

An Chomhairle Oidhreachta The Heritage Council



Westmeath Industrial Heritage Survey



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WESTMEATH COUNTY COUNCIL



PROJECT NAME

Westmeath Industrial Heritage Survey

CLIENT

Heritage Office, Westmeath County Council, and The Heritage Council

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ABBREVIATIONS USED

Doahrrga	Dept. of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
NMI	National Museum of Ireland
NMS	National Monuments Service
OS	Ordnance Survey
RMP	Record of Monuments and Places
NIAH	National Inventory of Architectural Heritage
LAP	Local Area Plan

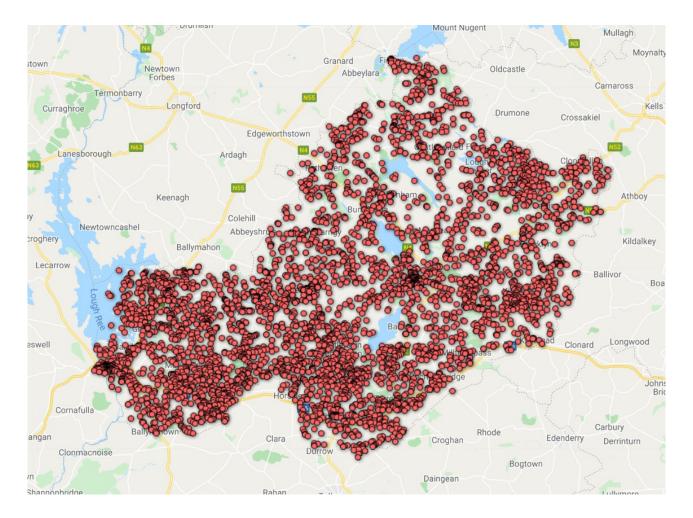
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Section 1 Introduction

Report summary

This survey has identified 4,856 industrial heritage sites in Westmeath based on cartographic and historical information, and existing surveys of historic monuments. The location of each of the sites is provided so that the data can be viewed on a GIS system or online map application such as Heritage Maps. None of the sites has been visited and the survey does not consider what proportion of these industrial sites may still survive. As such, this is the first stage of a larger project, which should visit the sites and assess their significance with a view to protecting those sites deemed worthy of protection in future Westmeath Development Plans. Following meetings with local community groups, seven industrial heritage sites were selected for further examination. The sites chosen reflect local heritage group interests, and are intended as an example of how to use the database to launch future research. These sites are: Athlone Woollen Mills, Athlone Workhouse, Gneevebane Limestone Quarry, Locke's Distillery, Moate Textile Mills, Mullingar Railway Station, and Multyfarnham Corn Mills. A discussion of the history and significance of these seven sites raises issues pertaining to Westmeath's overall industrial development and industrial heritage.



Source examined	No. of sites identified
OS Maps 1830s 6-Inch Edition – 40 Sheets OS Maps 1910s 25-Inch Edition – 40 Sheets Historic features database OSI Record of Monuments and Places (RMP) National Inventory of Industrial Heritage (NIAH) Ó Conlain's register of Westmeath mills	1,179 2,995 1,872 103 386 223
Total	4,856

Methodology

The main sources utilised for the survey are presented in the table above.

Duplicated sites were combined where possible. This was not possible in every case - for example where the Record of Monuments and Places lists an unlocated corn mill in a particular townland, and there is a record of an 19th century textile mill in the same townland, it is not possible to establish whether this represents one mill or two mills. In such cases, therefore, the database lists both sites separately. Another source of duplication is where the NIAH lists several different features of a particular complex, for example a workhouse, which would otherwise have been listed only once in the database.

Each of the identified sites was assigned a category and a type (a sub-category within that category to assist searching and filtering). These were agreed with the Westmeath Heritage Office and project steering group at the start of the project and are based on previous surveys in other counties to allow for comparisons at a national level.

