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English jurisdictions mapping project

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THE ENGLISH JURISDICTIONS MAPPING PROJECT

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Abstract

The English Jurisdictions Mapping Project (EJMP), designed by the British Reference Unit of the Family History Library in Salt Lake City, Utah, was initially designed in 1999 as a paper publication of 1851 English county maps detailing ecclesiastical parishes with transparent overlays showing overlapping jurisdictions. This original intent has since evolved into an electronic format intended to assist genealogical researchers in understanding the variety of civil and ecclesiastical jurisdictions and their records within the context of topography and geography, through time. At present this project has completed:

1. A GIS prototype of seven counties (Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Huntingdonshire, Norfolk and Suffolk)
2. Data collection and jurisdictional determinations for future application of the remaining thirty-three counties in England.

This mapping utility will greatly simplify research by consolidating data from multiple published sources into a single resource, thus removing the necessity for users to purchase or access information from countless websites or libraries. Once a location is identified, this product will allow the user to retrieve embedded data such as catalog entries, indexes, record location information, relevant local histories, published family histories, and other such genealogically important finding aids. Still necessary is the development of a user-friendly interface enabling quick and intuitive access to the embedded data.

Context

The tracing of family history is one of the most popular international hobbies. In the process of conducting genealogical research it is almost always found that even the most deep-rooted families migrated from place to place through successive generations. This fact can often frustrate researchers forced to deal with the complexity of new and strange sounding locality names, unfamiliar jurisdictions and their records. Frustration increases to bewilderment when family migrations cross international borders and oceans, thus introducing not only changes in political systems and jurisdictions, but also unfamiliar languages and cultures. The English Jurisdictions Mapping Project, currently under development by the Family History Library of The Church of Jesus Christ of Latter-day Saints, in Salt Lake City, Utah, is designing an interactive map-based computer product to dramatically simplify access to the jurisdictional information needed for genealogical research.

Understanding place and geographical context is critical in the genealogical research process. It is jurisdictions, be they civil or religious, from which much of the data or records were produced which identify individuals and families throughout history. In other words, in order to retrieve needed records a researcher must identify the

geographical context of place and jurisdiction in which their ancestor lived. As stated above, the records describing events in even one lifetime might be produced in different languages by different jurisdictions during the generational migration process. Maps describing assorted types of jurisdictions are therefore a basic resource to genealogists. Even topographical features on maps can be important in lending clues to migration and jurisdiction. Features such as mountains, rivers, bridges and roads influenced the lives of our ancestors much more than they do now.

When completed, these English GIS county maps will allow users to not only identify the relevant jurisdictions for their research, but also instantly connect them to archival and library websites, online catalog entries, indexes, and perhaps even relevant digitized primary historical records.

The Project

The English Jurisdictions Mapping Project began in late 1999 when the British Reference Unit of the Family History Library determined that a map-based resource might better serve its patrons in easily accessing relevant genealogical records. The original paper publication was envisioned as parish maps upon which a series of transparent overlays would display distinct and overlapping jurisdictions.

The first decision made by the project team was to determine the year on which to base the map presentations. After careful consideration, 1851 was chosen for the following reasons:

1. There is an abundance of published source material to correctly define jurisdictions.
2. It was a national census year.
3. The majority of parish boundaries changed little before this date.
4. Most major cities had not yet grown to the size of proliferating more parishes to serve increasing populations.
5. A significant wave of migration of early Latter-day Saints converts from England to Utah was just beginning.
6. This time period is just beyond current living memory and therefore important and profitable for research efforts.

The next production step was to create and populate a data table for each of the first seven counties identifying all ecclesiastical parishes as defined in 1851 with their associated jurisdictions. The county of Norfolk was chosen as the pilot because it provided both enough challenge in terms of numerous parishes and limited complexity in dealing with only three contiguous county borders. Microsoft Word was chosen for this table construction due to its compatibility with in-house printing presses.

With the first table completed, the next phase was to draw a basic county map showing each parish in Norfolk using Adobe Illustrator software. The transparent overlays were created with appropriate register points/marks to ensure accuracy in presenting overlapping jurisdictions. By mid-2001 Norfolk, Suffolk and Cambridgeshire were completed and tested to rave reviews from both professional and novice genealogical researchers.

