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‘A Digital Archive of Ireland’s Ordnance Survey’: Connecting Collections for Nineteenth-Century Ireland

DISCUSSION PAPER

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ABSTRACT

A three-year digital humanities research project, a collaboration between Queen’s University Belfast (QUB), the University of Limerick (UL) and the Digital Repository of Ireland (DRI), gathered historic Irish Ordnance Survey (OS) maps and texts into a single freely accessible online resource for academic and public use. ‘A Digital Archive of Ireland’s Ordnance Survey’ was launched in June 2024 and is now available online <https://dri.ie/os200/spotlight/os200>.

The First Edition Six-Inch OS maps with the OS Memoirs, Letters and Name Books were held in several GLAM institutions and public organisations, including Queen’s University Belfast Map Library, the Royal Irish Academy, Tailte Éireann (formerly the Ordnance Survey of Ireland), Ordnance Survey of Northern Ireland, National Library of Ireland (NLI), National Library of Scotland (NLS) and Public Records of Northern Ireland (PRONI). The diverse nature of ownership and metadata presented several unique challenges and this paper will discuss how the project managed ownership of data, copyright and licensing. The final digitised sources were preserved in the Digital Repository of Ireland (DRI).

A key issue for this project was its cartographic nature. The emphasis on location data and the need for a web map interface created a special case study in the integration of spatial metadata within the repository. Issues arose surrounding the linking and correlation of spatial data across modern political boundaries as well as the historical development of these boundaries. Further challenges developed due to the high spatial resolution of the project’s location data, which presented over 60,000 location points.

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1. CONTEXT AND MOTIVATION

Nineteenth-century Ireland is well recognised as the first country to be mapped systematically in its entirety at the large scale of six-inches-to-one-mile. It was the Ordnance Survey (OS) that began this process in June 1824 and involved British military-trained surveyors who gathered geographical, archaeological, and toponymical information across Ireland, including local customs, antiquities, place-names, and topographical features (Andrews, 1976; O’Cionnaith, 2024). The historic records of the OS capture the pre-famine landscape in Ireland, of localities as they were in the 1820s–30s, on a scale previously unknown, detailing farming practices, language, folklore, trades, and religion. The records of the OS also reveal the lives and activities of those employed in surveying and mapping Ireland.

In addition to providing us with valuable historical and topographical information about nineteenth-century Ireland, these maps provide unique insights for Ordnance Survey and state-sponsored mapping more broadly. Many early records of the OS in Britain were destroyed during WWII meaning the Irish OS provides a valuable window to the surveying processes and practices employed by the British military and the local operations that enabled surveyors to map Ireland to the large scale of six-inches to one-mile (Seymour, 1980; Owen & Pilbeam, 1992). The accounts of the surveying process show us how the surveyors effectively operationalised and exercised their work through localised actions and activities ‘in the field’. Led by Thomas Colby, the OS operations in Ireland had a wider impact and influence beyond Ireland, on British surveying and map-making in other parts of the globe (Lilley, 2019). For example, Colby’s measurement of the Lough Foyle Baseline (1827–28) attracted the attention of George Everest, who then adopted what he called Colby’s ‘beautiful system’ for the Great Trigonometrical Survey of India (Edney, 1997: 247). With their detailed townland boundaries and calculated areas, and local place-names set down in regularised forms, the six-inch maps made an enduring impact on government, politics, society, and economy of later nineteenth- and early twentieth-century Ireland.

1.1 SCOPE OF THE PROJECT

To explore how Ireland was mapped by the OS two hundred years ago, a three-year cross-disciplinary research project—‘OS200’—was created in 2021, jointly funded by Research Ireland and the Arts and Humanities Research Council (AHRC). It formed part of a wider €6.5 m programme of bilateral research which brought together world-leading expertise in the digital humanities across the UK and Ireland (OS200, ‘Digitally Remapping Ireland’s Ordnance Survey Heritage’, 2024). OS200 was led by Principal Investigators Dr Catherine Porter, University of Limerick (UL), and Prof. Keith Lilley, Queen’s University Belfast (QUB), and supported by researchers located at each university. The project’s underlying rationale was to reconnect the otherwise disparate records of Ireland’s first OS – its maps and texts – and to do so digitally. A key outcome of this digital approach was to create a single freely accessible online resource for academic and public use. An online digital platform and archive would be created that used geolocated scans of OS six-inch maps providing a spatial basis for linking and indexing historic OS textual sources, including OS memoirs, letters, and name-books. The idea was to allow researchers and users to uncover otherwise hidden and forgotten aspects of the life and work of those employed by the OS and facilitate an exploration of the complex histories associated with the survey and its legacies. These impacts can be witnessed in the Irish landscape to this day. Here, OS200 sought to construct an ‘ethnography’ of the OS in Ireland, looking in detail at the movements of individuals ‘in the field’, as well as their links with others, informants, and other OS personnel, studying the timing and geography of these movements and the unfolding of the survey across Ireland from the 1820s through into the 1840s.

