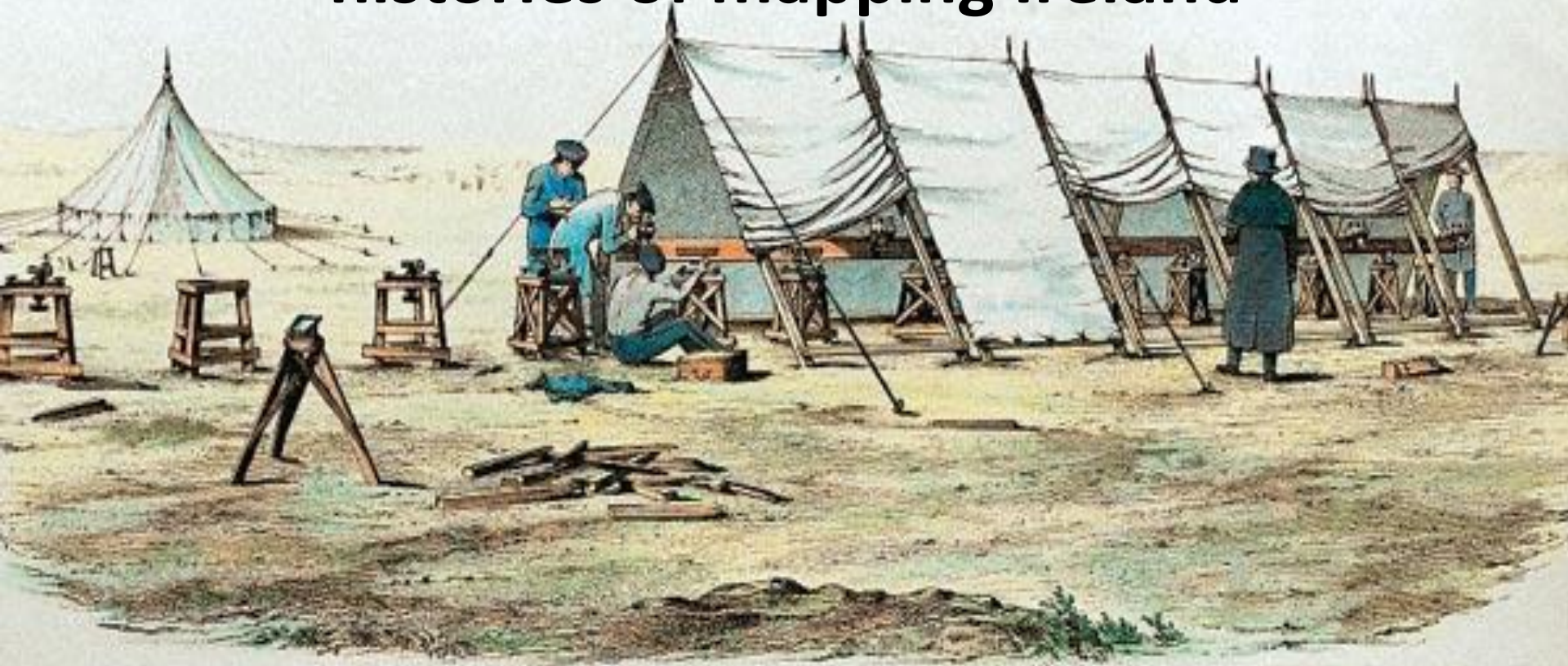


# Exploring the histories of mapping Ireland



*Sketch*  
*showing the mode of proceeding*  
*in measuring*

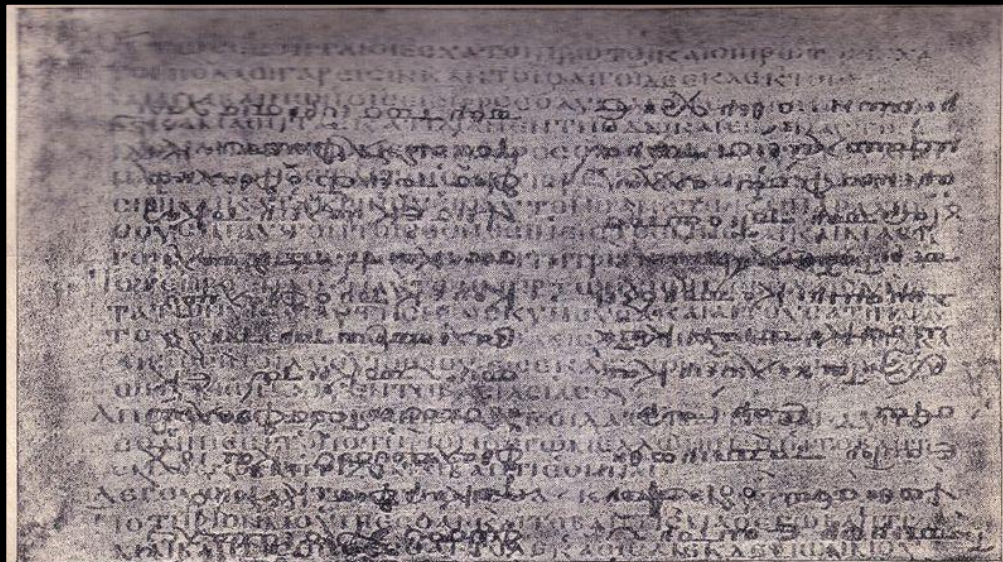
THE LOUGH FOYLE BASE

*(The original by Sir J. P. Hutchins Bart.)*

*Engraved by J. J. P. in the Collection Map Office, Southampton, March 1845.*

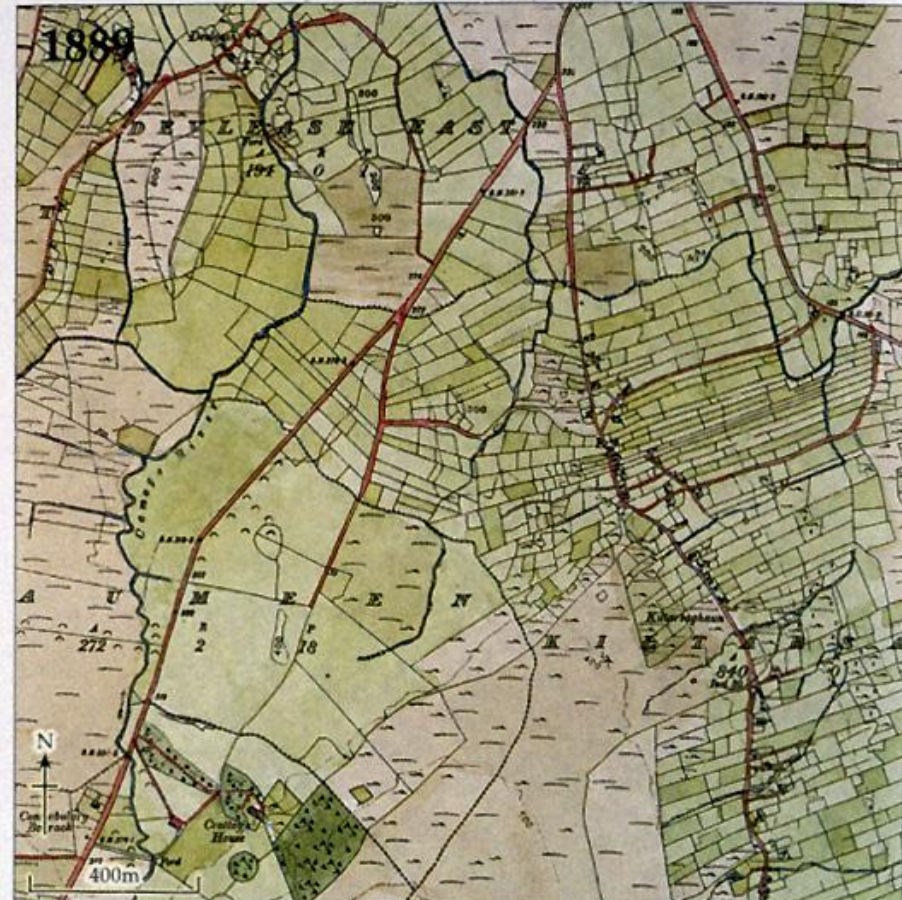
# Mapping Ireland's landscapes

- Landscape as a 'palimpsest': relict features in today's landscape
- Landscape as a 'map' of the past ...
- Mapping landscape changes...





Continuity and change in the Irish landscape – a history captured ‘in the field’



● Fig. 56 Large areas of the west of Ireland landscape were reorganised in the late nineteenth century, changes which become immediately obvious when various editions of O. S. maps are compared. In Kiltarsaghaun townland in county Mayo, the clachan-and-rundale of 1840 has been obliterated by the wholesale striping depicted in 1899. Across much of the west, the cultural landscape has been remodelled so thoroughly and so recently that the pre-Famine landscape can now be recovered only by archaeological or historical means, not by direct inspection.

## Continuity and change in the Irish landscape – a history captured through maps

## The session comprises:

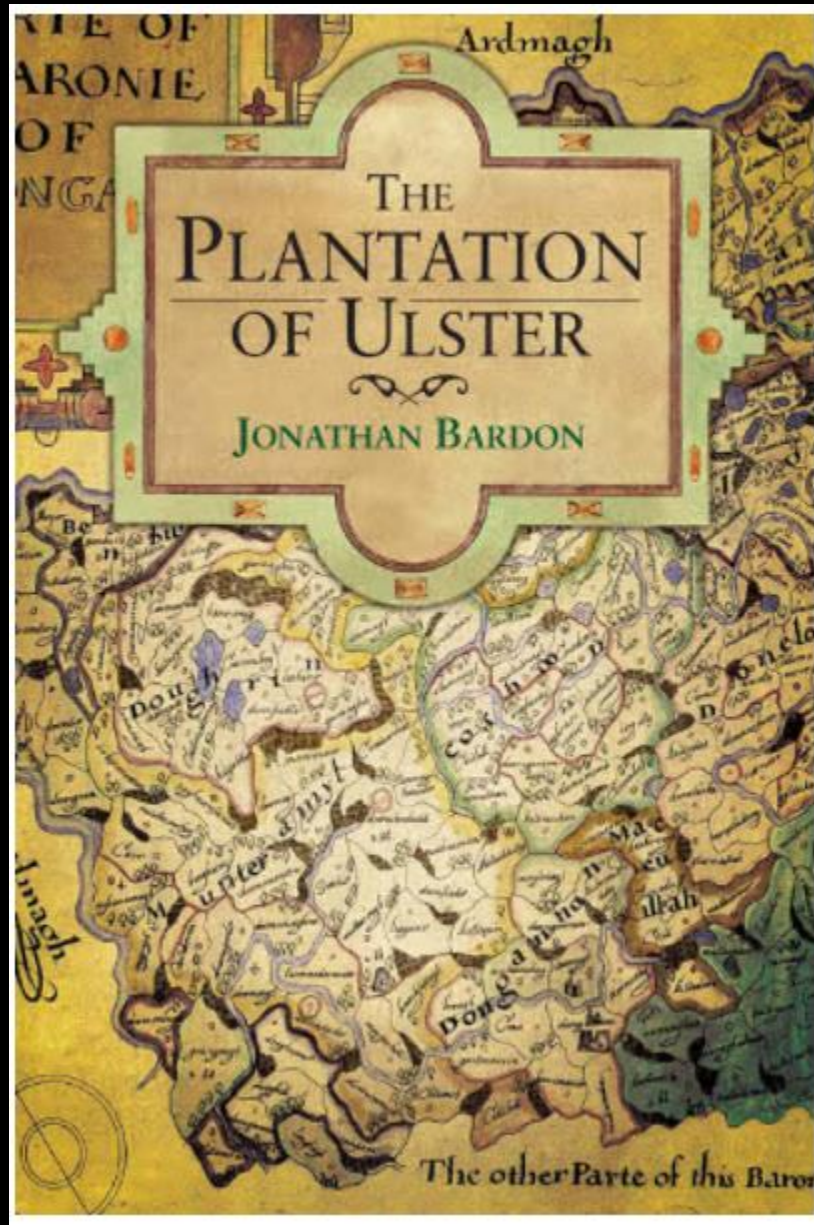
- A study of mapping Ireland's landscapes through the ages, with particular reference to:
  - Maps and surveys of the Plantation of Ulster of the early-seventeenth century;
  - Ordnance Survey (OS) mapping and survey of Ireland in the nineteenth century.
- A visit to the current Ulster Museum exhibition “Purpose and Portrayal--Early Irish Maps and Mapping” to explore how maps tell us about Ireland's changing landscapes as well as revealing histories of the mapping of Ireland.

