

Finding the Old Homestead in Ireland

Michael F. McGraw

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Introduction

The ancestral cottage has often been considered the Holy Grail of genealogists researching ancestors in Ireland. There are many old cottages, from the famine era and beyond, that still dot the Irish countryside. The years of neglect have exacted a toll on many, others have been reduced to use for storage and some have been demolished. Occasionally there is a pleasant surprise awaiting the intrepid researcher when the cottage has been maintained and is presently occupied, perhaps even by a relative.

The Search Process

The online availability of the Irish Parish Registers has removed a key obstacle that was preventing researchers from locating old family homesteads. The missing piece of information has been the townland. Not all the parish records include the townland but for those families whose records do contain a townland they are one step closer to locating the old family cottage.

Process Step	Comment
U.S. Census or any other available information. Construct the family profile Arrival year (approx.) Marriage year (approx.) Children and birth years (approx.)	Ideal profile: Parents married in Ireland and at least one child born in Ireland after commencement of parish records. Arrival in US after the publication of GV for their parish.
Parish Registers Start with an Ancestry index search	Use the Parish Register index search to find a possible parish and townland from the baptism and marriage records.
Griffith's Valuation AskAboutIreland.com	Find the father of the family in the published GV records for the parish and townland found in the parish registers.
Griffith's maps	Locate the townland on the GV maps (AskAboutIreland.com)
OSI maps and satellite images	These maps have the ability to overlay the circa 1841 GV maps with a modern map to help locate the townland among modern landmarks. It will also overlay a satellite image from the late 1990s up to 2005.
Google maps	This site has satellite images of similar quality to the OSI images, but they are more recent (2016). Some areas even have a 3D manipulation and orientation capability and occasionally a street view of the cottage.

The table above describes a basic process for finding an old family homestead in Ireland. In a perfect world the table lays out a “yellow brick” road, which leads to the old homestead. However, there are potholes and dead ends in this road and some of the data requires knowledgeable interpretation. An attempt is made in the following to describe the problems encountered in following this road and to offer solutions to these problems, where they exist. In some cases the process will not work exactly as described and detours will have to be developed. Discovering a family’s parish and townland of origin are key pieces of information and these are now readily available online in the Irish Parish Registers (<http://registers.nli.ie>).

Although successfully following this process might lead to a particular residence within a townland, it is not positive proof that the person and residence are connected to the family being researched. The likelihood of a connection is high but the lineage of the residence needs further confirmation. This process will narrow the possible residences that need to be investigated further but you will know in which neighborhood to start knocking on doors. .

The Sweet Spot

The two key records that are used in this process are the Irish Parish Registers and the Griffith’s Valuation. The Catholic Emancipation of 1829 marked the official beginning of the various parish registers, although many are found to exist prior to this year and some start later. The Griffith’s Valuation was conducted over many years and this period is usually given as 1848 – 1864. The goal is to find the family being traced in both of these records. The best of all worlds would present you with parents born after the registers had begun in their parish, who married and had one or more children, occupied a piece of land, didn’t move around too much and left Ireland after the GV for their parish had been published. Usually it isn’t possible to know if the family being researched exactly fits this profile until later in the process.

Construct the Family to be Researched

The process is described relative to persons who had immigrated to the U.S. but this initial phase can be adapted to any country. The search usually begins with the knowledge that ancestors had come from Ireland but there is uncertainty about exactly when or where in Ireland they originated. Tracing the family back in the US census records and using any other available records should produce that first set of parents and hopefully one or more children who had been

born in Ireland. This is the family group that will be followed back through the Irish records.

Search the Parish Registers

The Parish Registers will be searched for the names of the family members. Begin with the youngest child in the family born in Ireland and search for that person's baptism record. A convenient way to begin the search is to use Ancestry.com's index search capability. An Ancestry account is necessary to be able to view the parish name in the search results. From here the records of the individuals in the results can be viewed through an Ancestry link to the NLI records or they can be viewed through the NLI site itself. If the county of the family's origin is known the size of the search can be limited to that county. After finding the baptism record of the youngest child a new search is conducted for the next oldest child in the family. After as many of the children as possible have been found it's a good idea to scan the registers manually from the oldest to the youngest, looking for missing children of this same set of parents. Occasionally children died young and didn't make the trip to the U.S. Duplicate names in the same family is the sign of a child who died young as the parents would sometimes reuse the name of a deceased child.

Record any baptism records for this combination of parental names. After it is believed that all the children have been found and if the records go back further in time then go to the marriage records and search for the parents' marriage record.

With a little luck, one of the baptism records or the parent's marriage record will contain the name of a townland. The chance of successfully finding the correct family in the records improves with the number of children born in Ireland.

Griffith's Valuation

If the family was still in Ireland after the publication of the Griffith's Valuation for this parish, it might be possible to find them in the valuation if they were occupying (i.e. renting or owned) a piece of land. Only the head of the household of the chief occupants was listed in the valuation. The head of a second family living in the same household would not be listed since the valuation was all about taxes and only the official occupier was responsible for paying those taxes.

Griffith's Maps

There is a set of circa 1841 Ordnance Survey (OS) maps of very high resolution (6" to the mile) that compliments the valuation records. The marked up maps available today (AskAboutIreland.com) don't accurately reflect the land divisions or occupant assignments found in the published GV data but more typically reflect a point in time about 10-15 years later. These maps were periodically updated by the Valuation Office in Dublin to represent the changes in land occupation. With a little luck it is sometimes possible to reconcile these later maps with the published GV data and hence identify the location of the family within the townland at the time of the GV publication. The number of occupants in a townland decreased dramatically during the years of the Great Famine and continued to decrease in the years immediately thereafter. The recording these changes in the manuscript valuation records was the responsibility of the local valuation officials. The population reductions resulted in consolidation of the land holdings and the subsequent boundary changes and the necessary renumbering of the lots on the maps. The numbers and letters assigned to the various sections of land were not permanent, they changed as the result of land changing hands or farm consolidation.