1.2 DIGITAL MAPPING PROJECTS

Interactive digital mapping projects, where the user can probe historical maps and pose their own research questions, have been facilitated through the growth and development of spatial technologies or Geographic Information Systems (GIS). Metadata, contained within galleries, libraries, archives, and museums (GLAM) record systems, can become a crucial avenue for connecting a variety of materials to location points on maps through GIS. This

allows maps to be connected with a wealth of additional information, including historical data and contemporary analysis, prompting users to pose a wealth of new questions about the sources. This project drew on a variety of earlier digital mapping projects to develop its methodology. The Digital Atlas of Derry-Londonderry (Lilley et al., 2013) was launched in 2009 as a collaboration between the Royal Irish Academy, Derry City Council and the School of Geography, Archaeology & Palaeoecology at Queen's University Belfast. The project drew on the primary research and analysis contained within the 'Irish Historic Towns Atlas (IHTA), no. 15 City of Derry~Londonderry' (Thomas, 2005). The project created a digital interactive map that showed representations of the historical city on modern maps that the user could browse and navigate allowing them to view the growth and evolution of the city over several centuries. This methodology has been followed for two subsequent IHTA maps and in 2020 the Digital Atlas of Dungarvan (Martin, 2020; Murphy et al. 2020) utilised StoryMaps to harness the data points in the print 'Irish Historic Towns Atlas, no. 30, Dungarvan/Dún Garbhán' by John Martin to build an interactive resource. The resources included video tutorials to help navigate the maps. The 'Looney Map of County Tipperary' digitally pieced together nine historic maps from the Looney Collection held by the University of Limerick. In reuniting the maps digitally, the user can undertake a county-wider exploration of Tipperary in c. 1800 (Porter et al., 2022b).

The 'Inventor of Britain: Mapping Llwyd' project takes a similar approach but with a different investigative approach. While users can explore Llwyd's Cambriae Typus map of Wales, the project team deployed two image viewers to encourage comparison between Cambriae Typus, first published in 1573, and Saxton's Proof Map of Wales which was compiled in 1580 (Inventor of Britain, 2024). The collaborators of the 'Machines Reading Maps' project 'envision a future where map collections can be searched based on their spatial content, similar to the way that digitised newspaper collections enable full-text searching across scanned pages' (McDonough & Vital, Machines Read Maps, 2023). Their project has four aims including to 'read map content at scale using tools for text, not images', to 'integrate place entity linking and image annotation tools to make text on maps meaningful', to 'improve map discovery and collection histories at cultural institutions' and finally to 'analyse text on maps'. The project PIs, McDonough and Vitale, drew attention to the fact that 'maps constitute a significant body of global cultural heritage, and [as] they are being scanned at a rapid pace' they are 'an almost entirely untapped source for understanding how knowledge of place is constructed' (McDonough & Vital, Machines Read Maps, 2023).

1.3 CHALLENGES

Since OS200's aim was principally to reunite OS records there were some copyright, organisational, digital, and logistical challenges to address throughout the project. With the source material—in varying digital states—residing in several different GLAM institutions, which had their own disciplinary and organisational concerns, an added complexity was working across jurisdictional and state boundaries. Moreover, the scale of the material being gathered, and the metadata that was needed to digitally archive this material, presented a logistical challenge. A key concern was to ensure project digital data outputs would be sustainable beyond the lifetime of the project. With Geographical Information Systems (GIS) and spatial data such a key element of the project's work, there was a particular need for the preservation of shapefiles within a digital repository. Creating a dynamic exhibition platform that allowed the records to be investigated by both trained researchers and the public also raised challenges, not just in terms of design but also functionality. The digital corpus created through the OS200 project was launched in June 2024 to mark the bicentenary of the OS in Ireland and is a free open access resource. This article explores how the project team worked to overcome those challenges to create this innovative resource.