# 1. Mapping Ireland's landscapes through the ages

- Maps and surveys of the Plantation of Ulster of the early-seventeenth century;
- Ordnance Survey (OS) mapping and survey of Ireland in the nineteenth century.

# 1. Mapping Ireland's landscapes through the ages

- Maps and surveys of the Plantation of Ulster of the early-seventeenth century;
- Historical context: Ireland and Britain
  - Nine Years War
  - 'Flight of the Earls'
- Cartography and surveying in the early-1600s
  - Richard Bartlett
  - Josias Bodley
  - Thomas Raven



THE  
PLANTATION  
OF ULSTER

JONATHAN BARDON

The other Parte of this Barony





## Sovereignty and cartography

Portrait of Elizabeth I, commissioned by Sir Henry Lee: 'The Ditchley Portrait', by Marcus Gheeraerts the Younger, oil on canvas, circa 1592 (NPG 2561)

© National Portrait Gallery, London

## The power of maps...

“Just as ‘the historian paints the landscape of the past in the colours of the present’ so the surveyor, whether consciously or otherwise, replicates not just the ‘environment’ in some abstract sense but equally *the territorial imperatives of a particular political system.*”

Whether a map is produced under the banner of cartographic science - as most official maps have been - or whether it is an overt propaganda exercise, it cannot escape involvement in the processes by which power is deployed.”

J Brian Harley, ‘Maps, knowledge and power’, in *The Iconography of Landscape*, eds. Denis Cosgrove and Stephen Daniels (Cambridge: 1988), p.279



“The territorial imperatives of a particular political system...”, Brian Harley

Richard Bartlett’s “generalle description” of Ulster, 1602-3 (MPF 1/35)



*T. F.*

*The north fies*

Royal Coat of Arms of England (1399-1603)



MPF 35 (SP 64/2)



Great Britain  
Royal Collection

PARTE OF Y BARONIE OF  
LOGHINISHOLIN





Ralph's Meadow

Ralph's Meadow

Sander Bloss, and Sander Hamble

John's Meadow

The Great Hill



The Castle Hill

Bangor

Bay of Bangor

The Castle park

Milhamhill

The Mill by the Mill Leat

The Bull Green

The Borehill

The Churchhill

The Mill Park

Stanbyon hill

The Castle

The Barnard's hill

Whitby Towne

Arches Towne

Ba'm Gee

On Cole on y Lines fort hill

Hamiltons Dike

St. Peter's

Mill Dam

Whitby Towne





Oterson

Catoge

Catoge

CUMBER,

Robert  
Hamdton

ETT 140-2-0

ETT

32-1-20

Catoge

J. Bond  
W. N. Bond

30

# Maps in politics: the Plantation of Ulster and its surveyors and cartographers



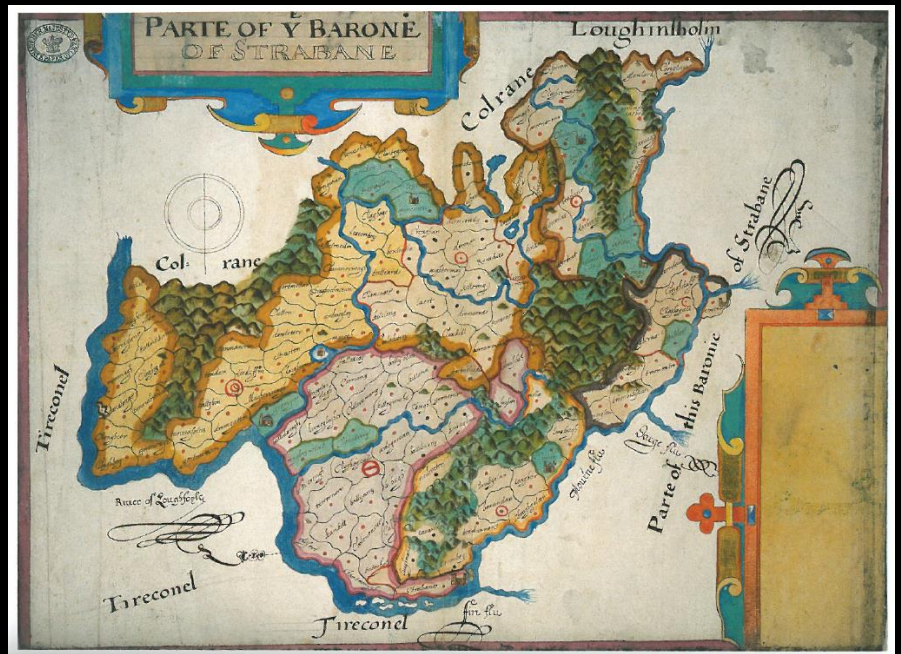
Josias Bodley, Map of 'parte of ye Baronie of Loghinisholin' (1609-10), No. 620, TNA MPF/47. Reproduced by permission of The National Archive, Kew



**Letter from Josias Bodley to Earl of Salisbury, Robert Cecil, Lord Treasurer for England and the English Crown, in February 24 1610:**

**Bodley held “that those escheated countries should be so plotted that the known bounds of every country might be discerned by the eye, the church land distinguished from the temporal, and land already granted from that which is yet to be disposed of; the shares for the undertakers to be laid out with their apparent limits according to certain conceived proportions of different quantities, the goodness or badness of the soil; and the woods, rivers, or mountains, bogs and lochs, to be specified in their several places.”**

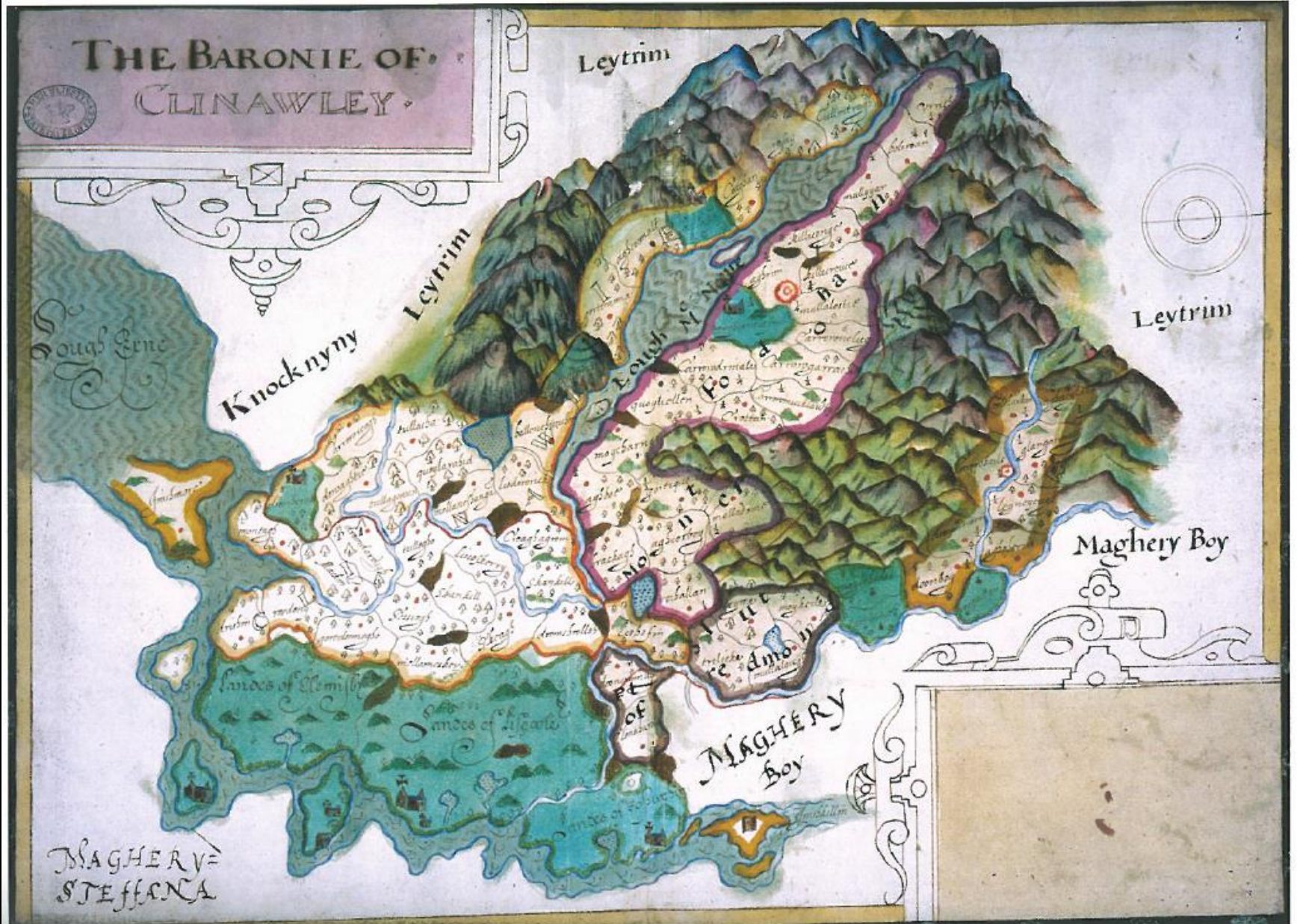
**Source: *Calendar of State Papers for Ireland 1608–1609*, 392–3.**



Maps of the 'escheated counties of Ulster': the MPF 1/38-64 group of 28 maps, named after Josias Bodley, were the product of many minds and hands...

William Parsons, surveyor general in Ireland  
 George Sexten, clerk of the Crown in Ulster  
 Plus four other men "surveying and plotting"  
 and also "framing and drawing up the plots  
 and descriptions," including Thomas Raven

And Josias Bodley himself...

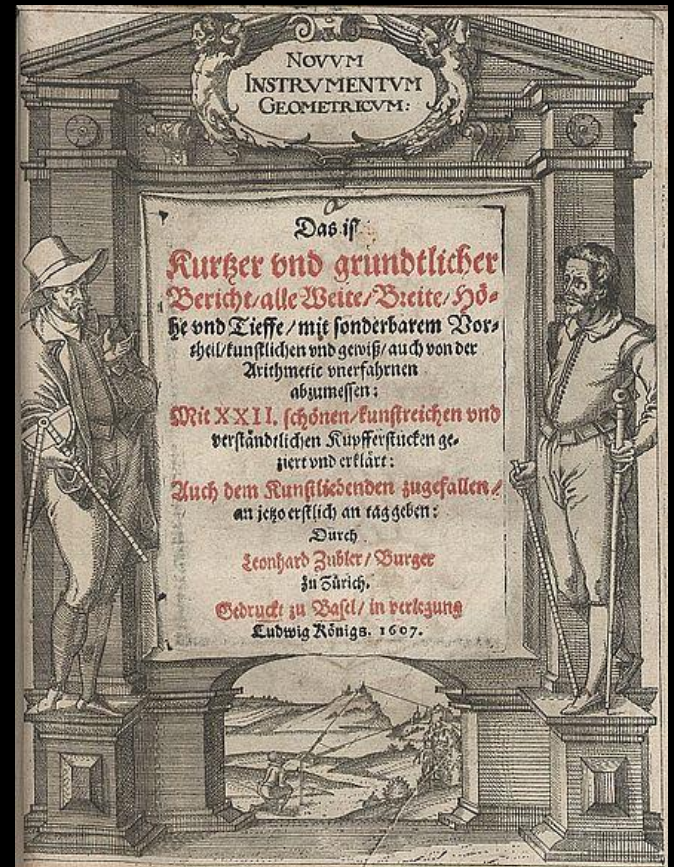




## How were the Bodley maps made?

‘Bodley’s instrumentation would ... have been ... rudimentary...’ , Margey (2011), pp.74-75

‘out of every barony such persons as by their experience in the county could give us the name and quality of every ballibo, quarter, tathe... with special notice how they butted or meared interchangeably the one or the other by which means and other necessary helpes wee contrived those maps’,  
Letter Bodley to Earl of Salisbury, 24 February 1609, TNA SP63/228/41.