A name was entered where relevant, and database fields were filled in on the site's depiction on map sources and presence on existing registers. Each site was located in the townland (as per the 1830s maps, as this is the clearest depiction of the Irish townland system), parish where relevant (ie when two townlands have the same name). Coordinates were given in ITM and long/lat to allow for mapping on GIS or online mapping apps. Where historical references to a site were encountered, the dates only of the references were entered, and a listing for the exact reference will need to be followed up on the relevant register. Local community input was critically important for this project. Local societies were contacted and requested for input, which they provided generously. Meetings with the North Westmeath Historical Society in Castlepollard and a Heritage Week event at the Kilbeggan Grand Canal Warehouse provided an opportunity to explain the project and receive information on industrial heritage sites. The information from these meetings allowed for the selection of the seven sites forming the bulk of this report, and on the themes discussed in the following sections.

One of the most helpful outcomes from this community engagement was the assistance of Grainne Ó Conlain. She provided the project team with Michael Ó Conlain's detailed notes on the mills of Westmeath. Michael had carefully compiled folders of information on each known mill in Westmeath, and these formed the basis of the record of mills in the database.

Summary of results

All sites were classified according to the categories and sub-categories. shown in the table on the following page.

In terms of transport sites, where a bridge was obviously associated with a single category of road, rail or canal it was listed as that subcategory, otherwise it was listed as a 'bridge'.

In terms of mills, distilleries and breweries were listed as a subcategory of mills rather than manufactories because they are usually associated directly with mills in Westmeath. Mills were categorised both by function and type. Where a mill's type is listed as unclassified, it is almost always a water mill. Where a mills' function is listed as unclassified, it is most likely a flour or

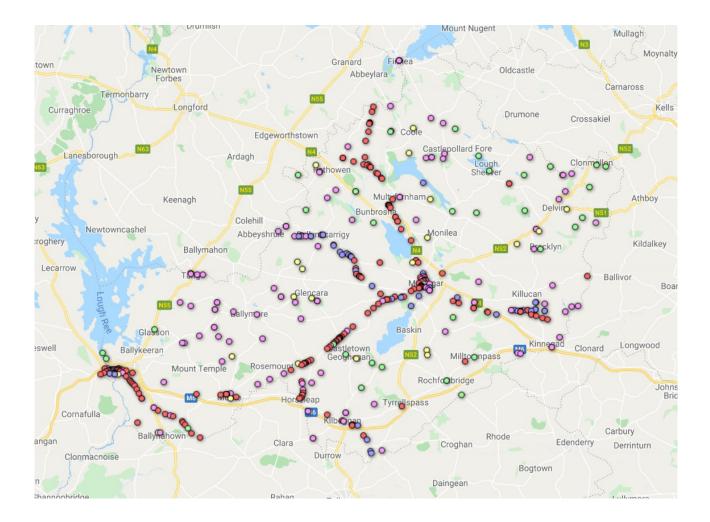
Transport (of which 15 RMP & 20	462 D2 NIAH)	Rail Canal Road River Bridge	195 66 25 39 137
Manufacturing (of which 4 NIAH)	111	Smithy Factory Tannery Timber	102 3 5 1
Mills (type) (of which 75 RMP & 27 (& of which in O'Conl		Brewery/distillery Windmill Steam mill Capstan mill Water mill	18 10 1 1 220
*Mills (function)	310	Flour/corn Drinks Textile Timber Unclassified	169 18 22 10 102
Extractive (of which 0 are RMP/N	1,851 NIAH)	Lime kiln Quarry Brick/tile	1,478 366 7
Complexes (of which 10 RMP & 44	130 4 NIAH)	Workers houses Ice houses Weir/sluice Workhouses Other complex	25 11 80 8 4
Utilities (of which 108 NIAH)	1,992	Water Postage Sewerage Gas/oil Electricity Unidentified utility	1,930 40 7 9 1 4

Total

4,856

corn mill. The distinction between a flour and corn mill is an important one historically but is not made here in the categories.