The Satellite Images – OSI and Google Maps

The final step of the process owes its success to the persistence of the field patterns represented in the stone walls that began to proliferate over Ireland in the late 1700s and early 1800s. Modern satellite imagery reveals that these patterns, very accurately recorded in the 1841 valuation maps, are still present for the most part. It is these satellite images that allow us to zoom in on the location of the old family homestead. Sometimes one is pleasantly surprised to find the old structure still standing. If the Google image has the 3D capability enabled the researcher will find themselves looking at their display as they "virtually" fly around the old family homestead, inspecting it from all angles. If the cottage is located on a road that is still used a "street view" image of the cottage might be available.

Examples

Dennis Carr

Dennis Carr was born in about 1853, in Ireland, and immigrated to Central NY in 1878.

In 1880 Dennis was single and working on the railroad while boarding on the Truxton farm of Michael O'Brien, his future father-in-law. This example did not fit the optimum profile, Dennis married an Ireland born girl but he married her after arriving in the U.S. and therefore all their children had been born in the U.S. A key piece of information was that Dennis had named his first son William, an indication that his father might have also been named William. Since Dennis had settled in an area of Cortland County that contained many persons who had come from around the Upperchurch area of Co. Tipperary, that was presumed to also be the case with Dennis. There were two records for a Dennis Carr found in Kilcommon RC parish records, whose baptismal dates were Nov. 6, 1851 and Feb. 15, 1852. They were both living in Templebeg civil parish which is part of the Upperchurch RC parish but the baptisms took place in the neighboring Kilcommon RC parish. The father of the younger Dennis (Feb. 15, 1852) was named William and his residence was the townland of Kilcommon. The father of the other Dennis was named Patrick and his residence was the townland of Loughbrack. The townlands of Kilcommon and Loughbrack are only a kilometer apart and it is possible that William and Patrick Carr are related. In the Kilcommon RC marriage records it was found that William had married Ellen Carew (Carey) on Jan. 14, 1849 and the residence was Loughbrack which reinforces his possible relation to Patrick Carr. The trail of William Carr found in the GV showed him as an occupant of the townland of Loughbrack. It was a small townland and the numbering on the map was almost identical to the published GV data. The numbering of William Carr's section of lot 1 probably had not changed. The satellite images showed two structures still occupying the locations shown on the GV maps.

Patrick McGrath and Bridget Slattery

Both Patrick and Bridget were born in Ireland as were their seven children who immigrated with them to the 1st Ward on the north side of Syracuse, NY in 1866. This family fit the profile completely and the location of their homestead was found in the townland of Loughourna, Knigh parish, Co. Tipperary.

Patrick Ryan and Mary Dwyer

Patrick and Mary Ryan and their two oldest children were all born in the Upperchurch area of Co. Tipperary. This had previously been determined by another researcher who had

written to the parish priest some years ago. These four persons immigrated to Cuyler, Cortland County in ~1867. This family also fit the ideal profile perfectly. The townland was found in the parish registers in connection with the family's baptism and marriage records. The approximate location of their homestead was found in the townland of Mogland (Moakland), Upperchurch parish, Co. Tipperary. Patrick married Mary Dwyer in Upperchurch on Apr. 27, 1855 and so at the time that the GV data for this parish was finalized in 1851 he was most likely living with his parents. Patrick would therefore not be listed in the GV since he was not the head of the household. There were 10 Ryans among the 11 unique persons listed for this small 180 acre townland so it wasn't possible to pinpoint the exact location of the homestead within the townland.

MOGLAND. (Ord. Ss. 34 & 40.)			
1 { a	Connor Ryan,	Peter Barlow, Esq.	House, offices, & land,
b	Denis Ryan (Tom).		
c	Denis Ryan (Maher).		
d	Denis Ryan (Con).		
e	Thomas Ryan,	Connor Ryan,	House and garden,
2	Norah Ryan,		
3	Thaddeus Ryan,		
4	Denis Ryan (Maher).		
5	Vacant,	Peter Barlow, Esq.	Garden,
6	Thaddeus Ryan,	Peter Barlow, Esq.	Land,
7	Mary Ryan (Denis).	Denis Ryan (Maher),	House,
8	Patrick Guinnane,	Peter Barlow, Esq.	House and land,
9	Mary Ryan (John).	Peter Barlow, Esq.	House and land,
		Peter Barlow, Esq.	House and land,
Total, .			
180 3 5			

11 5 0	1 10 0	12 15 0
5 15 0	1 5 0	7 0 0
5 15 0	0 15 0	6 10 0
5 15 0	1 0 0	6 15 0
5 15 0	0 15 0	6 10 0
0 7 0	0 13 0	1 0 0
0 8 0		0 8 0
0 10 0		0 10 0
	0 10 0	0 10 0
2 3 34	1 0 0	0 15 0
3 0 13	1 0 0	1 15 0
11 3 23	3 10 0	0 15 0
8 3 4	2 10 0	0 10 0
180 3 5	43 10 0	8 18 0
		52 8 0

The Griffith's Valuation listing for the townland of Mogland, Upperchurch parish, Co. Tipperary.



Valuation map of Mogland townland. Lot 1 contains many Ryans. Lot 1 contained 7 Ryans. Lot 1a appears to be the only site that might contain any old buildings. There were seven lots in the GV record but only three on this valuation map. Interest here is on Lot 1 that appears to be little changed.



This is a 2016 satellite view of the same area of Mogland townland as shown in the valuation map above. Location 1a is just above the dog leg in the road on the left hand side of the picture.



This 2009 close up view shows the cottage ruins at the Lot 1a location of the Mogland townland valuation map. While this is not a perfect shot it does show that some ruins exist at this site. The Google Street View drivers film everything they can see from the road, they are not looking for old cottages.