Quelle: Deutsche Fotothek



Quelle: Deutsche Fotothek

A GIS-based analysis of the townlands on the Bodley map of Loughinsholin (1609, map X)  
Cat Porter and Keith Lilley



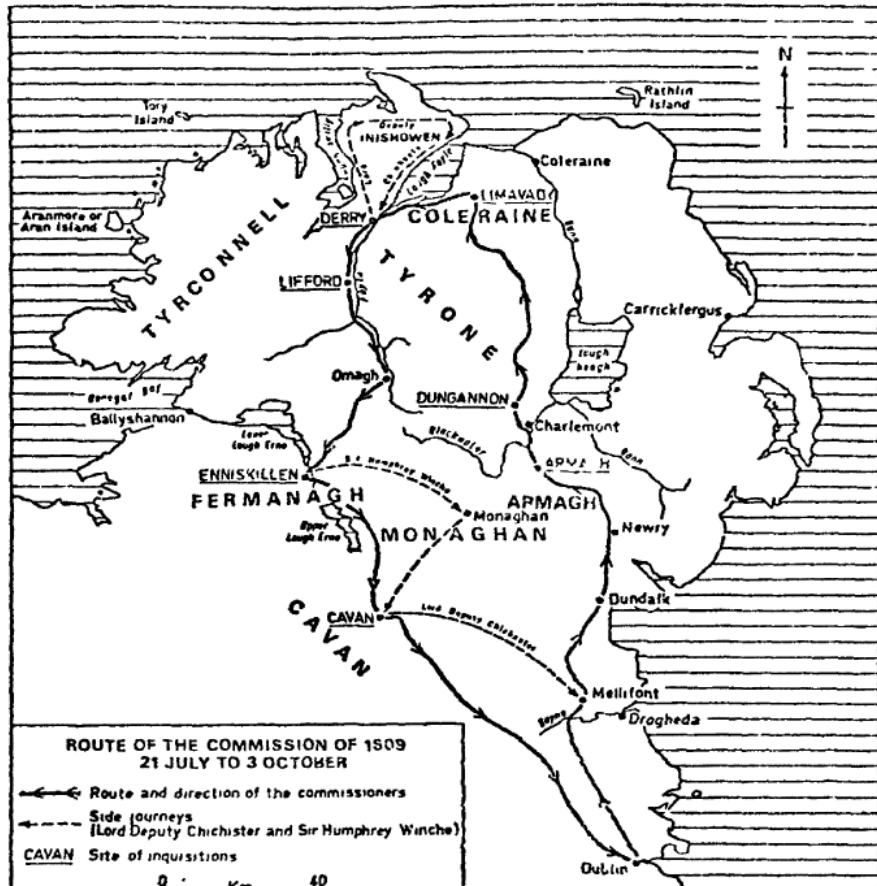


In 1609 Thomas Phillips, the governor of Coleraine, reported to the Corporation of the City of London on the prospects for Plantation.

Among the articles of his report Phillips referred to one particular area troublesome to the English:

“The Barony of Loghanshelan.”

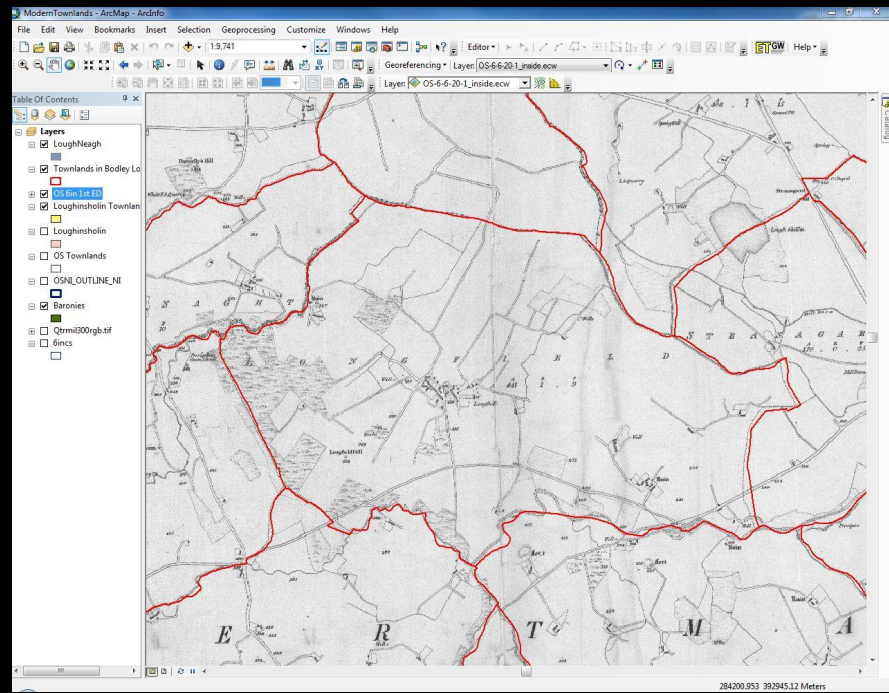
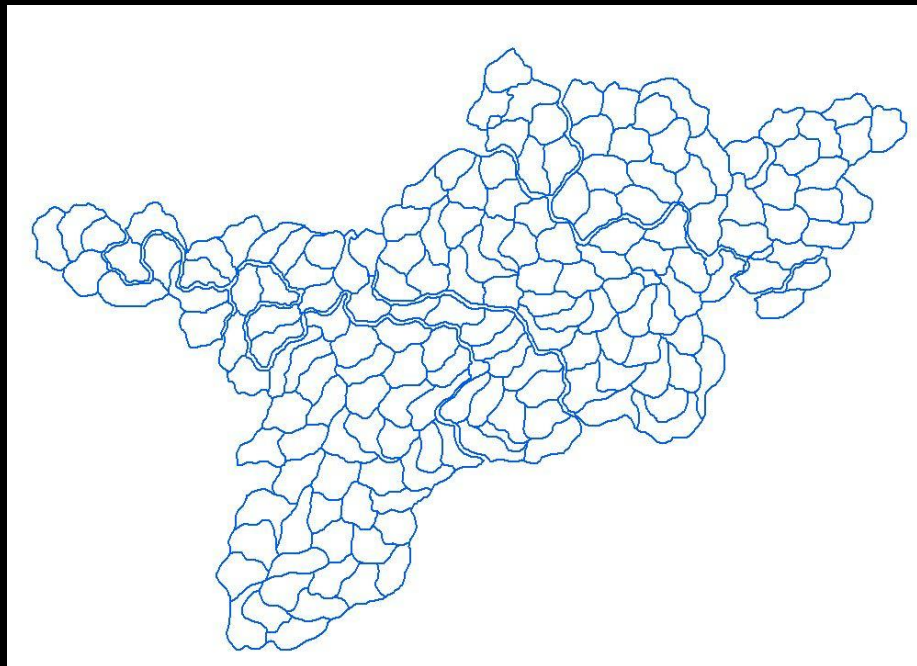
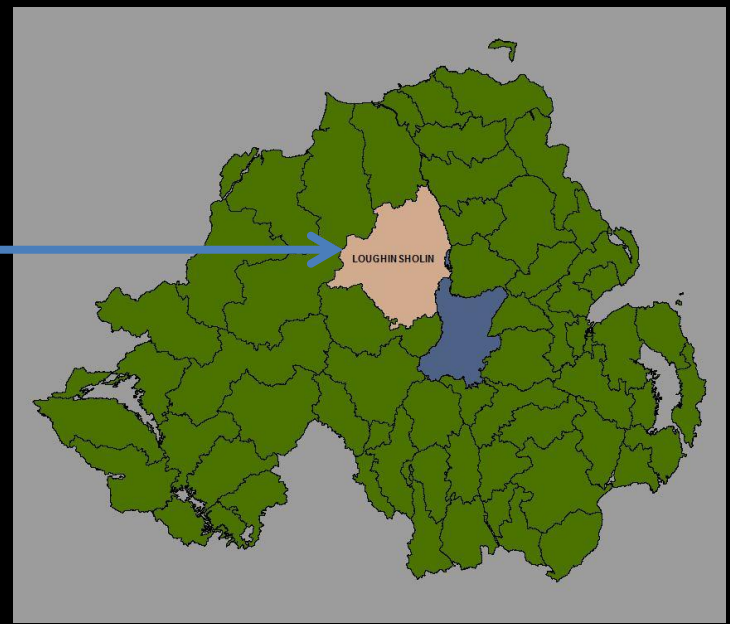
This area was, he wrote, “Tyrone’s chiefest fastness and the very Nursery of all rebellions in those parts and was therefore chiefly intended by his late Majesty to have been wholly planted with British which, if Londoners had done accordingly, they might have made of it as rich and strong a Country as any (of like in his Majesty’s Dominions) whereas it is now in worse case and far more dangerous to the State than when they first undertook it.”