(2) DATASET DESCRIPTION

OS200 gathered historic Ordnance Survey (OS) maps of the island of Ireland and texts to form a single freely accessible online resource for academic and public use. This digital platform reconnected the First Edition Six-Inch Maps with the OS Memoirs, Letters and Name Books. The data used to build this resource are preserved in the Digital Repository of Ireland, a

REPOSITORY NAME

The Digital Repository of Ireland

1.

DOI

<https://doi.org/10.7486/DRI.cn700x328>

Object name

Ordnance Survey First Edition 6-inch Map Sheet Information

Type

Collection

Format names and versions

Various, e.g., ASCII, CSV, Autocad, EPS, JPEG, Excel, SQL, etc.

Creation dates

2022–2024

Dataset creators

OS200

Language

English

License

These works have been digitised and made available by the OS200 project. Please credit OS200 when making use of the images or metadata.

Publication date

2024-06-21

2.

DOI

<https://doi.org/10.7486/DRI.th840r454>

Object name

Ordnance Survey Letters

Type

Collection

Creation dates

2022–2024

Dataset creators

OS200, Royal Irish Academy

Language

English

License

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Publication date

2024-06-21

3.

DOI

<https://doi.org/10.7486/DRI.w376h139n>

Object name

Ordnance Survey Memoir Drawings

Type

Collection

Creation dates

2022–2024

Dataset creators

OS200, Royal Irish Academy

Language

English

License

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Publication date

2024-06-21

4.

DOI

<https://doi.org/10.7486/DRI.cz313n17c>

Object name

Ordnance Survey Memoirs

Type

Collection

Creation dates

2022–2024

Dataset creators

OS200

Language

English

License

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Publication date

2024-06-21

5.

DOI

<https://doi.org/10.7486/DRI.p841pf89b>

Object name

Ordnance Survey Name Books

Type

Collection

Creation dates

2022–2024

Dataset creators

OS200, NLI

Language

English

License

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Publication date

2024-06-21

3. METHODS

For OS200, the principal early Irish OS records can be grouped into five different types: 1. First Edition six-inch maps; 2. surveyor's letters; 3. Memoirs; 4. Memoir drawings; and 5. Name Books. The maps are the 'county series', covering every county in Ireland at 1:10,560 scale (OS200. *Ordnance Survey First Edition 6-inch Map Sheet Information*; see [Figure 1](#)).

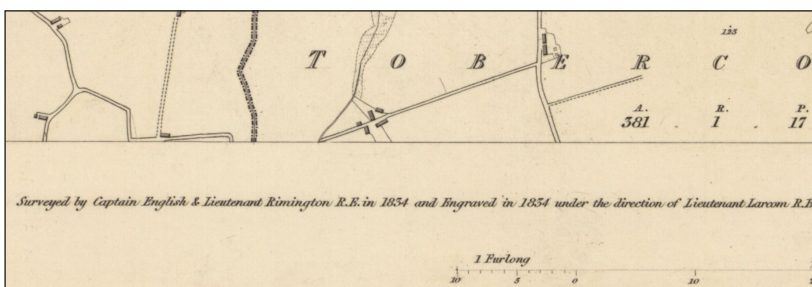


Figure 1 Marginal information on County Down sheet 37, naming the surveyors as Captain English and Lieutenant Rimington (Royal Engineers). 'A.R.P.' written underneath the townland name (Tobercorran) indicates the calculated townland area (in acres, roods, perches). Surveyed: 1834, engraved: 1834, printed: 1837. Size: map 61 × 92 cm (ca. 24 × 36 inches), on sheet ca. 70 × 100 cm (28 × 40 inches). Reproduced with the permission of the National Library of Scotland (<https://maps.nls.uk/view/246835403>).

The Ordnance Survey letters comprise correspondence between John O'Donovan (1806–1861) and other place-name and antiquity-focused personnel employed on the survey and OS head office staff based in Dublin. Letters exist for 29 Irish counties, with exceptions being

Counties Antrim, Cork, and Tyrone (OS200, RIA, 2024 *Ordnance Survey Letters*). The Memoirs provide a narrative account of each of the localities being mapped by the OS and contain information detailing aspects of local people and places, an expensive undertaking at the time the OS curtailed the collection of material for the Memoirs, which means as a source they are limited to northern counties (OS200, RIA, *Ordnance Survey Memoirs*). As well as the textual descriptions, the Memoirs also included drawings, sketches illustrations made on-site for some localities (OS200, RIA, 2024, *Ordnance Survey Memoir Drawings*). Lastly, gathering from written sources and local informants, the OS recorded place-names in name-books. Covering the whole of Ireland, these important records included spellings of names, orthography, Irish forms, and a translation, as well as additional topographic and observational information about the townlands (OS200, NLI, 2024, *Ordnance Survey Name Books*).