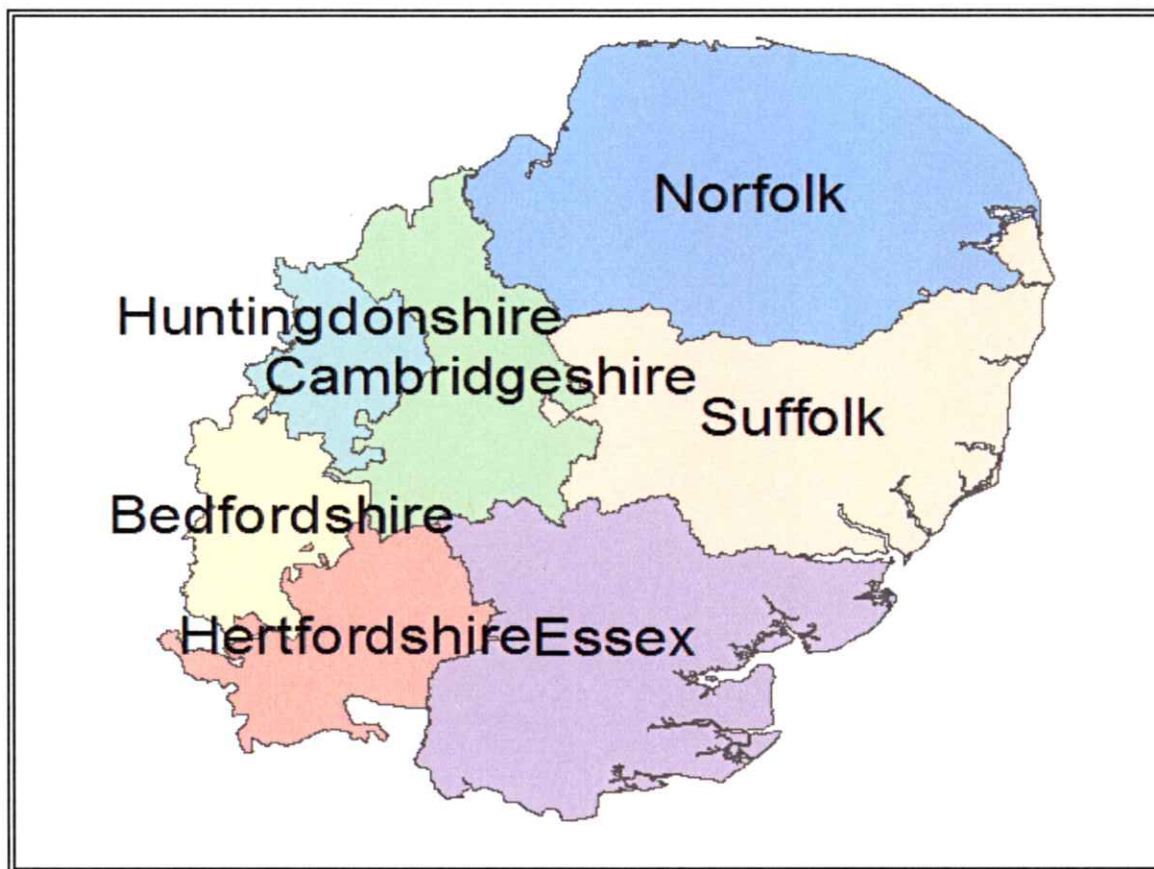


Figure 1: The first seven counties chosen for the English Jurisdictions Mapping Project

At this point project plans took a dramatic turn. During a research trip to England one of the Library's British reference consultants discovered that the History Data Service of the UK Data Archive at the University of Essex had produced a set of English parish maps on CD-ROM in January 2001.

The electronic map uses as a base the 115 sheets of the Ordnance Survey one inch to one mile (1:63,360) New Popular Edition maps (1945-8) with National Grid. It contains the boundaries of about 18,240 places and is arranged as three electronic 'layers'.¹

Here was a ready-made product duplicating the expensive and tedious labor of drawing parish maps for the Family History Library's project. Contact with the UK Data Archive at the University of Essex was made immediately and permission obtained to use their product as the basis for the paper-based genealogical maps.

¹ Roger J. P. Kain and Richard R. Oliver, *The Historic Parishes of England and Wales, An Electronic Map of Boundaries before 1850 with a Gazetteer and Metadata* (Colchester: History Data Service, UK Data Archive, 2001), p. 6.