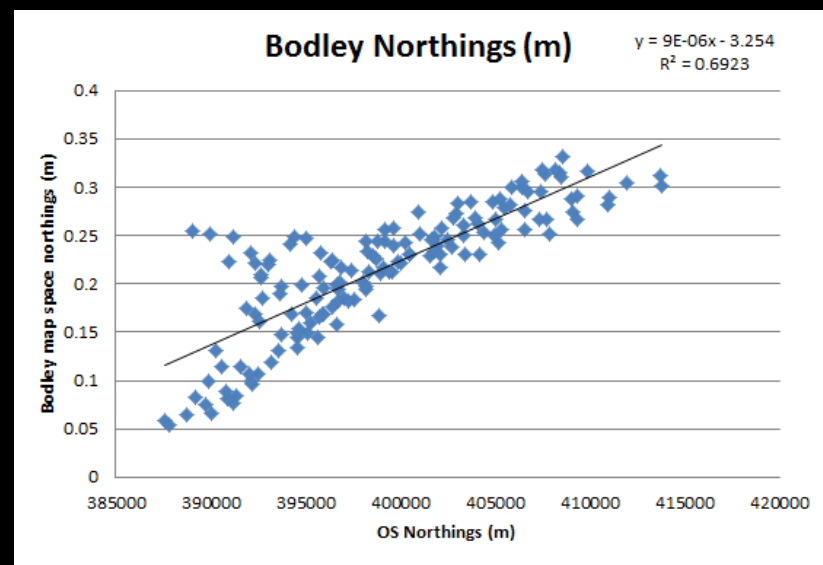
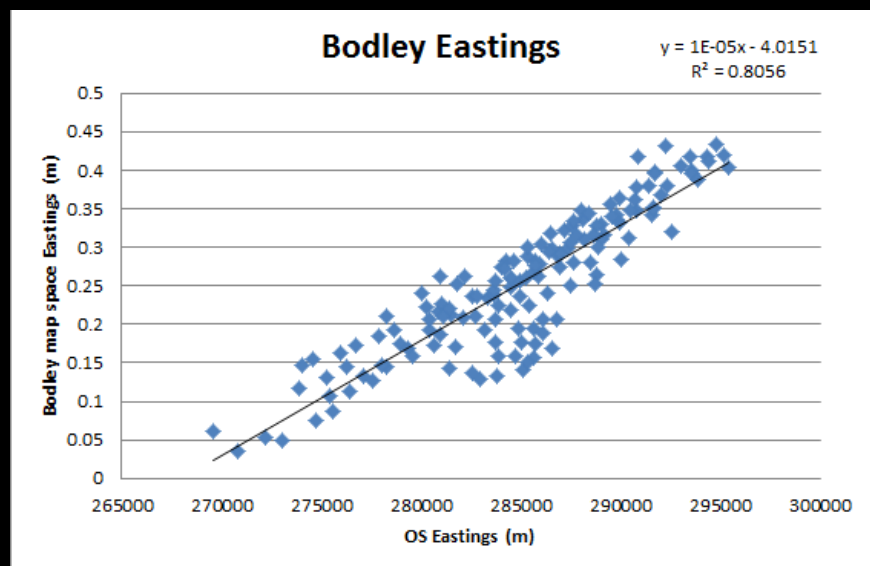
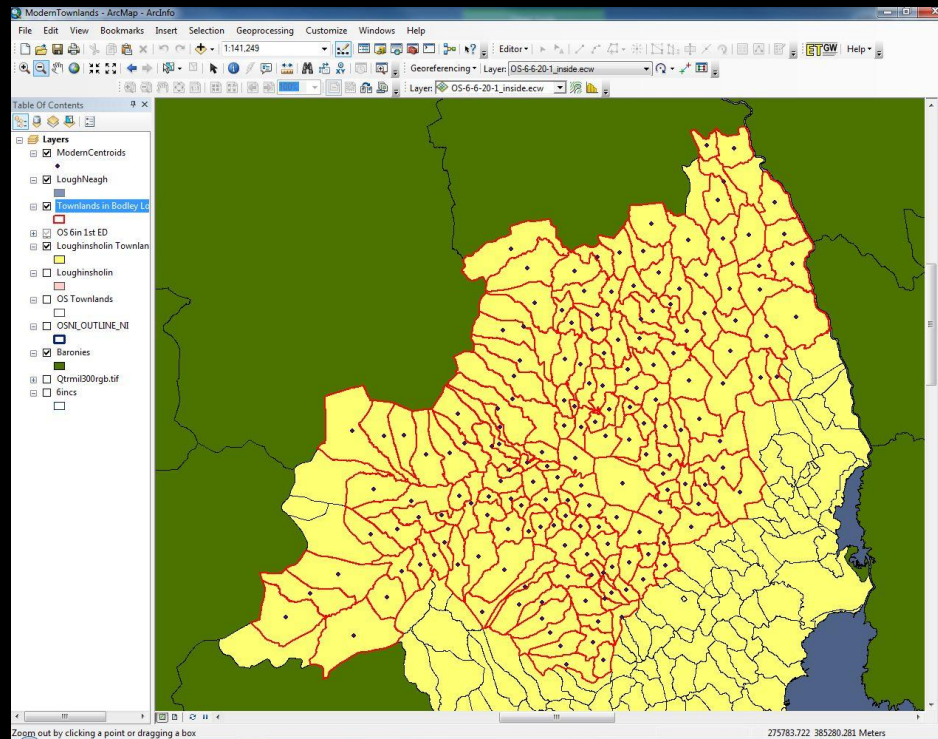
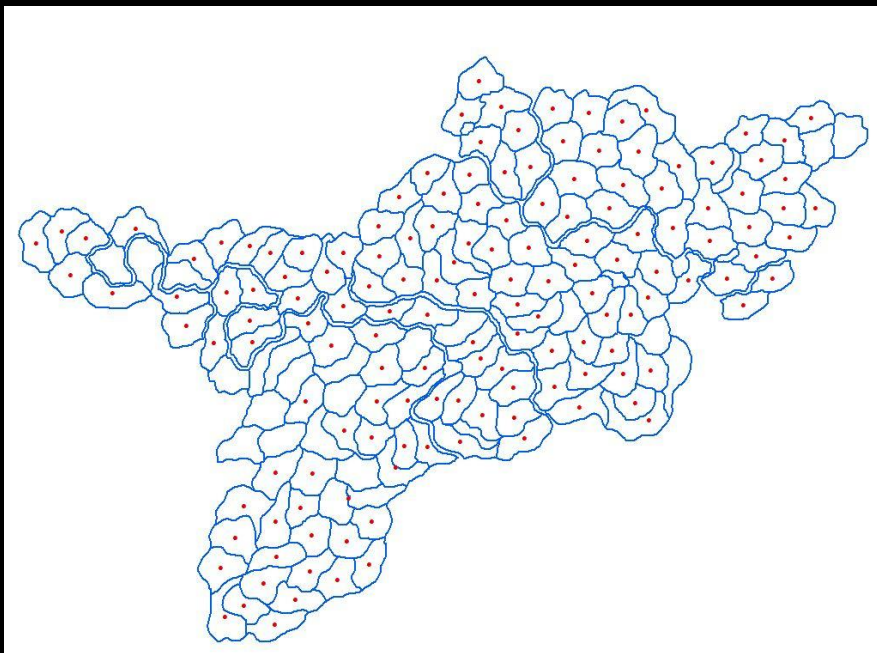


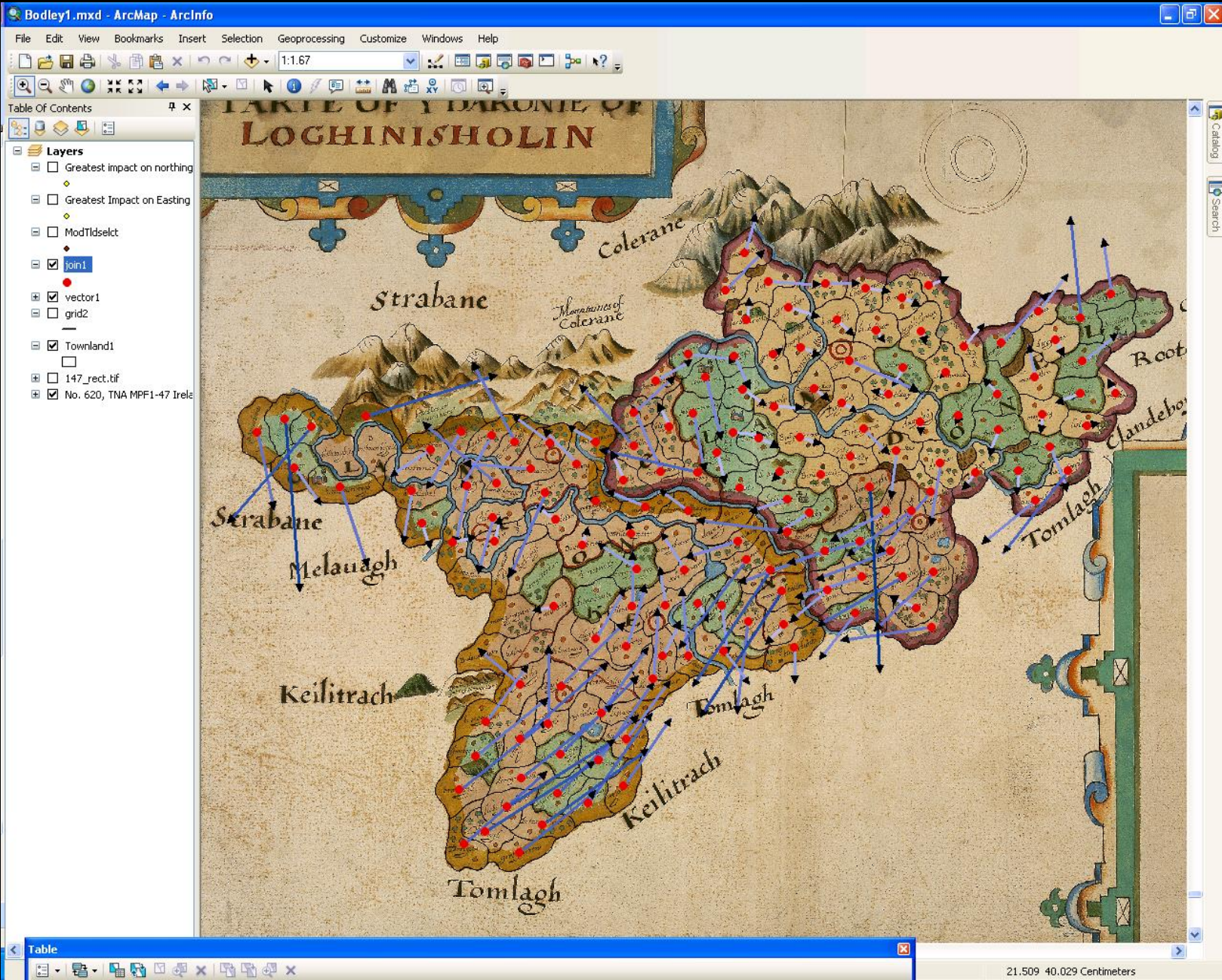
‘Their geography has had the speedier dispatch, inasmuch as here the county is but little, consisting only of three baronies, and as they had sent two surveyors before to perambulate the country and to prepare the business by gathering notes of the names, sites, and extents of the townlands. This they performed well and readily, being accompanied with but a slender guard.’

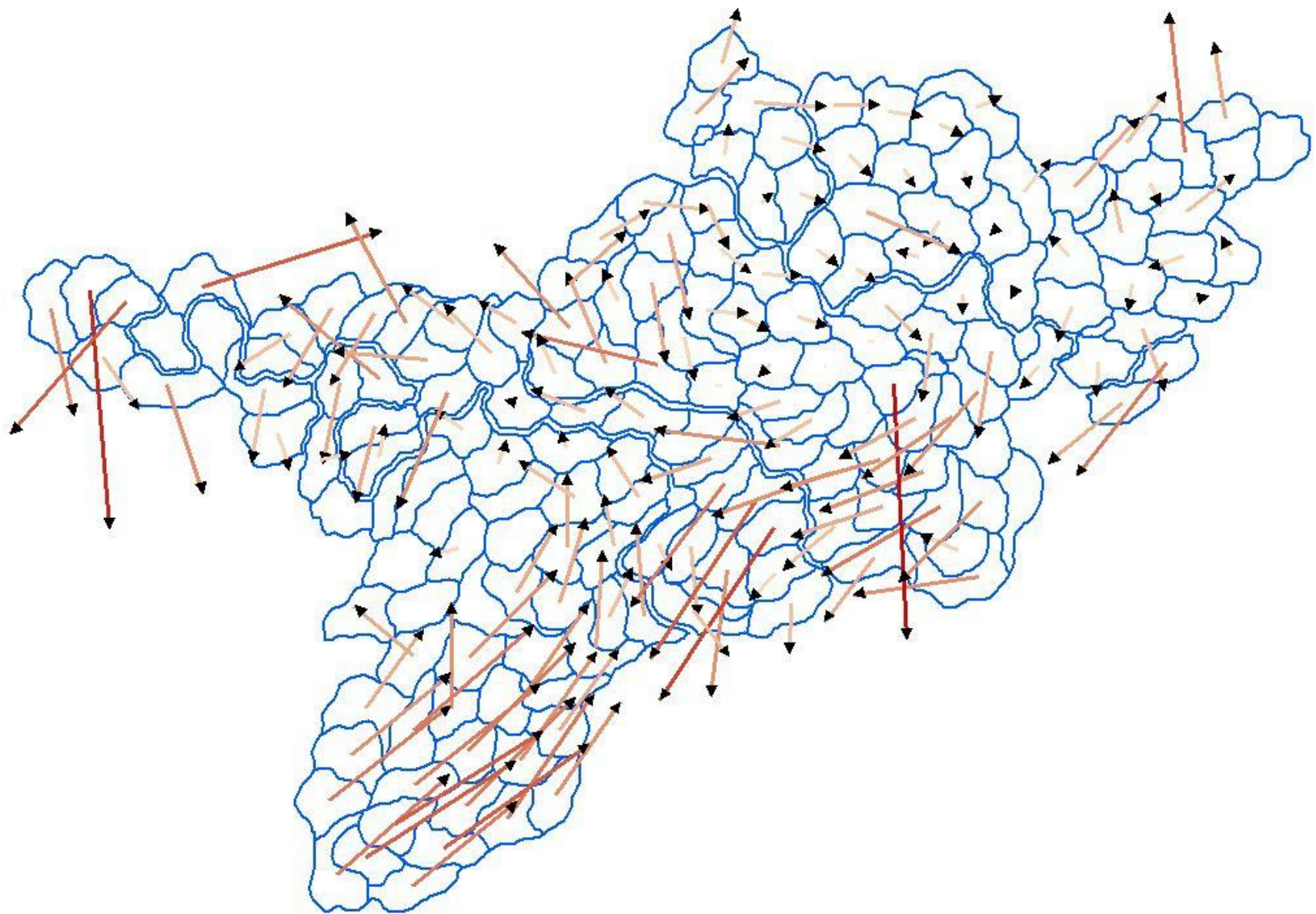
From: F. W. Harris  
 ‘The Commission of  
 1609: Legal Aspects’,  
*Studia Hibernica*, 20  
 (1980), pp. 31-55