3.1 COPYRIGHT AND LICENSING

The first challenge presented to the project was the complexity of gathering the materials that formed the foundation of the first Ordnance Survey. In attempting to compile the OS source materials from various GLAMs, this challenge became particularly evident when the project sought to secure agreements and permissions for the inclusion of collections in the online resource. While all core ‘institutional partners’, including the Royal Irish Academy (RIA), Public Record Office of Northern Ireland (PRONI), Digital Repository of Ireland (DRI), National Library of Ireland (NLI), and later the National Library of Scotland, provided letters of support as part of the 2021 project funding application, the project faced the task of securing more detailed memoranda of understanding and participation agreements regarding how materials would be gathered and used.

The project team worked closely with each partner on a case-by-case basis, tailoring the agreements to meet each organisation’s requirements and align with GLAM best practices. This collaborative approach between archival staff and project investigators resulted in mutually beneficial agreements regarding the project’s outputs. For example, this was evident in the case of the Reverend Michael O’Flanagan OS letter transcripts, housed at the RIA Library. The Royal Irish Academy (RIA) granted the project access to the collection and its related Academy metadata, with the understanding that digitised copies of the collection objects would be provided to the Academy in return. The historic maps featured in the online map interface were made available under Ireland’s National Mapping Agreement with Tailte Éireann, which permits non-commercial and non-profit use of the historic Ordnance Survey maps. These maps are a crucial source in situating the historical geographies of the island, forming the foundation of the project, and anchoring all materials within the spatial context of nineteenth-century Ireland.

The individual printed map sheets, which are presented as a collection in the DRI, were provided by the National Library of Scotland (NLS) under a Creative Commons Attribution (CC-BY) licence. By linking to the live version of the map sheets on the NLS website, the project contributes to increasing traffic to NLS’s collections. The agreements established between the archives and the project ensured that all parties benefitted from the project’s multiple outputs and were fully invested in its successful realisation.

The digital material was housed in the DRI, a repository for the long-term preservation of digital arts, social science, and Cultural Heritage data. The decision to collaborate with the DRI was driven by the project team’s genuine concern for sustainability, longevity, and the extendibility of Digital Humanities projects beyond their initial funding periods. Partnering with the DRI provided the project with a secure, long-term home for the material ensuring that it was FAIR (Findable, Accessible, Interoperable, and Reusable) and the project’s outputs would remain sustainable beyond the project’s completion (Drucker, 2021; Edmond & Morselli, 2020; Goddard & Seeman, 2019). However, this created an additional challenge in drafting the memorandum of understanding with the partners. One of the DRI’s mandatory metadata fields for collections, sub-collections, and items is the ‘Depositing Organisation’ for collections, but given the diverse range of institutions contributing materials, the project faced the challenge of selecting a singular ‘Depositing Organisation’ for each collection. While DRI provides long-term preservation of collections in accordance with its core remit, concerns were raised by the archives regarding the maintenance and potential updates of the resource beyond the funding

window. In response, the project team agreed that they would not hold ownership of the materials—either digitised or otherwise—and that the appropriate rights and, where applicable, licensing statements would be clearly applied to each digital object in the online system. The project acted as the ‘Depositor’ of the collection material and negotiated permissions with the archives to ensure ongoing access and involvement in future projects. Consequently, the official ‘Depositing Organisation’ and ‘Host’ were assigned to the relevant archive. The agreed organisational affiliation, along with any associated lock-ups, a Rights Statement, a Reuse licence (Creative Commons Attribution-Non Commercial-No Derivatives 4.0 International Licence), and a Metadata Statement (CC0), were applied to each object via the metadata import. Through the co-creation of the memoranda of understanding and participation agreements with archives, the project successfully mitigated some of the key copyright and access challenges typically faced by Digital Humanities projects, while also considering the sustainability and future expandability of the resource.