The pre-1850 definition of the electronic maps matched almost perfectly with the 1851 designation already chosen by the project team. However, History Data Service map contained some jurisdictions superfluous for the Library's product, such as townships and civil parishes, which did not produce records of relevance to family historians. Using Adobe Illustrator, a graphic designer deleted unnecessary boundaries and modified others according to project locality criteria. The layers of jurisdictional boundaries include:

1. Basic ecclesiastical parish
2. Chapelry or extra-parochial place
3. Non-Church of England (Nonconformist) denominations in the parish
4. Civil registration district
5. Hundred
6. Probate court
7. Market towns

The University of Essex electronic map accelerated project production and allowed a level of detail not previously possible. In November 2002 the whole direction and potential of the project again dramatically shifted when a library volunteer with mapping expertise suggested the application of GIS technology. The potential of producing computer-based maps with links to web-based resources persuaded the project team to shift efforts in this new direction.

The Project approached Gateway Mapping, Inc., one of the first GIS consulting firms in Utah, to investigate the feasibility of transferring the graphic images to a GIS format. There was no software available to do this, so new software was developed to first convert Adobe Illustrator maps to Computer Aided Design (CAD) format, and then to ArcView, a GIS software. This new software can link data to specific points, lines, or enclosed polygons on a map. The EJMP required that jurisdictions be shown as polygons encompassing the appropriate space on the maps.

Unfortunately the dual image conversion process from Adobe Illustrator to ArcView introduced digital 'noise' in the electronic maps. Parishes with overlapping boundaries, and those with unenclosed or unfinished boundaries, as depicted in the illustration below, were not defined polygons. Points or pixels of deleted borders introduced additional digital noise within some parish polygons, thus rendering them unusable. Gateway Mapping, Inc. successfully cleaned up this noise by manually and painstakingly completing or erasing pieces of the polygon boundaries, sometimes on a pixel level.

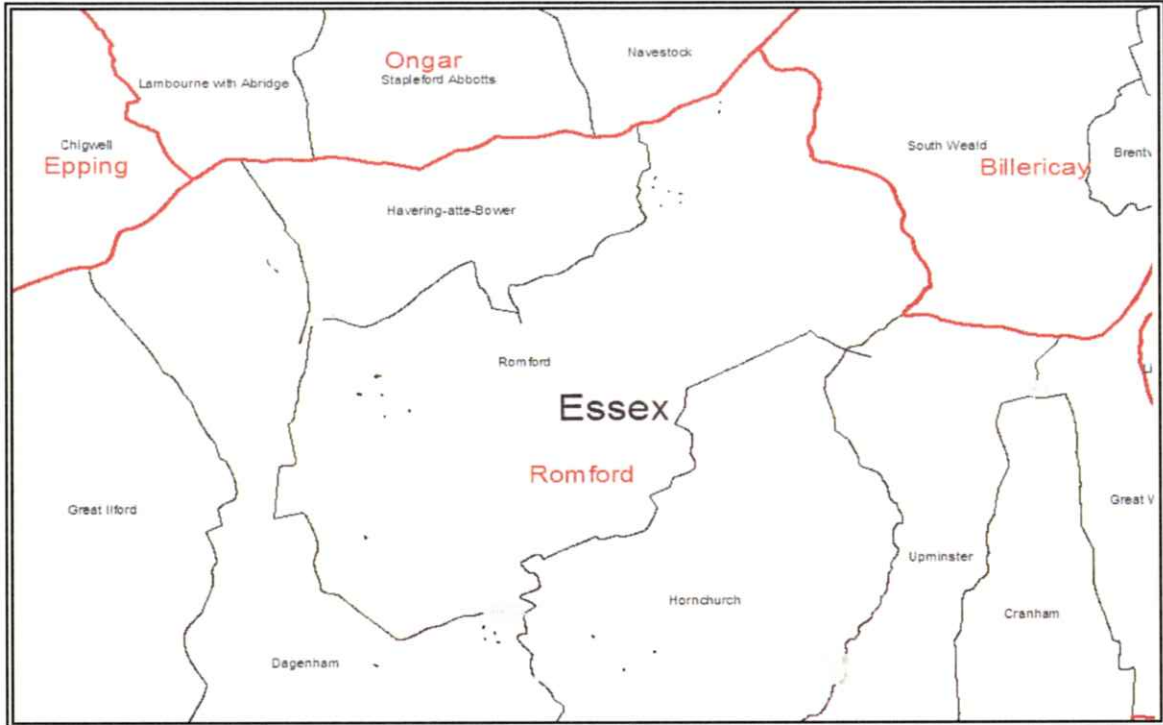


Figure 2: Examples of digital noise introduced in the software conversion process, including unenclosed polygons, overlapping lines and leftover pixels.