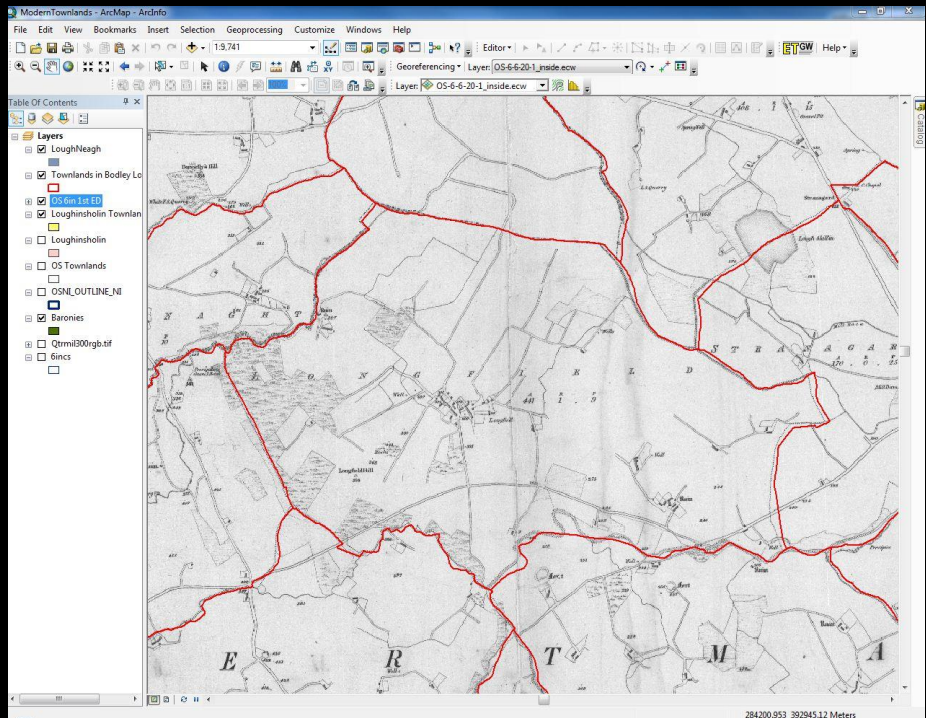
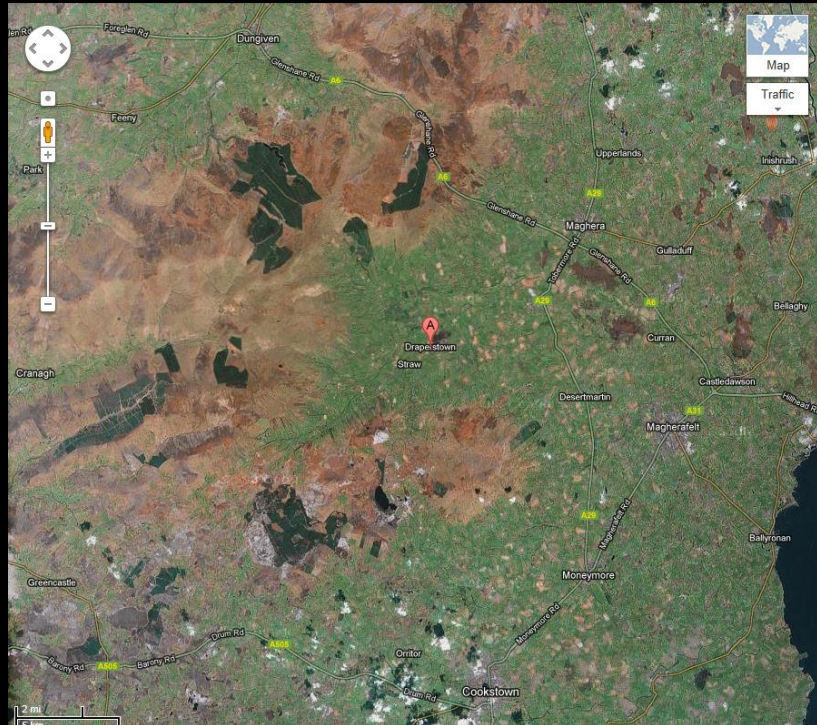
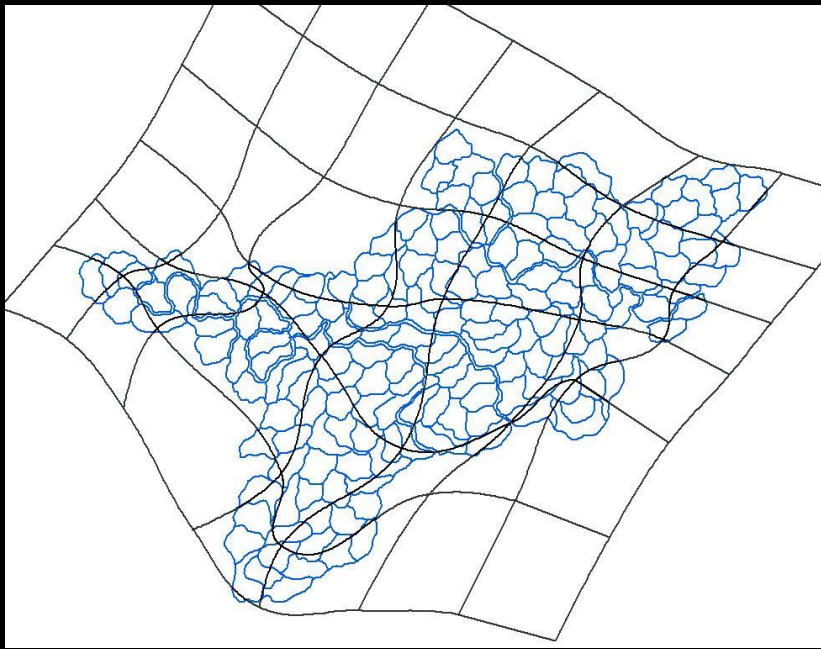
August 28 1609, letter sent from  
 Limavady by Sir John Davies, Irish  
 Attorney General, to Earl Salisbury in  
 London, SP 63/227/122, CSPI 1608–1610.











# 1. Mapping Ireland's landscapes through the ages

- Ordnance Survey (OS) mapping and survey of Ireland in the nineteenth century.
- The survey of Ireland as a colonial enterprise?
- Marking the landscape – survey and mapping:
  - Triangulation
  - Levelling
  - Naming
- Maps and knowledge = power?



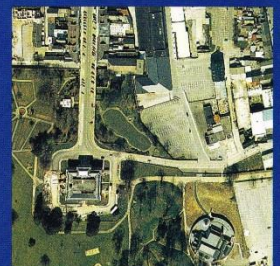
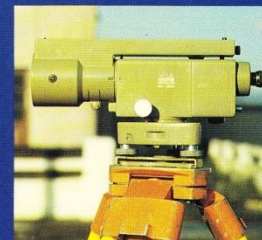
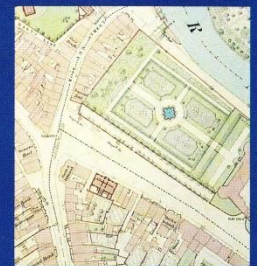
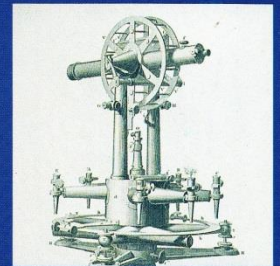
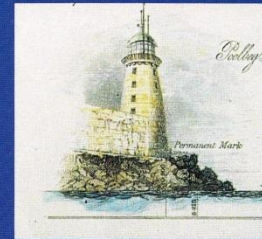
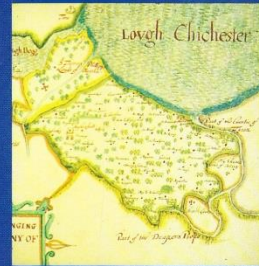
GILLIAN M. DOHERTY