3.2 GEOSPATIAL METHODS

The core data that unites all of the material in this project is geospatial data. The maps, memoirs, memoir drawings, letters, and name-books all reference places and provide place-names for a wide variety of locations that vary in size and scale and create a huge quantity of data points. The largest locations referenced exist at the country level while the smallest units may refer to individual buildings or even individual boulders. A core goal of the project was the creation of a detailed gazetteer, or geographical index, of these places through which the documents could be searched. To keep the project within budget and on time, the smallest unit used within the gazetteer was the townland, the smallest *administrative* unit within and across Ireland. Townland boundaries were an important focus of the nineteenth-century mapping project and survive in the modern day, though some boundaries may have changed. Over 60,000 townlands exist across the country providing a highly local geographic reference system that was still manageable within the project scope. Townlands sit within larger parishes, which themselves are generally situated within baronies, and baronies are largely located within county boundaries. Individual locations such as individual topographic or anthropogenic features were linked to the townland they occurred in, and each townland was linked, via a relational database to its particular administrative hierarchy. This hierarchical structure provided the basis for the project gazetteer which in turn provided the geographic metadata for each document (see [Figure 2](#)). This presented the project with three specific challenges to overcome- overlapping geospatial locations, standardisation and different geospatial products.

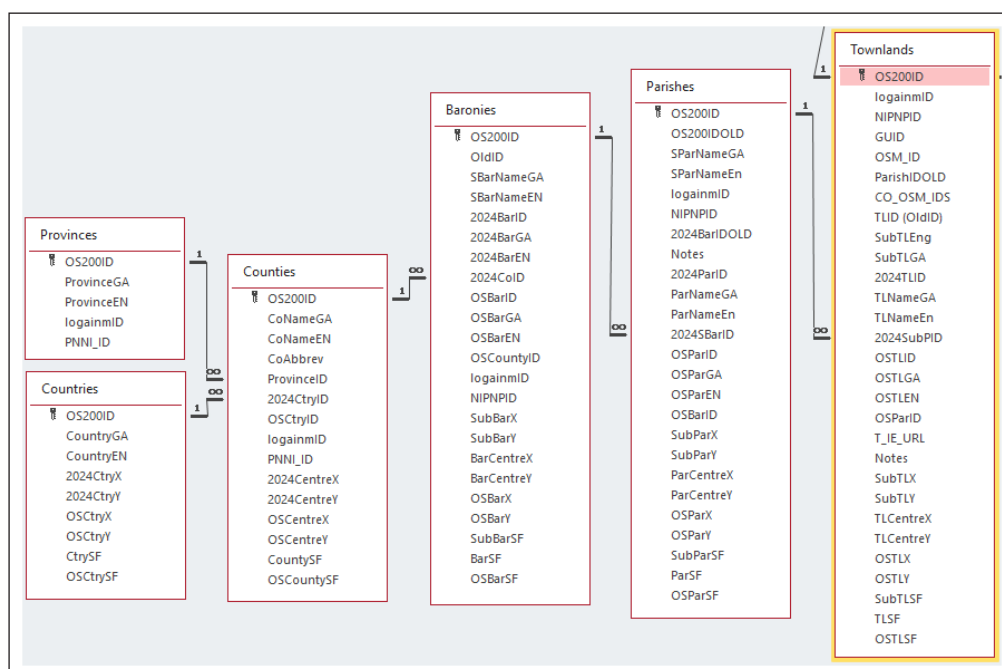


Figure 2 Administrative unit tables and relationships from OS200 database.

Although the hierarchical structure outlined above worked well in general, there were several issues where the location referenced crossed multiple administrative boundaries. Most often this occurred at a relatively small scale with individual towns or loughs located at the intersection of multiple townlands. However, the issue persisted through all scales of the data, with some parishes lying in multiple baronies, and some baronies spanning multiple counties. To address this issue each of these locations was individually checked. Where possible the smallest locational unit was assigned to the location. For example, if an individual building within a town spanning multiple townlands could be located, the townland that particular building was in was assigned to the location. However, if the singular townland could not be identified, or if the location spanned multiple townlands, all the associated townlands were attached to that particular location. This ensured that users interested in a particular place spanning multiple townlands would not be penalised in their search regardless of the townland they picked.

Another major challenge with the geographic data was the variations in nineteenth-century spellings and in some cases in the names themselves from the modern-day administrative unit names. Although problematic, the alternative names and spellings remain a valuable resource for many researchers including geographers, linguists, archaeologists, and historians. The challenge then became how to maintain the richness of the data without complicating or overwhelming an already robust geographic metadata schema. Our solution was two-fold: the documents themselves, including the transcriptions, would preserve the variety of place-name information. These place-names were then tied via a relational database to modern standardized spellings of each townland (See [Figure 3](#)). Since modern users would be the ones to access the digital resource, they would be most familiar with the modern names. Using the modern spellings for the metadata would thus allow the user to find any mention of that administrative unit within the documents, regardless of changes in spelling or the name itself. It also prevented the need for additional spatial metadata elements, which would have proved problematic given the large size of the metadata already.