The map images were only one set among several elements requiring software conversion from Microsoft Word to Microsoft Excel, which is more compatible with GIS software. The new tables needed specific formatting to enable the ArcView software to create jurisdictional layers. During this process the tables were enhanced to allow the creation of additional layers of jurisdictional polygons.

England has many place names duplicated within the same county, thus requiring each parish to have a unique identifier. Using ArcView, Gateway Mapping, Inc. next linked the polygons to the appropriate identifier. Project personnel reviewed the map images to check for mistakes in the linkages. A specific challenge included searching for detached parishes as illustrated below.

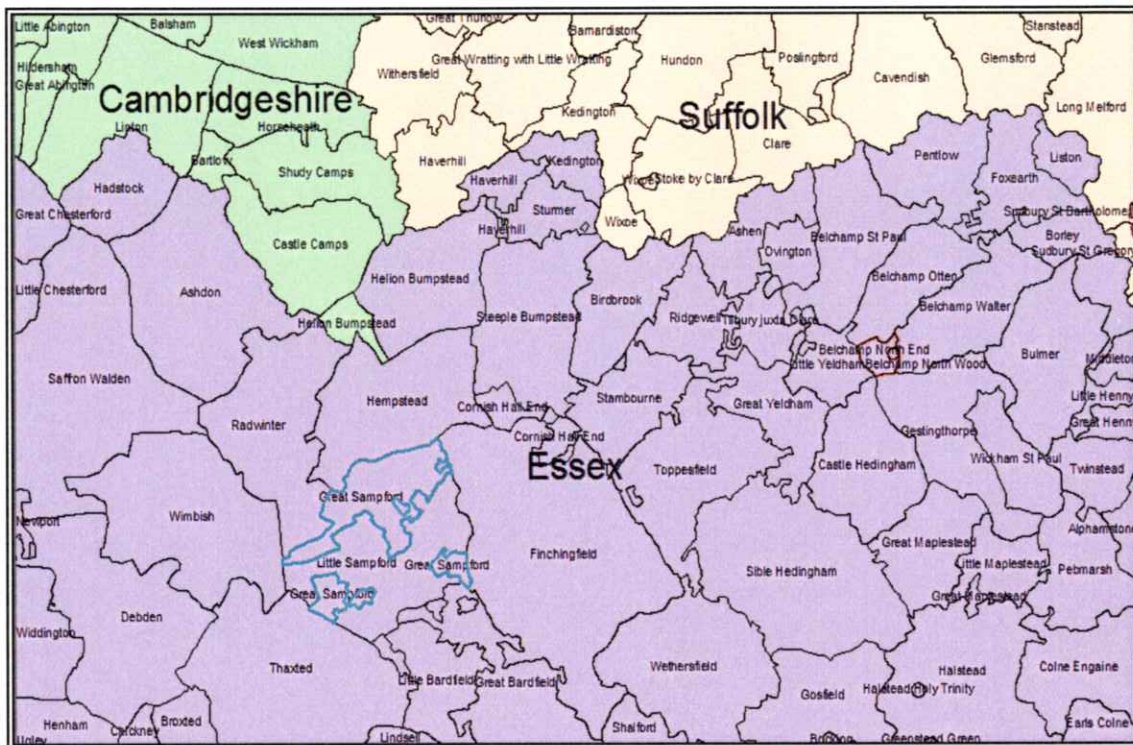


Figure 3: The polygons outlined in blue depict the three pieces of the detached parish of Great Samford in Essex. Each of these pieces required linkage to the same unique identifier in the data table.

In such cases it was necessary to join each separate polygon to one parish identifier so that when any piece of a detached parish is selected on a map, all pieces will be linked in the presentation.

The parish boundaries on the map, combined with the metadata in the table, provided the basis upon which the new jurisdictional layers were created. New polygons were developed for the maps by incorporating the smaller parish boundaries in building larger jurisdictional boundaries, such as for civil registration districts. Again, as with detached parishes, county and parish borders did not always align perfectly with the new jurisdictions. Each of these new polygons also had to be checked manually to ensure accuracy between the data in the table and the drawing.