Summary

As can be seen from the examples above, the process for finding old homesteads is not always successful in finding the exact cottage. Even if the family perfectly matched the ideal profile success is not guaranteed. In the first example, Dennis Carr nowhere near matched the profile but in his case the process succeeded in finding the location of his ancestral cottage by inferring that his father's name was William.

References:

The IreAtlas Townland Database

<http://www.thecore.com/seanruad/>

The site for searching a Parish Register Index

<http://search.ancestry.com/search/db.aspx?dbid=61039>

The Irish Parish Registers

<http://registers.nli.ie>

Griffith's Valuation and Maps

<http://www.askaboutireland.ie/griffith-valuation/index.xml>

This site has the capability to overlay a modern roadmap over the valuation map so that the area can be located relative to modern landmarks.

The Ordnance Survey Map site

<http://maps.osi.ie/publicviewer/#V2,578432,756724,1,10>

This site allows the viewing of a specific area through the years on several different maps. There is the modern Street Map which contains the outlines of the modern structures occupying the area. The satellite views are Ortho 1995 (B&W, crude), Ortho 2000 (Color) and Ortho 2005 (Color). The Historic 6" and 6" (B&W) are the 1841 Ordnance Survey (OS) maps that are the basis for the valuation maps associated with the Griffith's Valuation. However, they don't contain the lot markings that were added by the valuation officials. There is an overlay capability that allows the Street Map to be displayed over the selected map with the transparency controlled by a slider. When viewing the 1841 maps this overlay capability allows the user to see which 1841 structures survived until the present day.

OSI site with the Viewer located at the townland of Glenreagh, Holycross parish, CO. Tipperary

<http://maps.osi.ie/publicviewer/#V2,606879,655689,11,0>

Google Maps

Do a Google search on an Irish village near the townland of interest. Click on the map that will appear on the right on the results page. Zoom out at first to get your bearings and then navigate to the townland of interest. Zoom in a bit and then switch to satellite view. The satellite views from Google are of mixed quality. In the area where Moyaliff and Holycross civil parishes come together the extent of this quality spectrum is on view. Moyaliff is so blurred that it is useless but to the east the resolution and exposure are excellent and still further east it is badly under exposed with the map being very dark. Google Earth displays this same map. However, even in the Moyaliff section the Street View images are sometimes available. So one could navigate to the townland with the map, switch to satellite view and go to Street View.

"Thomas Long Land Lease – May 1839"

<http://mcgrathsearch.com/files/Thomas%20Long%20Land%20Lease%208-6-11.pdf>

"The Neighbors in Ireland"

<http://mcgrathsearch.com/files/The%20Neighbors%20in%20Ireland%2012-05-11.pdf>

Measuring Areas on Google Satellite Images.

<https://www.freemaptools.com/area-calculator.htm>



An Example of the Evolution of the Lot Numbers During the Great Famine

The information contained in the House books and the other pre-Griffith field books allow a unique look back into the occupation of land during the final years of the Great Famine. This was a rapidly changing situation as people died or emigrated from Ireland.

The Raheen, Holycross parish House Book

The Holycross House Books contained far more information than what is displayed in the table below. The information chosen for this table was meant to show the numbering sequences, the different occupants and the lease information. When the names of new occupants were entered into the House Book the old occupants' names were lined through but the lease information was left untouched. This could be interpreted to mean that the new occupant took over the old lease. Unlike the Moyliff House Books, the Holycross House Books listed lots that were land only.

House Bk Nos.			GV	Raheen	Area (Irish)			Rate/Acre			
1st	2nd	3rd	Prime	Name	A	R	P	£	s	d	Tenure
1	1a		1a	Lawrence Dwyer	11	0	0	0	30	0	Lease for 2 lives
2				Lawrence Power	11	0	0	0	30	0	Lease of 1 life
	1b		1b	John Dempsey							
3	4a		4	James Dwyre	8	0	0	3	0	0	for 1 life
4	3a		3	Samuel Hill	5	0	0	8	6	2	
5	2			John Kelly of Lisnagrough							No house
6	10a			Kennedy Long	15	0	0	0	35	0	Lease of 3 lives
		2a	2a	John Conway							
7				John Long	15	0	0	0	35	0	at Will 3 lives
	7a		7a	Patt Long							
8	5			Dick Long & Dan Ryan							1/2 each
11	7	6b	6b	Lawrence Long Sen.							Rent free
9		6		Pady Long							1/2 - Land only
9				Dick Long							1/4 - Land only
9				Dan Ryan & Larry Long							1/4 - Land only
10				Dan Ryan	10	2	0	0	36	10	Lease of 3 lives
		6a		Mary Ryan							
11	7b			Larry Long							
12	7a			Patt Long - Farney Bridge	13	2	0	0	36	10	same lease
9				Richard Long	11	0	0	0	36	10	Same Lease
	6c		6c	Lawrence Long Junr							
13	8			Dick Long & Dan Ryan							1/2 each - Land only
14	9			Patt Long of Farney Bridge							Land only
15	15	8		Richard Long Farney Bridge							Land only
			8	Michael Long							
16	16a		5ABac	Edward Wilson, Esq.	40	1	37	0	20	0	
17	16c		5cb	Harry Cormack & Jane Allen							1/2 each
	16d		5c	Pady Dwyre							
19	16e		5d	John Consodine							
18	16g		5f	Peggy Gleeson or Crefton							
20	15	8a	8a	Pady Ryan							Under the same roof and only one door with H. Cormack
25	12a			Jack Butler or Widow Walsh							Rent free

This table was taken from "The Neighbors in Ireland" and it illustrates the evolution of the lot numbers over an approximately three year period during the process of gathering information from the townland of Raheen, Holycross parish, Co. Tipperary. This was used in constructing the Griffith's Valuation.