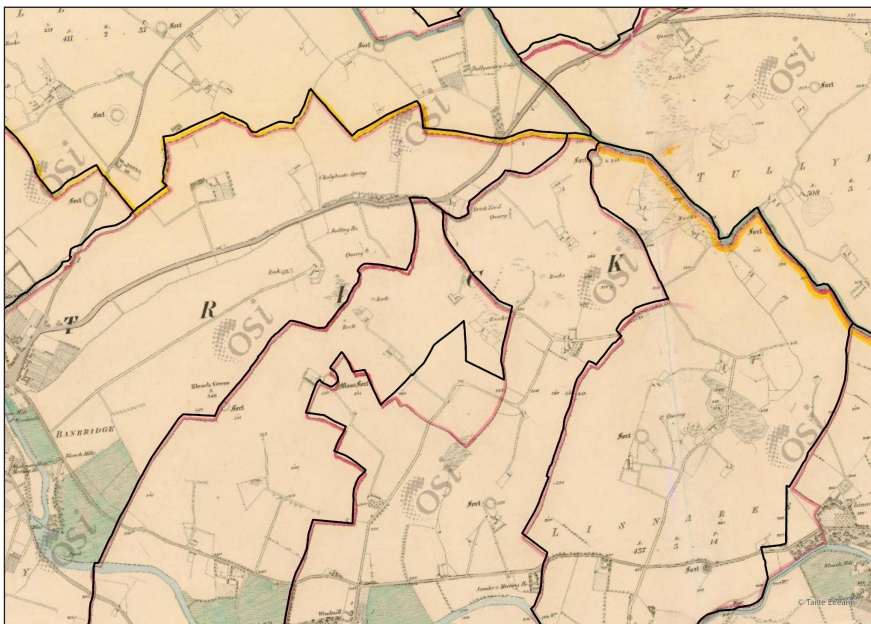


Figure 3 Example from Seapatrick Parish, County Down of townland boundary shifts. At the centre of the image changes are visible between the 19th century boundary (red lines) between the townlands of Tullyear and Ballydown and the modern boundary (black lines). A smaller boundary shift between the townlands of Balleevy and Lisnaree can be seen at the far bottom right of the image.

The last geospatial challenge the project faced involved the geospatial products used in the visualisation of the gazetteer. Shapefiles were acquired for each townland from open sources on the internet. A shapefile stores the geometry data of features, in this case, all of the townlands identified in the OS200 material. Although the modern boundary shapefiles provided an important shortcut, they also produced additional challenges to the geospatial project. These issues came primarily from the two-hundred-year historical legacy of the Ordnance Survey in a country that evolved into two distinct political entities. The first issue was that the shapefiles captured modern administrative boundaries, which in some cases have shifted dramatically since the first edition maps ([Figure 3](#)). Additionally, the reality of resolving shapefiles across a political boundary, that not only represents two mapping agencies with unique government

and institutional mandates, including distinct coordinate systems, must be rectified to join the data in a GIS. Moreover, these shapefiles represented twentieth-century digital products rather than nineteenth-century realities. The results of this endeavour produced significant but variable overlaps across boundaries that were not always possible to rectify. Survey error, individual judgement, and temporal variance resulted in a series of maps that were not always able to be aligned properly. In some cases it appears boundaries may have shifted between mapping programs, while other discrepancies may have resulted from errors introduced during surveying. In this instance, the geospatial challenge could not be rectified within the database itself but required the identification of an appropriate web platform. This is where Spotlight emerged as a solution.

3.3 CREATING THE DIGITAL RESOURCE

The digital platform developed as part of the OS200 project makes the historic OS maps, memoirs, name-books, and letters available in a single resource so that researchers and members of the public can easily access the material. Although all the material is ingested to, and discoverable through, the main DRI repository application, the requirements of the platform, particularly around search and mapping display meant that creating a separate bespoke exhibition site was necessary. Although adding functionality to the Repository to meet the needs of the platform was explored, the creation of a separate site allowed for development to take place without disrupting the main Repository and also more freedom in the choices of solutions used. The platform chosen for the project was Spotlight, an open-source software for building exhibit websites. DRI had previously used this software in projects such as ‘Amplifying Change: A history of the Atlantic Philanthropies on the island of Ireland’ (DRI, 2020). This was a generic base platform that could be taken and customised for OS200. Spotlight was the preferred exhibition layer for this project as it uses many of the same underlying technologies as the Repository and therefore is easier to integrate into the DRI infrastructure (see Figure 4). Though less ‘feature complete’ than other more well known platforms such as Omeka, it is simpler for the DRI developers to modify and extend given their experience with these technologies.