Of great significance to genealogical researchers is the ability to identify a jurisdiction on these computer maps, no matter how large or small, click on it and view the embedded data. This metadata might include in the future:

- Parish register name indexes and associated digital images
- Catalog entries with hyperlinks to digitized original and published sources
- Digitized census images
- Local publications and photographs
- Websites specific to the jurisdiction
- Online historic directories
- Collaborative genealogical extraction projects

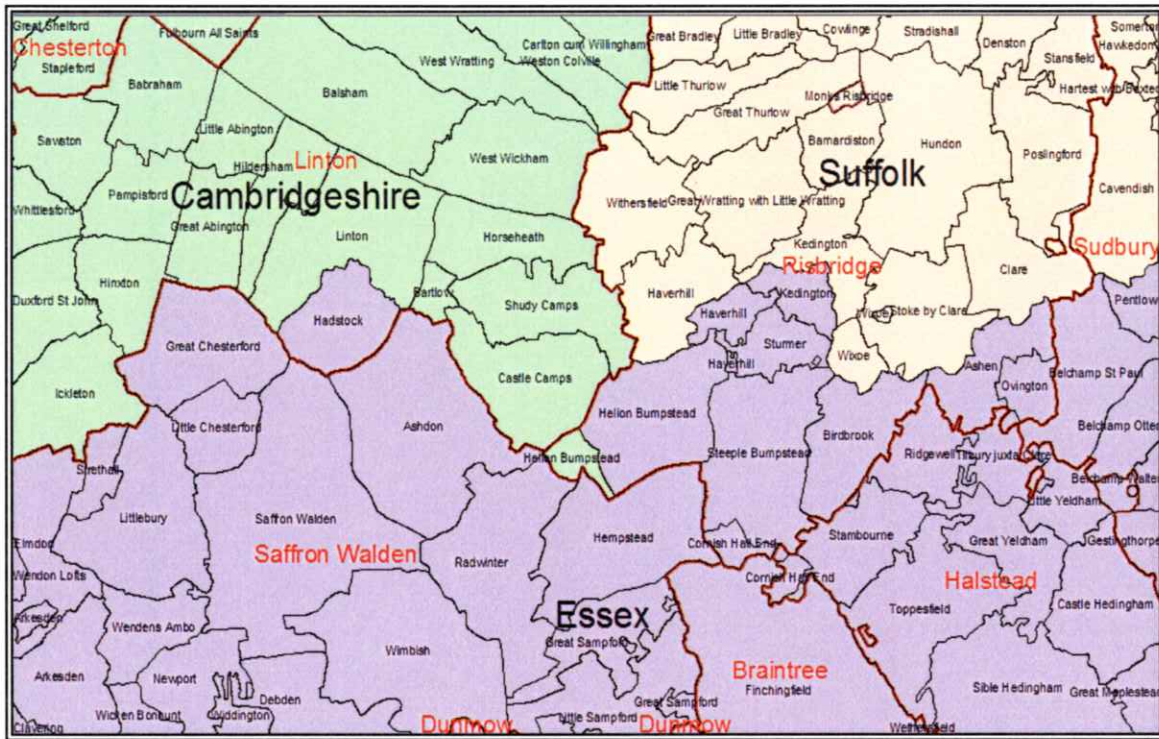


Figure 4: Civil Registration boundaries are displayed in red. Note that these boundaries don't necessarily imitate county or parish boundaries.

City and county maps were separate files in the History Data Service's electronic map. The EJMP has integrated the city maps within their parent county maps seamlessly, thus allowing the user to zoom in to view details down to the street level.

The finished EJMP product will include all parish boundaries with:

- Type of place (parish, chapelry or extra-parochial place, etc.)
- Changes to parish or chapelry boundaries prior to 1851 (including the year the parish was created from or combined with another parish)
- Year extant Church of England parish registers and bishop's transcripts began
- Non-Church of England (Nonconformist) denominations in the parish
- Civil registration district
- Hundred or wapentake, borough, or liberty
- Probate court and decision table giving prioritized listing of courts creating records for a parish
- Church of England diocese
- Rural deanery
- Poor law union
- Market towns
- Villages and hamlets
- Other jurisdictions, records and information yet to be defined
- 1850 Ordnance Survey