The table above shows the evolution of the lot numbering in the House books that were used in the creation of the published GV. The teams that were compiling the information for Griffith passed through the same areas multiple times and the occupant's names were updated when they passed through. This set of renumbering events occurred over a period of 2-4 years. This is a very rapid evolution compared to that represented on the valuation maps (10-15 years) and reflects the effect of the Great Famine on the small farmers in Ireland. The House books allow the researcher to reach back into the shadows of the famine to find ancestors who had fled Ireland prior to the publishing of the GV. The following description is from "The Neighbors in Ireland."

The names aligned to the left in the "Name" column were the original ones entered when the House Book information was first gathered beginning in mid-1848. They were originally all numbered sequentially. These numbers are shown in the "1st" column under the "House Bk Nos." Now it doesn't always happen that the House Book contains revisions but the ones examined from Holycross parish did. The House Books for Moyaliff parish did not. When one occupant left and another moved in as a result of buying the lease, getting a new lease or whatever, the old occupant's name was lined out and the name of the new occupant was written in above the old one. For clarity in the table above the new name appears under the old name and is indented. The old name is struck through with a single line. This House Book contained three levels of numbering: the original and two levels of revisions. There was also a substantial amount of information on the description of the land held, including the rent rate and the tenure under which the land was held. None of this lease information was required to be recorded in the House books. From the Tenure (Perambulation) Book for Raheen it could be seen that the Immediate Lessor for these lands was William B. Armstrong, Esq. In the Griffith's Valuation it could be further seen that Armstrong held his land from Rev. Garrett Wall of Trinity College, Dublin.

The gray bars, starting in the "1st" column on the left in the table above indicate the names of persons who were not associated with that house in the initial survey and who later took over from a previous occupant. The numbering stops in the row for the old occupant and picks up in the row for the new occupant. In Raheen townland, for this time period, most of the new occupants just took over the entire holding from the old occupant.

Tracing the revision levels of the numbering sequences found in the Raheen House Book was a bit tricky and took a little guessing and some trial and error. The surveyors creating the original House Book just numbered the entries sequentially, in the order in which they interviewed the occupants. Sequentially numbered individuals were not necessarily next-door neighbors.

The Evolution of the Lot Numbers of Glenreaghmore townland of Holycross parish – from the House books to the Valuation maps

House/Tenure Book						GV Table		GV Map	
No.	Name	A	R	P	Acres (Statute)	Acres (Statute)	GV Table	Est. (Statute)	Map No.
1	William Fell	8	0	0	12.96	13.32	1. James Long	26.7	1
2	William Shea	8	0	0	12.96	13.06	2. James Long		
3	John Meara	10	0	0	16.20	32.34	3. Richard Comerford	31.6	2
4	William Ryan	9	3	0	15.8				
5	Thomas Doyle	10	0	0	16.20	15.63	4. Thomas Doyle	14.7	3
6	Edmond Cass	13	0	0	21.1	103.8	5. ABC Edmund Cass	118.4	4AB
	Edmond Cass	27	0	0	43.7				
7	John Kennedy	29	0	6	39.0				
					8.0	16.20	7. Mrs. Murphy		
8	Patt Davorn & Malachy Ryan	10	0	0	16.20	47.00	6. Mary Gleason	45.5	5
9	Thomas Fanning	19	0	0	30.80				
		143	3	6	232.9	241.35		236.9	

This table represents the culmination of the effort to trace the land information for Glenreaghmore from the House Book through to the GV Map. From *The Neighbors in Ireland*.

The total area calculated from the House Book numbers comes up a little short of the area in the GV itself. The 143.8 Irish acres converts to 232.9 Statute acres. Compared to the 241.4 Statute acres in Glenreaghmore there are 8.5 Statute acres missing. These can be identified as the acres held by Mrs. Murphy in the GV Table. The missing acres probably originated with Edmund Cass. His entry in the House Book noted that he had “abt. 40a.” The size of eight of the ten lots were given as a whole number of acres, implying that they were probably also estimated rather than actually measured.

The GV Map acreage numbers were estimated from the actual map using the square counting methodology and yielded a value of 236.9 acres. This differed from the actual value by only 1.8%. The second to the last column contains these Farm Lot numbers from the GV Map.

So here is a complete tracing of the land (Farm Lots) from the House Book to the GV Maps. The holdings of William Fell and William Shea maintained their separate identities as Farm Lot #1 and #2 and were taken over by James Long. The Tenure Book order of Shea and Fell seems to have been the one that propagated into the GV Table. This will be seen in more detail further into the analysis. The holdings of John Meara and William Ryan were merged together and were taken over by Richard Comerford and became Farm Lot # 3. Thomas Doyle maintained his holding that became Farm Lot # 4. Skipping ahead to John Kennedy, his 47 acres were split with Edmond Cass picking up 39.0 of his acres while maintaining

his own 64.8 acres. The remainder of Kennedy's property, 8.0 acres, went to Mrs. Murphy whose land was Farm Lot #7. Finally the 16.2 acres of Patt Davorn and Malachy Ryan and the 30.8 acres of Thomas Fanning were combined to become the 47.0 acres of Farm Lot #6 belonging to Mary Gleason. With just this information it isn't possible to assign names to the farms on the GV Map. That will require the information in the Cancelled Books to continue the chain and that will be demonstrated near the end of this section.

From the measurement of the areas of the Farm Lots in the GV Map it could be seen that Lot #1 & #2 in the GV Table were combined and became the Lot #1 on the GV Map. Lot #3 and #4 maintained their size and were renumbered #2 and #3 respectively. Lot #5 became #4 and the ABC structure became just AB with the 16 acres of Farm Lot #7 being absorbed into Lot #4. Farm Lot #6 maintained its size and became Farm Lot # 5 in the GV Map.

Reconciliation of the Valuation Maps with the GV Lot Designations.