Figure 4 OS200 ‘Spotlight’ exhibit.

Given the nature of the project, the most important functionality of this exhibition platform was the mapping interface. While the Repository has a mapping display that provides the ability to browse objects as points on a map, it is a relatively simple mapping library using OpenStreetMap as a base layer (OpenStreetMap Foundation, 2025). Points are plotted on the base layer using geographical coordinate information contained in an object’s metadata. For OS200 the base layer was to be provided by the Ordnance Survey of Ireland’s base map. Two additional base

maps could also be selected to be displayed, the 6-inch first edition colour and 6-inch first edition black and white. This meant an additional complexity of multiple base maps and the requirement to handle different projections (OSi base maps are provided in Irish Transverse Mercator rather than the more usual web mapping projection of WGS84). The map display was written using the OpenLayers software library (OpenLayers, 2025) rather than the simpler Leaflet library used by the Repository. The existing map functionality was essentially rewritten using this new library with the addition of switchable base maps, allowing the mapping points contained in the OS200 metadata to be plotted on either modern or historic OSi map layers. The base maps are accessed through ArcGIS Online using their REST based API (Esri Inc., 2024).

The other addition to the map was the ability to display a townlands shapefile overlaid on the base maps (Library of Congress, 2020). Although with OpenLayers it is possible to display a shapefile by first converting it to a GeoJSON format, the size of the townlands shapefile precluded this option as it was simply too slow to load (See Figure 5). For this to function in a performant way the file must be served as individual ‘tiles’ for the section of the map being viewed. This is the same approach used for displaying the base maps. An instance of GeoServer, an open-source server for sharing geospatial data, was deployed and used to serve the townlands shapefile to the map.

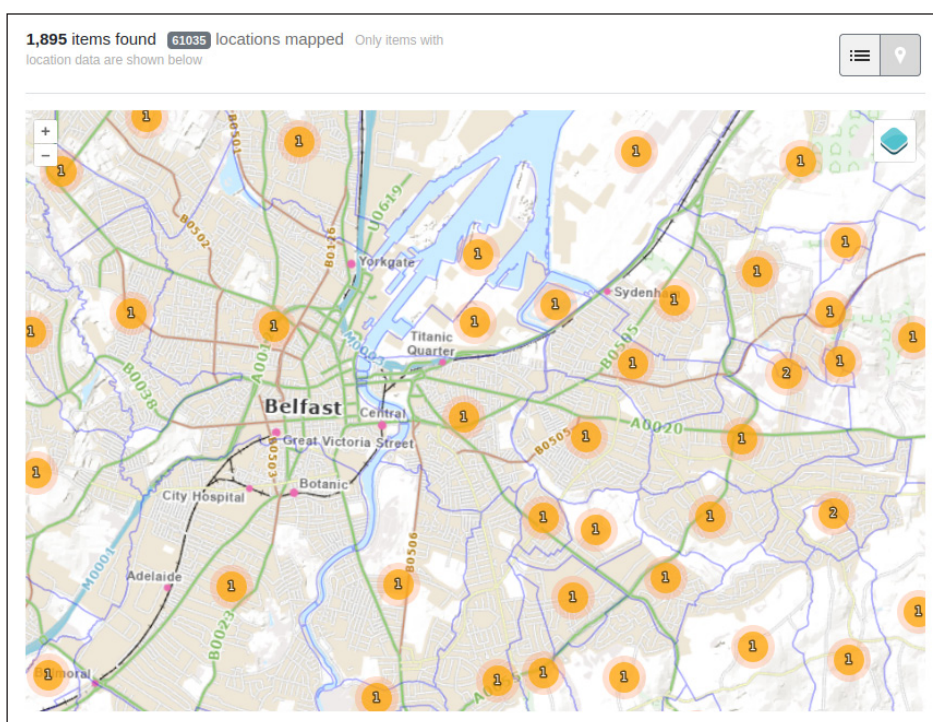


Figure 5 Map interface with OSi base layer selected and townlands shapefile displayed.