# THE IRISH ORDNANCE SURVEY

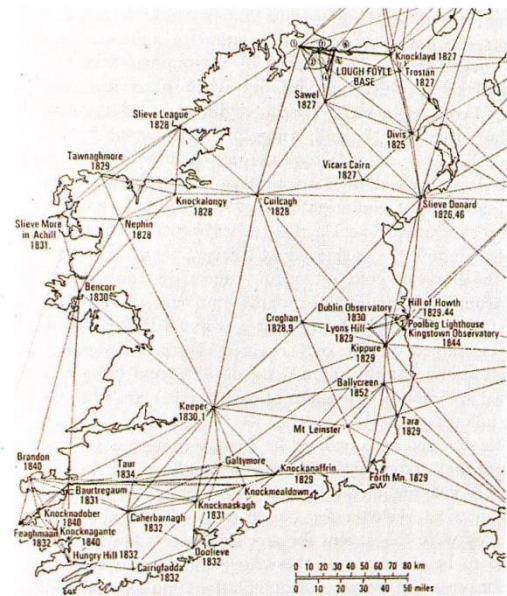
History, Culture and Memory



# ORDNANCE SURVEY IN IRELAND



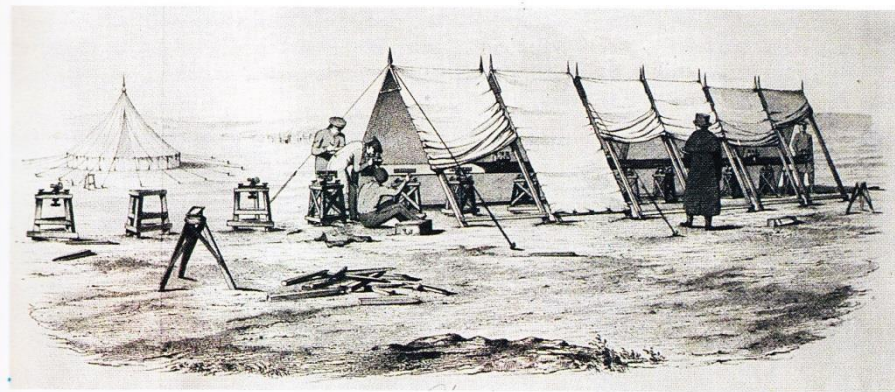
AN ILLUSTRATED RECORD



*The Principal Triangulation of Ireland*

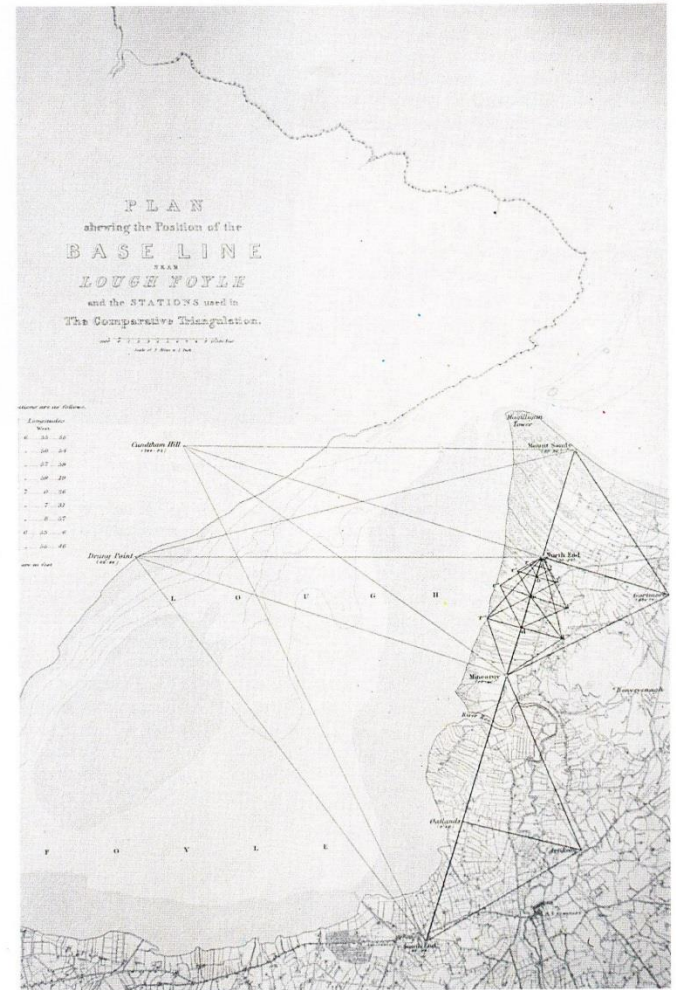
The first task to be completed was to precisely calculate the positions of a framework of points upon which the mapping could be based. This was done by a process of triangulation whereby sightings were taken to distant mountain tops using theodolites.

Some of the primary triangles in Ireland have sides greater than 150 kilometres in length and the argand lamps previously used by the survey were found to be not bright enough over these distances.



*Observing the baseline under tenting*

The measurement of the baseline began in 1827 and was observed under tenting to minimise fluctuations in temperature. The bars were mounted on tripods and the total distance of 7.89 miles which included the crossing of the River Roe was completed in November 1828 after 60 days of measurement by 70 men. The accuracy achieved is still marvelled at today.



*Diagram of the Lough Foyle Baseline*



The primary network of spirit levelling related to the datum at Poolbeg lighthouse in Dublin was completed in 1843 and was used extensively until the datum was changed to mean sea level at Malin Head, Co Donegal in 1958.

*The principal lines of spirit levelling completed in 1843*

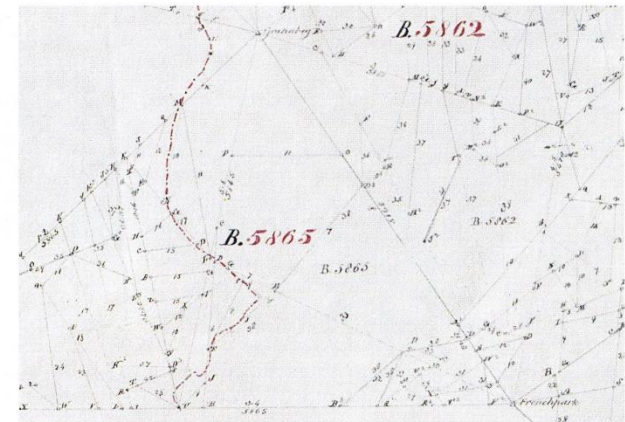


*Royal sappers and miners surveying in 1837*

A major debate raged in the early 1820's as to whether civilian or military surveyors would be employed on the impending survey of Ireland. The Spring Rice Committee decided the issue by recommending that the task be given to the Ordnance Survey under Colby's direction. Colby began preparations, immediately sending sappers and miners of the Royal engineers on a course of instruction in surveying and mathematics to Chatham, and the first survey parties took to the field in the northern counties early in 1825.

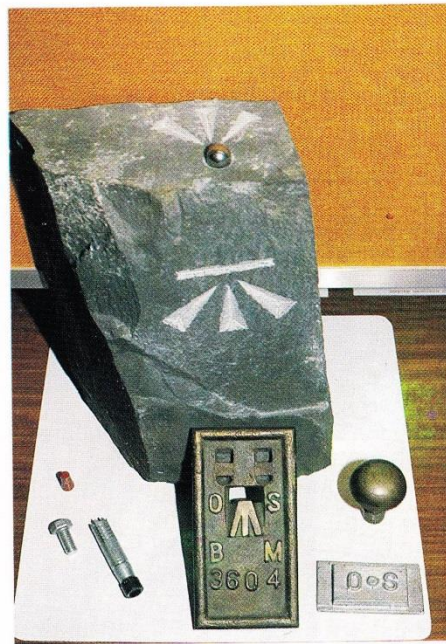
Each district commander observed a secondary trigonometric network using 12" theodolites so that two or three points lay within each parish. 7" or 8" theodolites were used to densify the network of triangles to make one or two points accessible to each townland. Chain lines were run between the trigonometrical stations thus giving a check between the chained distances and the trigonometrically computed distances.

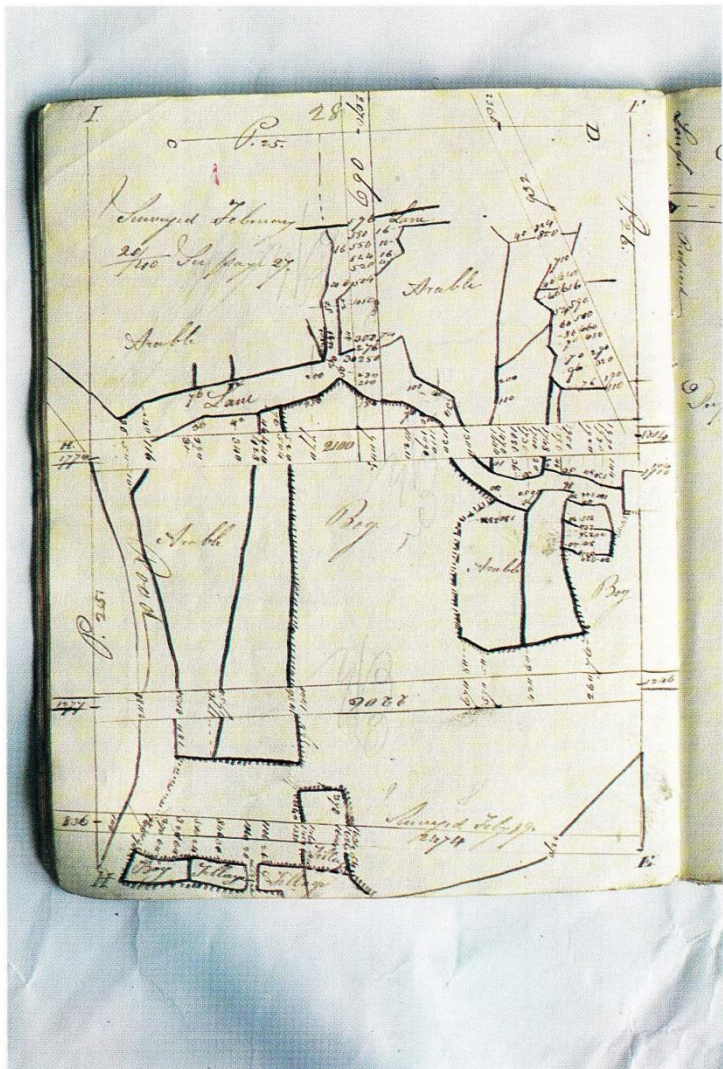
*Chain line plot*



*Types of bench marks used by the Ordnance Survey in Ireland*

Bench marks (widely known as "crows feet") related to the datum are sited on walls, public buildings, bridges, etc. along the road network. Stone masons carved "crows feet" and these marks became part of folklore throughout Ireland. These "crows feet" are still being cut in Northern Ireland and have only recently been replaced by a range of metal bolts in the Republic of Ireland. Many of these old marks are still in existence and where found by the modern day levelling parties are included in the new network.





*Content field book*

The theodolite triangles were then further subdivided into chain triangles which were laid out to fit as snugly as possible into each townland. The books used by the field survey parties to note their observations were called content field books which contained two main elements. Firstly, the content register listed the areas of the triangles used to calculate the areas of the townland.