Assumption

This method is a substitute for following the actual evolution of the lot numbers in the Cancelled Books, which presently requires a trip to Dublin, Ireland. The lot designation (numbers and letters) changes were made first in the manuscript valuation book and then the maps were changed accordingly after a certain interval. If the lots are adjacent in the GV they might undergo consolidate. Consecutively numbered lots, most of the time, are found to be placed adjacent to each other on the valuation maps. There is a tendency for occupants to buy (rent) adjacent property rather than a distant parcel of property across the townland.

Using Landmarks to Identify Lots

A lot might contain a graveyard or church or it might be church land that was typically labeled “Glebe.” The largest lot if it is substantially larger than all the others in the townland will stand out. These physical features will allow some of the GV lots to be identified with their corresponding lots of the valuation map.

Consolidation Patterns

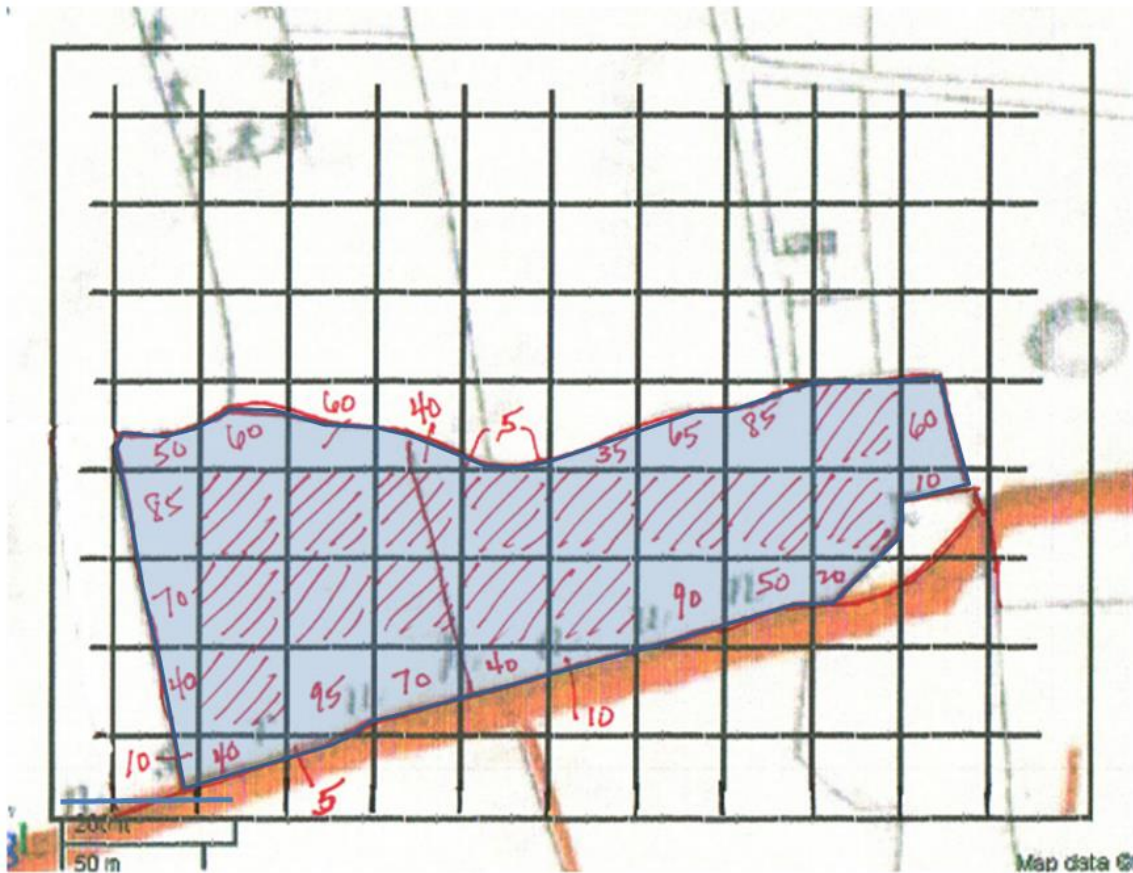
It’s possible to develop (discover) a set of guidelines to govern the GV designation consolidation patterns. The original numbering of the lots took place while the townland was being surveyed in the preparation of the GV. Typically the numbering began at the north end of the townland and proceeded left to right and south. As a result consecutively numbered lots, most of the time, are found to be placed adjacent to each other on the valuation maps. Lot numbers that appear out of sequence are a sign of renumbering. There is a tendency for occupants to buy (rent) adjacent property rather than a distant parcel of property across the townland. Therefore lots tend to grow in size by absorbing adjacent lots and fields.

Calculation of Lot Area Via Counting Squares

In the document “Thomas Long’s Land Lease – May 1839,” a process is described in detail for comparing the GV lot sizes with estimated valuation map lot sizes determined via the square counting methodology. This is a very laborious and time consuming process. There are inevitable errors that occur in the process of calculating the areas and this approach is very unforgiving. Recalculation requires that all the previous work be redone. The process described below easily overcomes this problem. Recalculation of all the field areas, as required by adjustments to the map scale factor or other errors, can be completed in seconds.

An Irregular Polygon Area Excel Macro

The creation of an efficient method to measure the areas of the various lots and sub-lots (fields) on the valuation maps can facilitate the unwinding of the consolidation process. The area measurement process begins with the pasting of a map of known scale onto a worksheet. The Map Scale Factor is calculated (feet/inch) and then entered into the labeled cell. A polygon is drawn around the area to be measured. Then the polygon is selected and the macro ProcessMapAreas is called. If only one area is selected this macro performs the indicated calculations and the area and perimeter results are displayed in a table on the worksheet in several different units. If two or more areas are selected the macro will combine the areas and display the total area results in statute acres and acre-rood-perch units.



The above is a diagram from “Thomas Long’s Land Lease – May 1839” demonstrating the square counting methodology.

The grid of squares represents the previous method for obtaining estimates of the area of the selected region. The red numbers around the perimeter indicate the percentage of the whole square that is contained within the area to be measured. The shaded light blue area is the polygon whose area is calculated in the newer method.