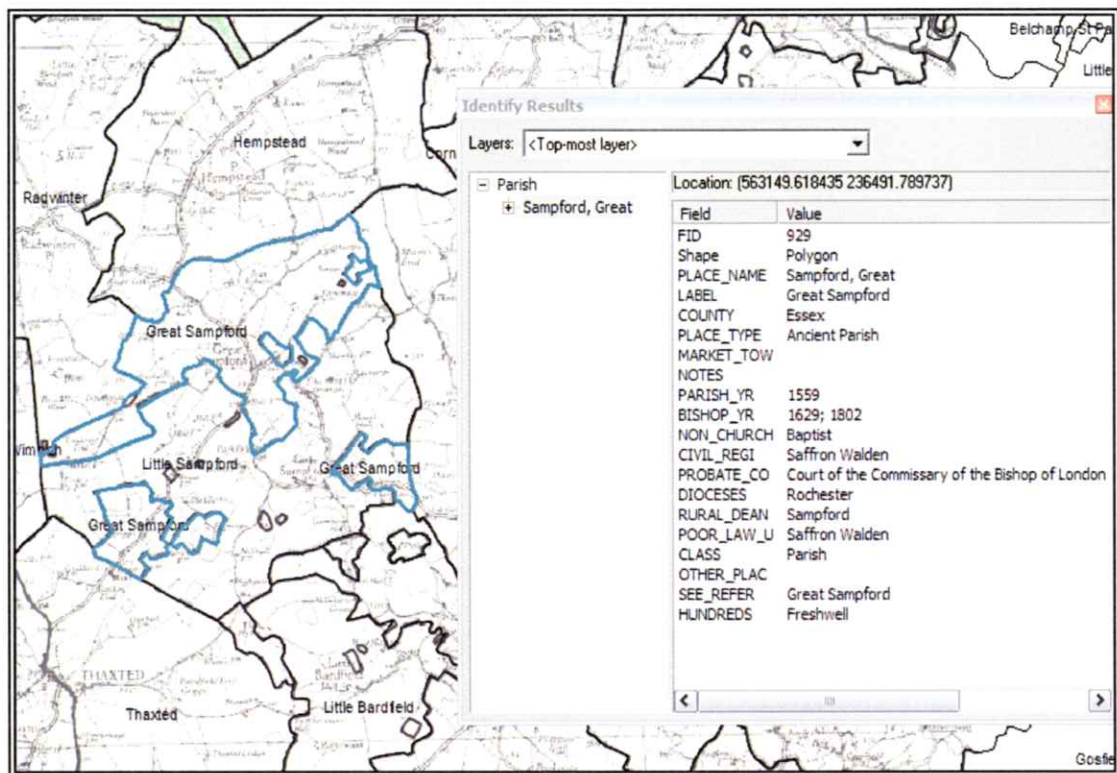


Figure 5: Metadata for Great Sampford parish in Essex. No user interface currently available.

Future Development

Although powerful, the GIS software used to present the digitized maps is not user friendly. A user interface must still be developed which will allow novice users of this product intuitive access to the data. In its present format, the county maps require training and experience in order to navigate the many layers and features of the software. It is apparent that building this kind of digital resource is very labor intensive and expensive. Expanding this map product beyond the borders of England to Wales, Scotland and Ireland are the next logical projects. With its introduction to the genealogical community, eager researchers everywhere will quickly demand this technology be applied to jurisdictions around the world.

Data Sources for the Maps

Following are some of the general sources used to determine jurisdictional boundaries in England. Many more specific sources were used to pinpoint boundaries from locally focused gazetteers, maps and other publications.

Camp, Anthony J. *Wills and Their Whereabouts*. 4th ed. London: Anthony J. Camp, 1974.

GENUKI Church Database. <http://www.genuki.org.uk/big/parloc/search.html>

Gibson, J.S.W. and Else Churchill. *Probate Jurisdictions: Where to Look for Wills*. Baltimore, Maryland: Genealogical Publishing Company, c2002.

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- New British Atlas: being a complete set of county maps, on which are delineated all the roads, cities, towns, villages, rivers and canals; together with correct general maps of England, Wales, Scotland and Ireland*. London: Printed for John Stockdale, 1805.
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- Youngs, Frederic A. *Guide to the Local Administrative Units of England*. 2 vols. London: Offices of the Royal Historical Society, 1980, 1991.
- Wilson, John Marius. *The Imperial Gazetteer of England and Wales*. Edinburgh: A. Fullarton & Co., [1871].