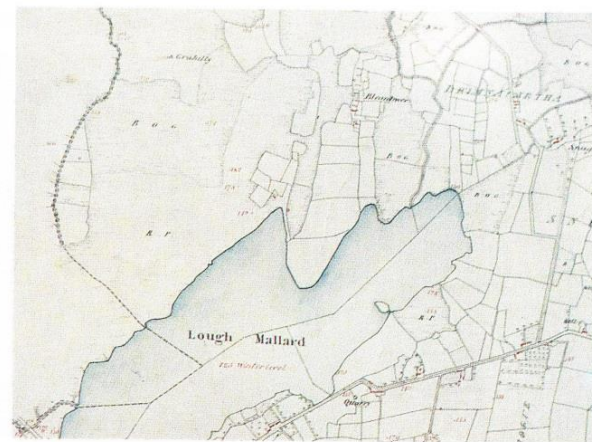


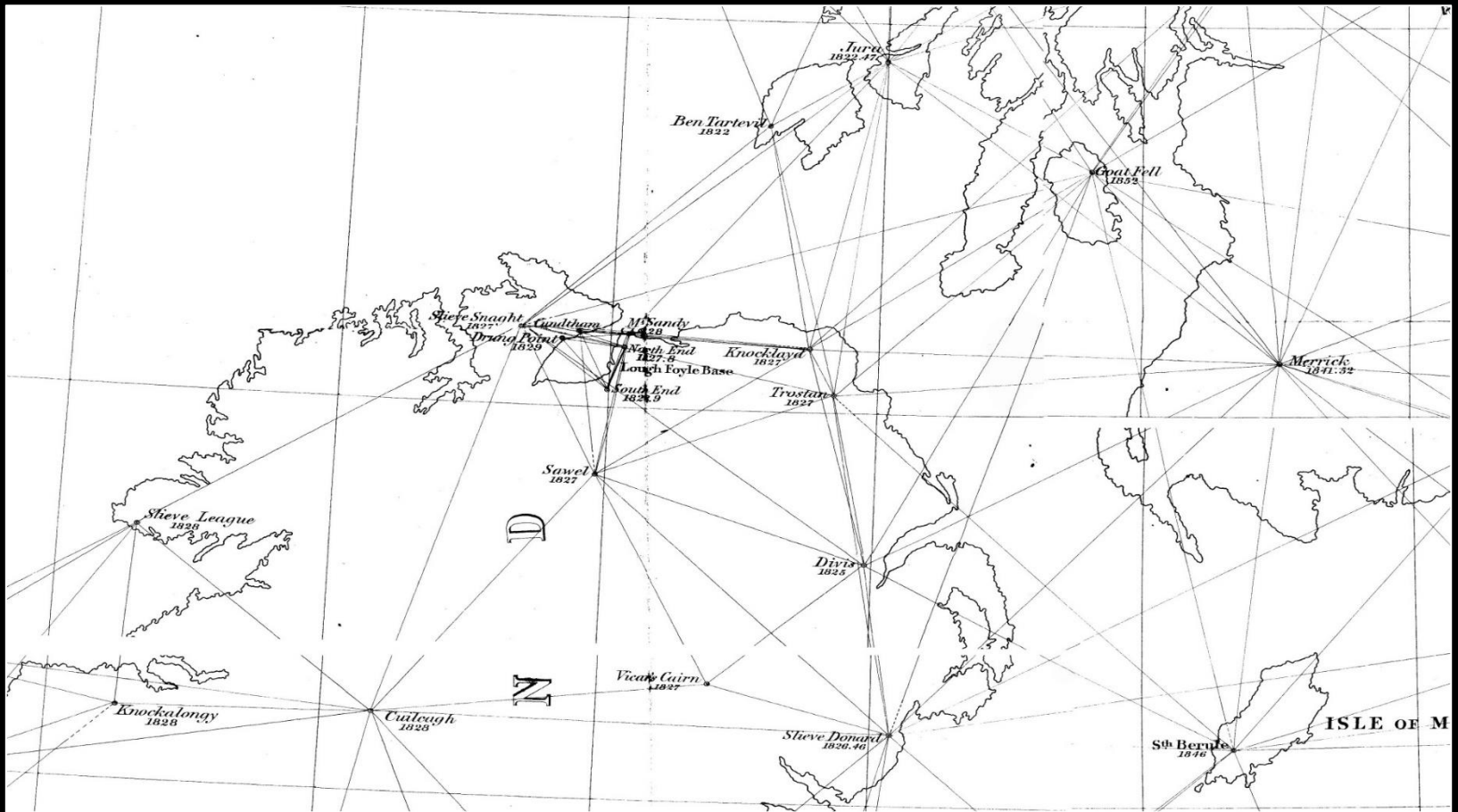
*Content Plot*

Secondly, the content plot contained the townland boundaries plotted by offset measurements. Other major topographical features were also included at this stage.

The final manuscript drawing called the fair plan was then completed. This included all the other topographic features except field boundaries which were specifically excluded from the specification by the Spring Rice Committee. These fair plans were compiled on a parish basis, with north at the top, at a scale of 6 inches to one mile, and engraving began in 1827. Initially there did not seem to be any provision for combining the parishes into a regular rectangular map series. This decision was taken in 1828, and records from this period do not provide the reasons for the decision.

*Fair Plan*





Trigonometrical survey of Ireland of the 1820s-1830s  
linked to Scotland and Great Britain

## Chronology of the survey of Ireland

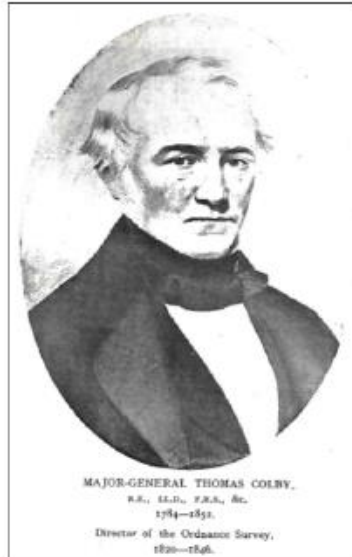
1824 – work begins:  
Arthur Wellesley, 1st Duke of Wellington, instructs Colby to survey Ireland.

Select Committee (Spring Rice) on the 'Survey and Valuation of Ireland', Colby recommends 6-inch-to-the-mile scale for the mapping

Parliament authorise £5000 for the 'Trigonometrical Survey of Ireland'

Col. Colby in Ireland "to acquire a general idea of the country, and to seek a proper place for the measurement of a new base-line" (Close p.107)

Lt-Col Portlock posted to OS to assist Colby in Ireland



"Whilst the trigonometrical work in the south-west of Scotland had been in progress [in 1822-23], various hills in Ireland had been marked by signals and were linked up, by intersection, to the Scottish Hills"

Close, p.107.

"Accompanied by Lieutenant Drummond, Colonel Colby traversed Ireland from north to south in 1824, selecting the most suitable mountains for principal stations, and collecting data for determining probable limits of altitude to be represented in the map." Portlock, pp.122-23.

Colby on Divis:

"the triangles, of which it is the apex, cover a space of about 130 miles in one direction and about 80 miles in the other – no less than 200 Trigonometrical Points were observed from it."

Divis: "the camp on Divis became a school [...] of geodesical [...] science..." "the officer of the day was called at earliest dawn to rise, and kept watch on the weather. If the hill continued clear of fog, he called Colonel Colby at the moment when the light became sufficient to prepare for observation."

Portlock, p.126

**Divis, 1825.** "This station is on the summit of a well-known mountain of the same name, about 3.5 miles west of the Exchange Buildings, in the town of Belfast. It may be approached by the Shanklin Road for rather more than a mile, then by a bye-road skirting the mountain on the east side. The station is marked by a pile of large coarse stones, having a diameter at base of 16 feet and raised to a height of about 5 feet; this truncated section of a pile has a small quantity of bog turf on its top. The centre stone has a smooth upper surface, with a well-formed hole in it, 2 inches deep and 2 inches in diameter. It is level with the surface of the mountain. Divis Station is about 140 links due south of a fence which crosses the mountain in an east and west direction".



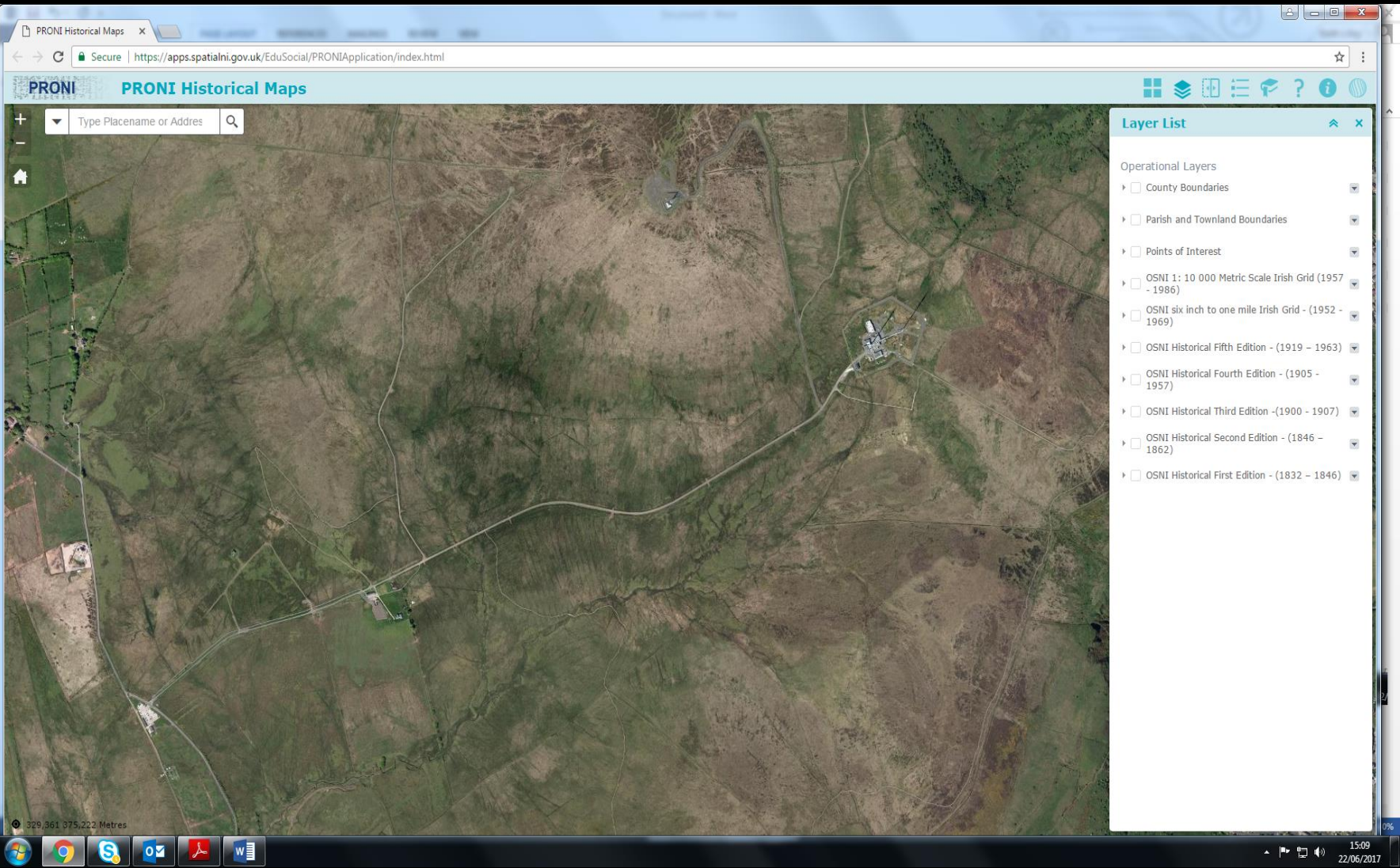
The screenshot shows a web browser window displaying the PRONI Historical Maps application. The browser's address bar shows the URL <https://apps.spatialni.gov.uk/EduSocial/PRONIApplication/index.html>. The application interface includes a search bar at the top left with the text "Type Placename or Address". The main area is a detailed historical map of Northern Ireland, showing various electoral areas such as "SHANKILL WARD NORTH ELECTORAL AREA", "WOODVALE WEST ELECTORAL AREA", and "WOODVALE WEST ELECTORAL AREA". The map is overlaid with a grid. On the right side, there is a "Layer List" panel with the following options:

- County Boundaries
- Parish and Townland Boundaries
- Points of Interest
- OSNI 1: 10 000 Metric Scale Irish Grid (1957 - 1986)
- OSNI six inch to one mile Irish Grid - (1952 - 1969)
- OSNI Historical Fifth Edition - (1919 - 1963)
- OSNI Historical Fourth Edition - (1905 - 1957)
- OSNI Historical Third Edition - (1900 - 1907)
- OSNI Historical Second Edition - (1846 - 1862)
- OSNI Historical First Edition - (1832 - 1846)

The bottom of the browser window shows the Windows taskbar with icons for various applications and the system clock displaying 15:07 on 22/06/2017.