Old method – Counting Squares: 6-01-38 – Each square is 1 sq. Rood. Four squares is 1 acre.
Four small squares represent an area of 200 feet wide by 217 feet high.

New Method – Polygon Area: 6-0-33.

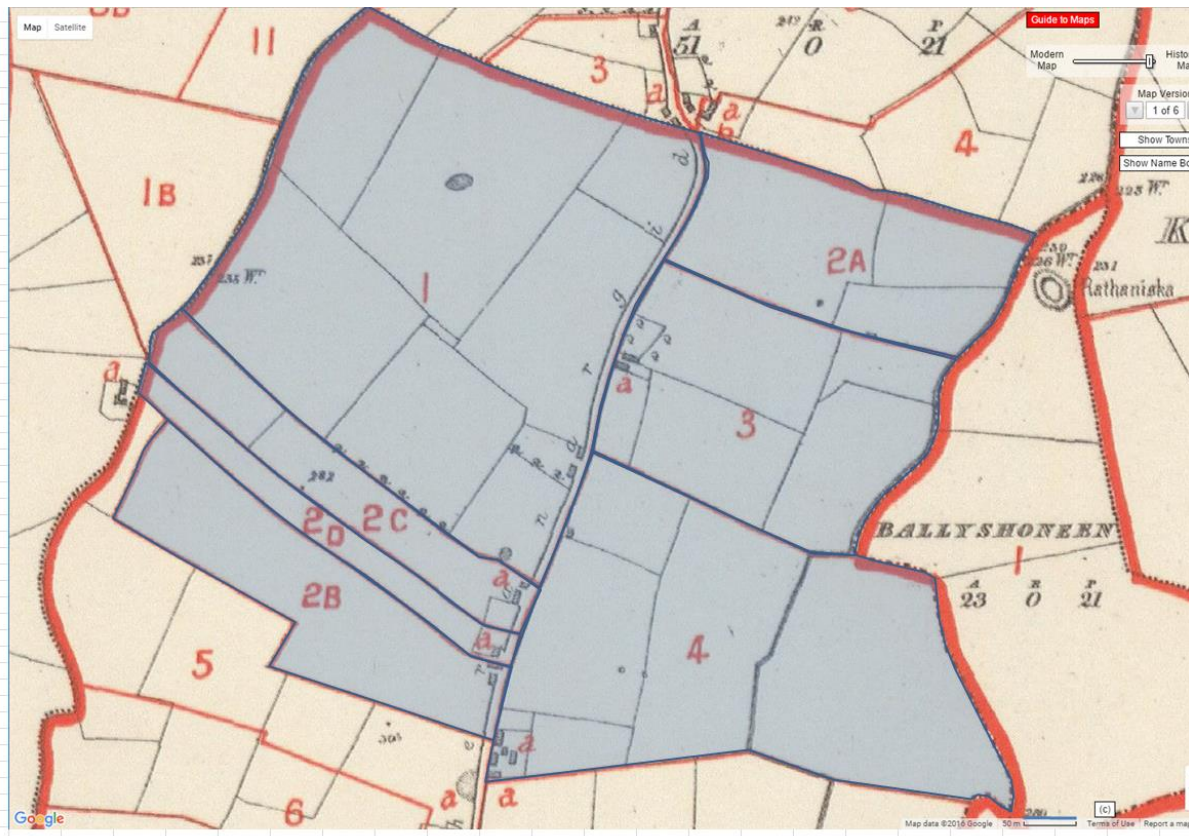
For achieving accuracy, a key requirement is to precisely know the scale of the map. This is accomplished by having a scale indicator included on the map that is pasted into Excel. In the diagram above there is a scale representing 200 feet in the lower left hand corner. In the older square counting method the grid was stationary and the map (and scale indicator) was increased or decreased in size until the scale indicator spanned exactly two squares. The blue line above the scale indicator is a part of the newer polygon method. A line drawing object is placed above the scale indicator and its length was adjusted until its length matched that of the scale indicator. The length of the line in inches is found among the properties of the line. The Map Scale Factor is calculated by dividing the scale indicator in feet by the line length in inches. The use of feet as

the map unit of length is built into the conversion constants in the software that calculates the total area.

Resolving the Map Lot Numbers into the GV Numbers

The Ballynaclogh townland in the civil parish of Ballynaclogh, Co. Limerick was chosen to demonstrate this new polygon area measuring method. The plan is to identify the lots in the GV with the corresponding lots on the valuation map. In some cases this will be done by breaking the lots into individual fields (shown by the field boundaries) and reassembling these fields to make lots that agree with the GV lot acreage numbers.

The first step was to create two tables in a worksheet. The first table was for the GV data and the second was for the valuation map data. The first table has six columns: No., Landmark (if any), Acre (Whole), Rood, Perch and Acres (Decimal). The second table has eight columns: No., Landmark (if any), Acre (Whole), Rood, Perch, Acres (Decimal), Freeform No. and Refresh Order.



The northern portion of the townland of Ballynaclogh is depicted in the valuation map above. The lots 1-4 have been covered with shaded polygons whose areas can be measured.

Adjusting the Map Scale Factor

After the areas of all the lots in the townland have been measured they are totaled and compared with the GV total area. The ratio of these two areas is used to adjust the areas in the second table so that the adjusted total area is now the same as the GV area total. This removes the errors introduced in trying to draw a line equal in length to the scale indicator and the fact that the length of the line in this case, given in inches, only has 2 or 3 significant figures.