The geographic data set that comprises the OS200 gazetteer and informs the spatial metadata of the project within Spotlight is unusual in terms of its all-Ireland coverage. Digital web gazetteers already exist for both the Republic of Ireland and Northern Ireland, in the form of Logainm (Logainm, 2024) and the Northern Ireland Place-Name Project (NIPNP) respectively. However, the issue is that these resources are maintained by separate entities and are restricted in their coverage by the international border. The DRI has integrated Logainm place-names into its metadata schema; however, the lack of Logainm identifiers for many of the places within Northern Ireland meant that the project had to produce its own unique geospatial coordinates. Where possible the unique geographic location IDs generated by OS200 were linked via the relational database to both the Logainm location IDs and the NIPNP location identifiers. While this data is not currently accessible within the DRI itself, future project goals include incorporating these identifiers into the DRI metadata, in order to link the data spatially to other collections across the DRI, and in so doing, adhere to FAIR principles.

4. RESULTS AND DISCUSSION

The aim of reuniting two hundred year old maps and records in a searchable digital format was an ambitious one. The PIs worked to ensure support for the project aims at the funding

application stage through project support letters. However, as the funded project progressed it became clear that tailored partner agreements were the best way to address the copyright and licensing concerns of the GLAMs who were providing material. The importance of co-creating agreements regarding collections cannot be overstated, as it fosters collaboration and mutual benefit. One key element in gaining buy-in from GLAM institutions was the provision of digital versions of materials digitised through project funding. All of this had tight timing, especially to meet a deadline linked to the 2024 bicentenary year making the start of the OS in Ireland.

In addition, the project employed established agreements and standards for some early successes. The Creative Commons framework provided a clear licensing structure for both the project and its partners. Working with TailtÉ Éireann through the National Mapping Agreement, OS200 gained access to the digital base maps, which were central to the project's foundation. By using standardised web gazetteers like Logainm and PlacenamesNI, the project tapped into Open Access resources and employed widely-used standards. Adding the collections to the DRI provided a single digital home for all the material generated, ensuring its preservation and accessibility beyond the life of the project. Finally, by adopting the Spotlight exhibition and methodology previously employed by the DRI, the project was able to create a mapping layer that interlinked the collections, offering an opportunity to investigate the sources in an integrated way for the first time.

While the three-year duration of the project allowed for significant progress, it also highlighted areas for future development. One limitation was the inability to generate Irish language metadata for the place names in this project within the timeframe of the project. The original OS project phoneticised many Irish language names, a practice that has become a contentious legacy of the nineteenth-century OS project. It is hoped that future work (and funding) can address the Irish language elements of the sources. OS200 has had an impact too for DRI, providing a basis for potential future resource and technical development, particularly in supporting complex digital humanities research projects like OS200 and meeting the needs of researchers seeking to use this collection. There have been requests to download the entire collection to support data mining and more dynamic investigations. The DRI does not yet support collection download and currently requires users to download items one by one. This will be investigated further. Additionally, there is potential to develop the mapping of shapefiles within the basic mapping interface. Working with research collections of this scale has not only enhanced and diversified data sets, but also anticipated user needs. To this end, then, OS200 provides a valuable transferable model for humanities data and research. The significance of these digital collections of OS200 extends beyond enriching our historical understanding of Ireland and the surveying process.

5. IMPLICATIONS/APPLICATIONS

These collections have numerous possibilities for re-use, providing valuable data to address contemporary issues in Ireland. In an article published in August 2024, following the digital archive's launch, the *Irish Times* highlighted the intrinsic conservation potential and impact of the OS200 collections, particularly for studying Irish nature. Interviewing OS200 project researchers and collaborators, *Times* journalist Sylvia Thompson draws attention to how 'such information could inform which peatlands are chosen for habitat restoration as part of Ireland's commitments to the EU Nature Restoration Law.' The newspaper feature also emphasised how historic OS data from the project also can help in identifying areas of higher flooding risk: 'information such as the course of rivers could also be useful as townland boundaries in the original Ordnance Survey maps followed the course of a river while more recent townland boundaries follow the course of rivers some of which were later straightened for agricultural purposes. With a new understanding of how re-wiggling rivers can slow down the passage of water to prevent flooding of urban areas downriver, such information about the earlier flow of rivers could be very useful.' (Thompson, 2024). The wider potential for reusing these collections is vast and remains as yet untapped.

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COMPETING INTERESTS

The authors have no competing interests to declare.

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