Historic six-inch to one mile (6") OS maps  
of Northern Ireland (1830s-1950s):

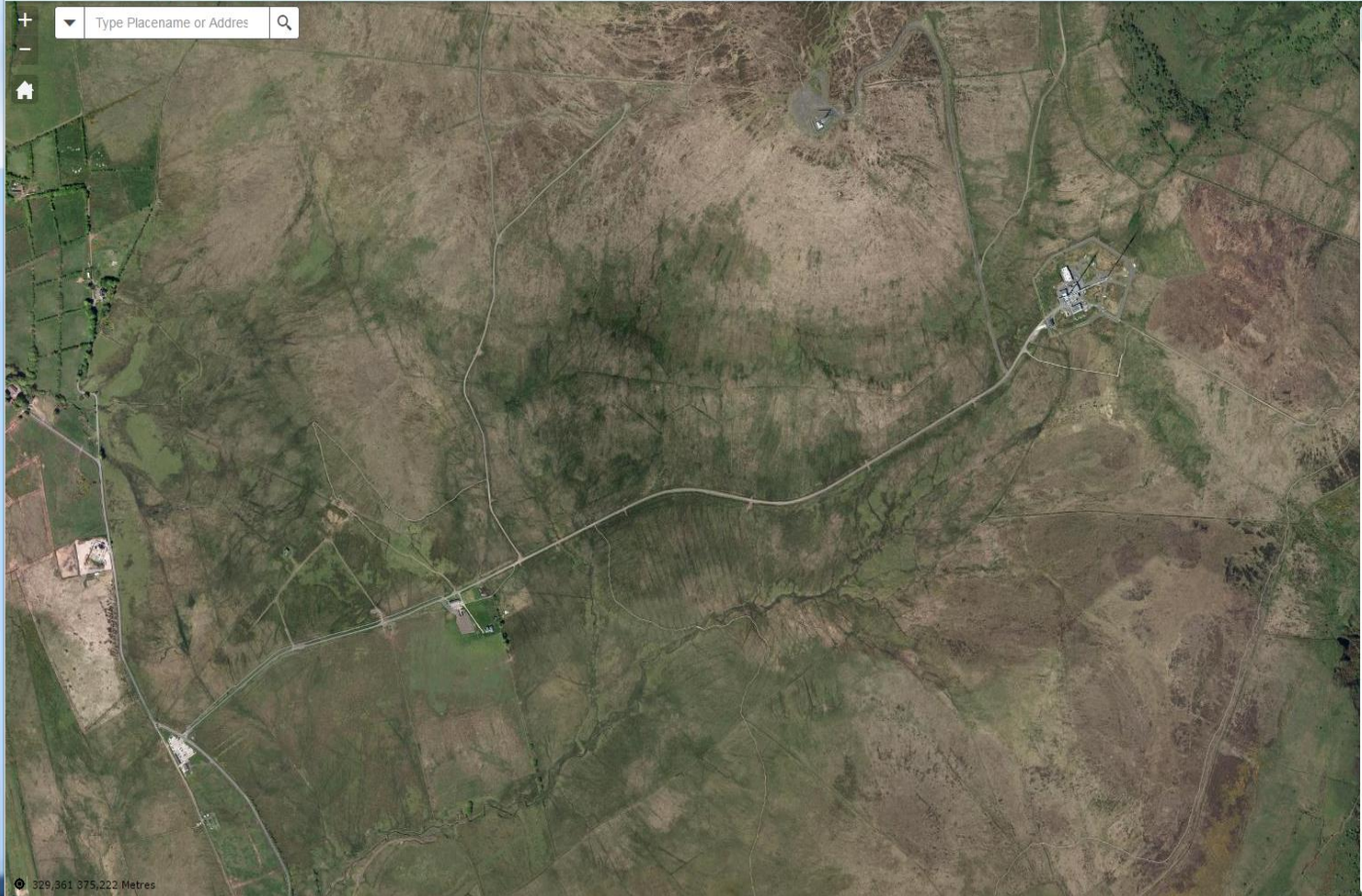
<https://apps.spatialni.gov.uk/EduSocial/PRONIApplication/index.html>



# PRONI Historical Maps



Type Placename or Address



## Layer List

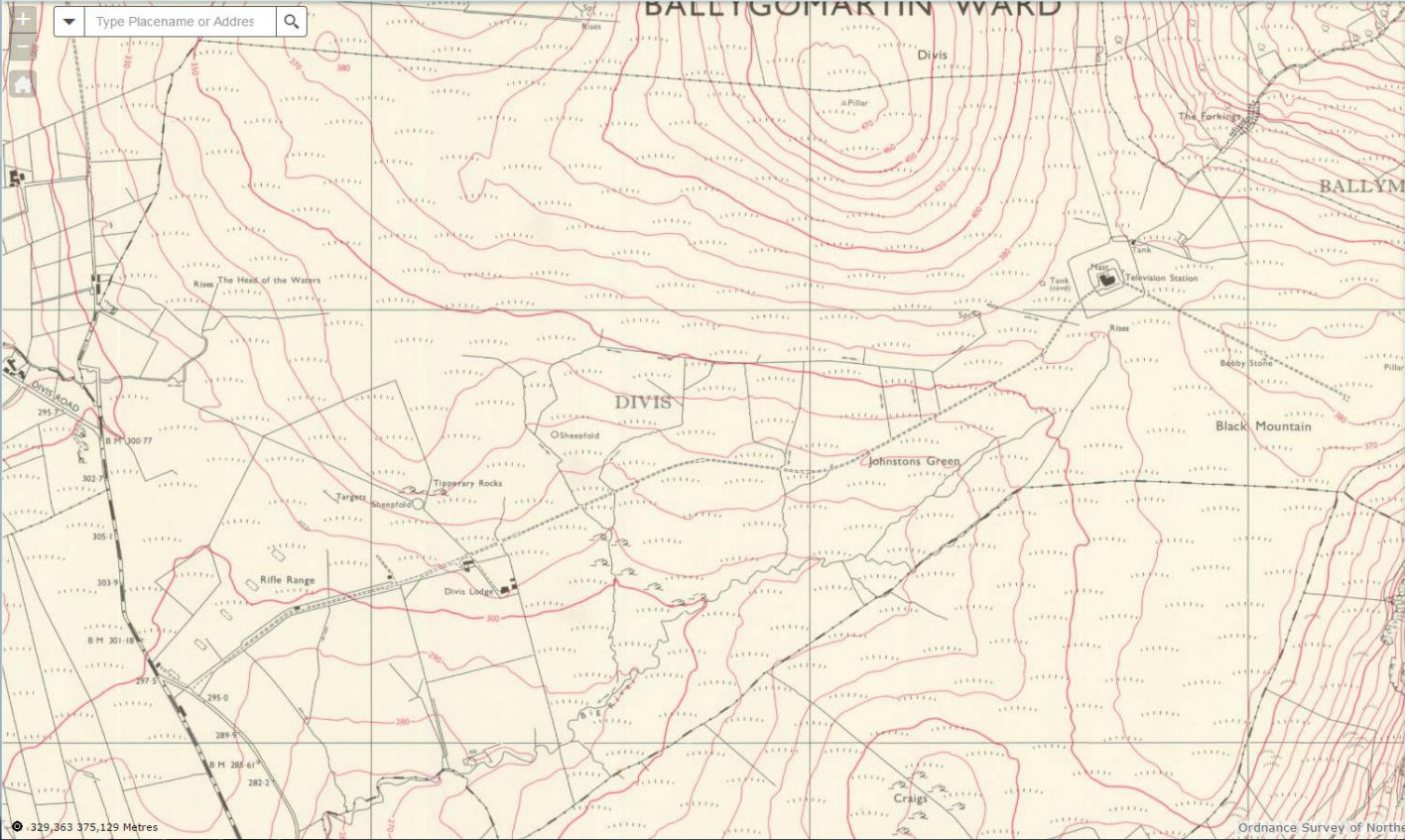
- Operational Layers
- County Boundaries
  - Parish and Townland Boundaries
  - Points of Interest
  - OSNI 1: 10 000 Metric Scale Irish Grid (1957 - 1986)
  - OSNI six inch to one mile Irish Grid - (1952 - 1969)
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  - OSNI Historical Fourth Edition - (1905 - 1957)
  - OSNI Historical Third Edition - (1900 - 1907)
  - OSNI Historical Second Edition - (1846 - 1862)
  - OSNI Historical First Edition - (1832 - 1846)

329,361,375,222 Metres





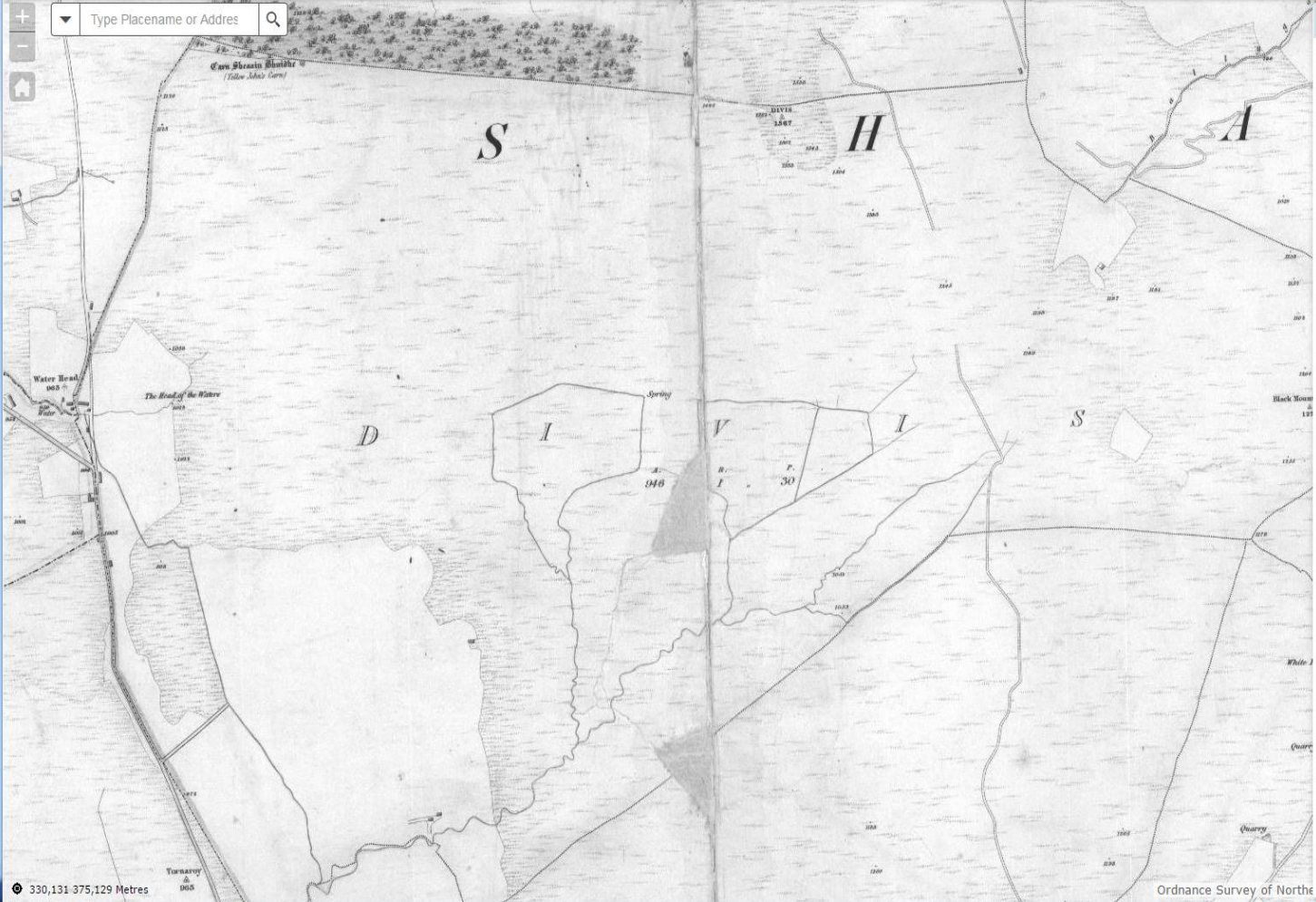
PRONI PRONI Historical Maps



Layer List

- Operational Layers
  - County Boundaries
  - Parish and Townland Boundaries
  - Points of Interest
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Layer List

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- OSNI Historical First Edition - (1832 - 1846)

Type Placename or Address



Layer List

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- OSNI Historical Fourth Edition - (1905 - 1957)
- OSNI Historical Third Edition -(1900 - 1907)
- OSNI Historical Second Edition - (1846 - 1862)
- OSNI Historical First Edition - (1832 - 1846)

Opacity slider for OSNI Historical First Edition - (1832 - 1846)

0% 50% 100%

Move up

Move down

## **2. Exhibition gallery visit – “Purpose and Portrayal-- Early Irish Maps and Mapping”**

A visit to the current Ulster Museum exhibition “Purpose and Portrayal--Early Irish Maps and Mapping” to explore how maps tell us about Ireland’s changing landscapes as well as revealing histories of the mapping of Ireland.