Ballynaclogh townland						
GV						
Map No.	Comment	A	R	P	Acres	
1		34	2	15	34.594	
2A		9	1	20	9.375	
2B		7	3	20	7.875	
2Ca		5	1	29	5.431	22.681
3a		13	1	36	13.475	
3b		0	0	17	0.106	13.581
4a		22	3	2	22.763	
5a		3	0	24	3.150	
6a		11	1	31	11.444	
7A	Largest	2	0	8	2.050	
7Ba		54	0	30	54.188	56.238
8a		8	3	34	8.963	
8b		0	0	0	0.000	
8c	Graveyard	0	1	37	0.481	9.444
9a		19	3	6	19.788	
10		12	2	28	12.675	
11	Glebe	7	1	30	7.438	
12		11	1	11	11.319	
13a		41	3	35	41.969	8a
14a		3	0	17	3.106	
15a		3	1	34	3.463	
16a		3	0	39	3.244	9.813
17a		1	2	34	1.713	
17b		0	0	0	0.000	
17c		1	3	0	1.750	3.463
18a		1	1	30	1.438	
19a		5	0	18	5.113	13a
20a		4	0	8	4.050	
	Temp-Total	279	33	593		
	TOTAL	290	3	33	290.956	

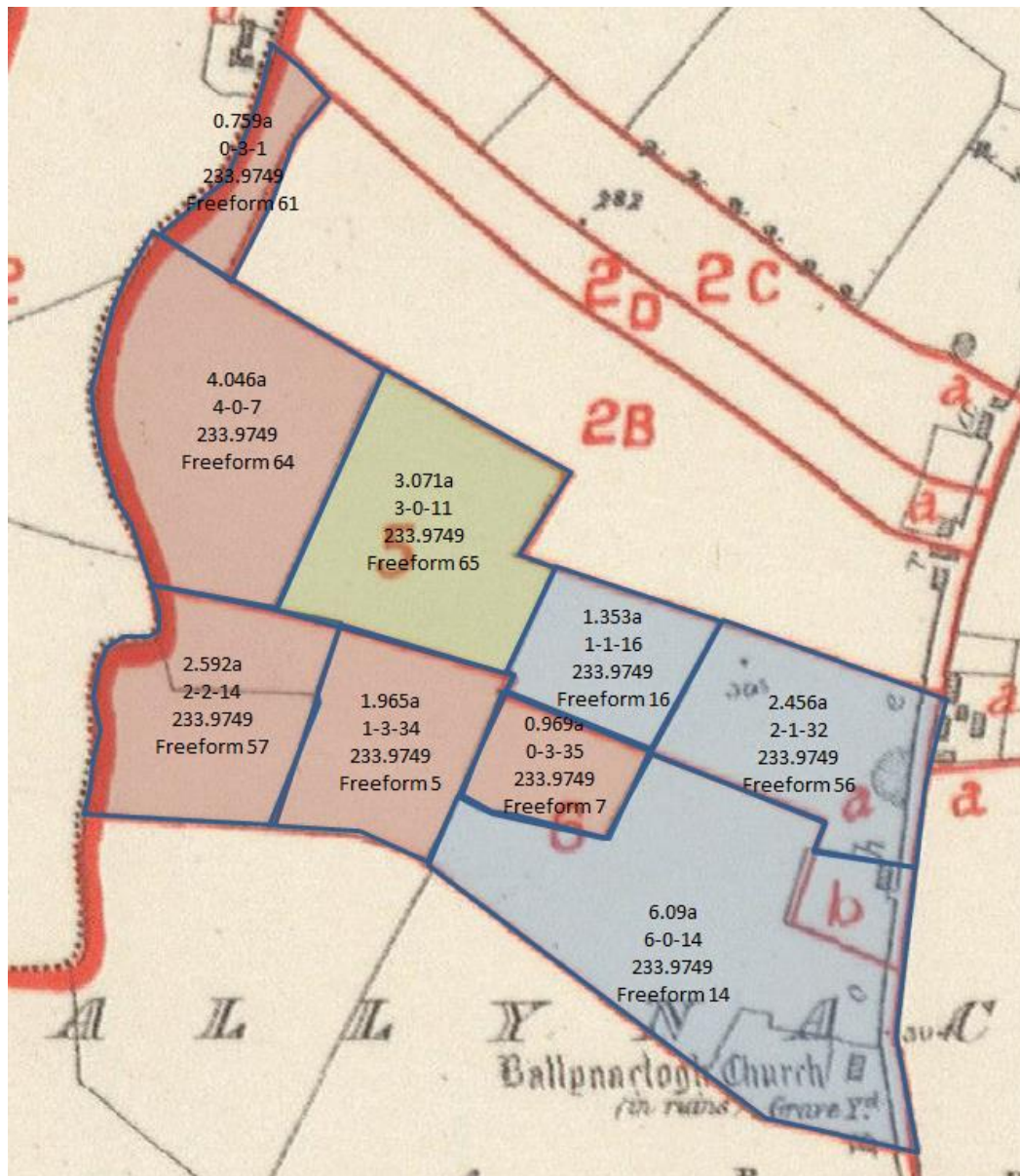
The A-R-P values in this table are filled in manually and the Acres values are calculated using the A-R-P values. The data in the table above are from the published GV data for Ballynaclogh. The color coding identifies the link corresponding to the measured lot in the valuation map table. Some of the lots are grouped within a black rectangle and the combined areas are shown in the 7th column.

