navigation in England 1600-1750* (1936), the *Royal Commission on Canals and Waterways*, BPP, 11 vols, (1906-1911) and H. de Salis, *Bradshaw's Canals and Navigable Rivers of England and Wales* (1904) but where available secondary studies of particular regions and individual waterways were also consulted. The accompanying database includes a variety of attributes including opening, closing and commercial disuse dates for each section of waterway. This enables the network of navigable waterways for any given year from 1600 to 1948 to be generated.