		Map Scale (Don't change number of display digits)					
Valuation Map		233.9749				FreeForm	Refresh
Map No.	Comment	A	R	P	Acres	No.	Order
1		34	3	18	34.865	35	4
2A		9	1	16	9.353	38	6
2B		8	1	16	8.352	41	9
2Ca		5	1	9	5.308	40	8
2Da		2	3	23	2.894	42	10
3a		13	0	16	13.102	39	7
4a		22	1	28	22.428	36	5
5a & 5b		12	1	20	12.376	45	11
6	Graveyard	10	3	35	10.971	27	21
7a	Largest	54	0	39	54.247	46	12
8a		46	0	19	46.121	26	20
9a		19	3	4	19.780	31	2
10		12	0	30	12.193	32	3
11	Glebe	7	1	35	7.473	1051	1
12		11	2	3	11.524	47	13
13a		4	3	33	4.959	49	14
14a		3	1	11	3.320	50	15
15a		3	2	21	3.635	51	16
16a		3	1	38	3.491	52	17
17a		3	0	19	3.122	54	18
18		1	1	31	1.444	55	19
	Temp-Total	281	28	464			
					290.958		
	TOTAL	290	3	24			
		This gives 290.90					
		1.0 Perche = .00625a					
	Refresh Valuation Map Table				New Ratio	1.00001	

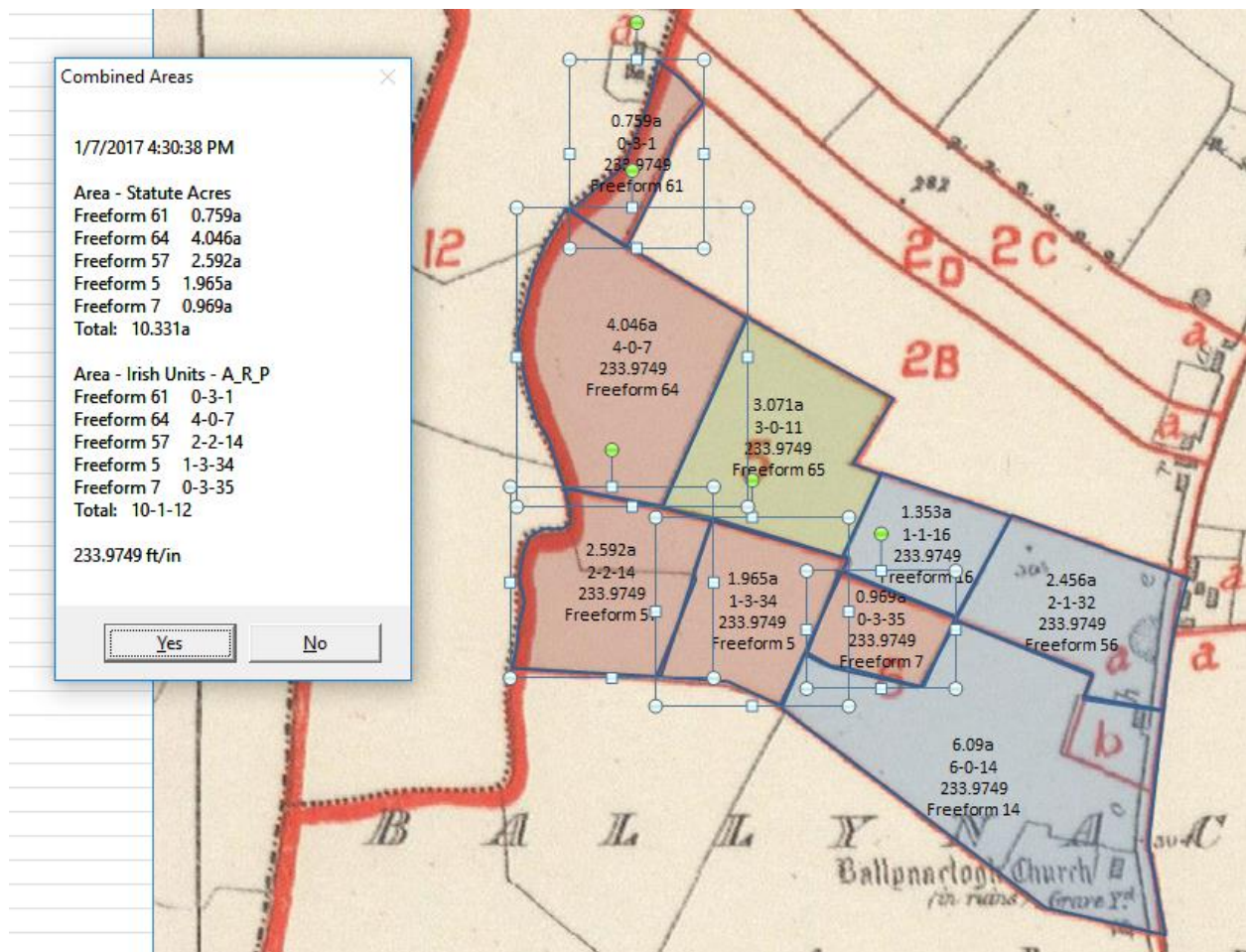
The table above contains the measured areas of the lots on the valuation map. The values in the Acres column are from the area calculations from the constructed polygons. From these values the A-R-P values are calculated. Each of the polygons on the MS map sheet has a unique Freeform number. After the map scale factor is changed all the shapes are recalculated and the final choice polygons for each of the valuation map lots (selected by placing their Freeform number in the seventh column) are recalculated. The recalculation is performed by selecting all the polygons on the corresponding MS map sheet and pressing the "Refresh Valuation Map table" button. The eighth column is the order in which the area values have been refreshed which can be useful for trouble shooting purposes. The data shown above represent the situation after the map sale factor has been rescaled. The actual townland area of 290.956 acres is compared to

the calculated townland area of 290.958 acres. Taking the ratio gives 1.00001. It is seen that the valuation map area total has been recalculated and the agreement with the GV actual area is only limited by round off error.

Several of the valuation map lots could be traced back to the GV data by using landmarks, relative location within the townland and lot size. This will allow the researcher to match up the occupants listed in the GV with the lots shown on the valuation maps, in most cases. This is the key step in finding the homestead location on the satellite images.



The lots 5 & 6 on the valuation map have been resolved into the GV lots 5(Green), 6 (Red) and 8 (Blue). The area differences show that the valuation map lots 5 & 6 are 3.1% smaller than the GV lots 5, 6 & 8. Comparing the three field groups shown above with the three GV lots gives an average RMS error of only 3.7%.



This demonstrates a time saving device that is useful in calculating the total area of a collection of selected fields. If two or more polygons are selected when the map receives a mouse click this area addition routine is called.