The very large number of water utilities listed, which are predominantly water pumps, represent the Ordnance Survey of Ireland listing of some 1,795 water pumps in the county in their historic water pumps database. The majority of the sites in the database date to the 18th, 19th and early 20th centuries, and more generally the period 1750-1950. This period coincides with the industrialisation of many aspects of Irish life, and also reflects the date range of the sources used to compile the database. Mills, bridges and weirs, however, frequently date to earlier than this, and the database includes these features dating from the medieval period to the 17th century.



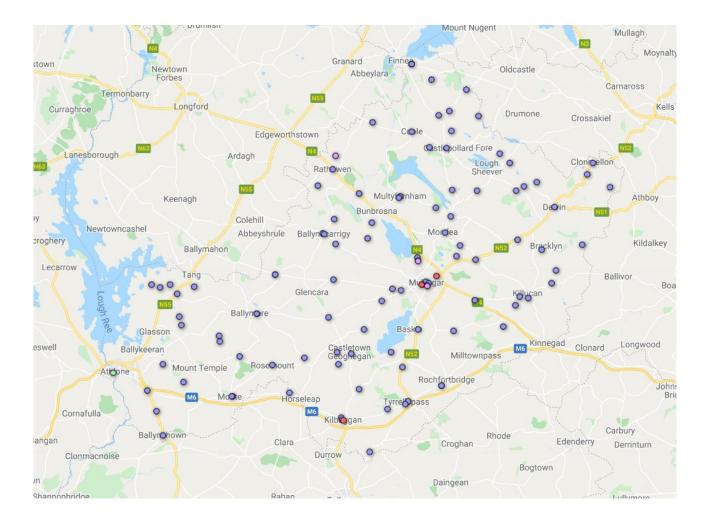
Distribution map showing location and type of tranport-related sites: Rail (red), Canal (blue), River (green), Road (yellow) and Bridge (purple).

Recommendations for future work

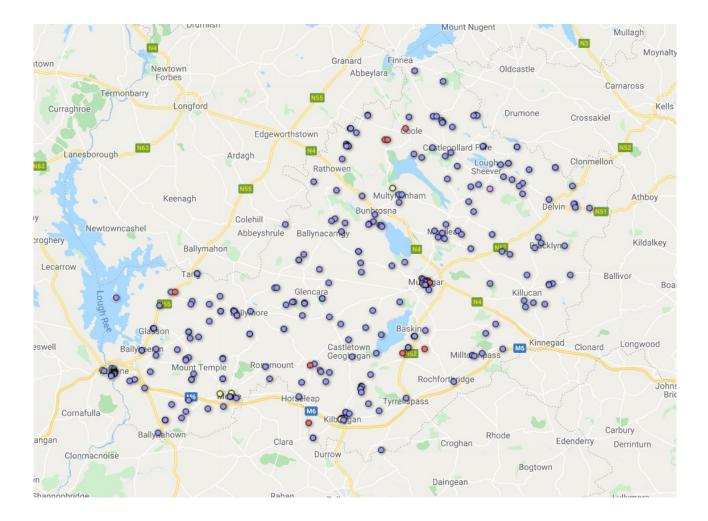
The first stage of the Westmeath Industrial Heritage Survey (WIHS) has identified 4,856 industrial heritage sites based on cartographic and historical information.

In addition, seven industrial heritage sites identified in the survey have been selected, and a detailed historical assessment has been conducted on them. This demonstrates how the WIHS can be utilised as a springboard useful to researchers and local community groups to further investigate industrial heritage. The historical assessment of the seven sites (which are Athlone Woollen Mills, Athlone Workhouse, Gneevebane Limestone Quarry, Locke's Distillery, Moate Textile Mills, Mullingar Railway Station, and Multyfarnham Corn Mills) touches on issues pertaining to Westmeath's overall industrial development and industrial heritage and are relevant to all Westmeath industrial sites.

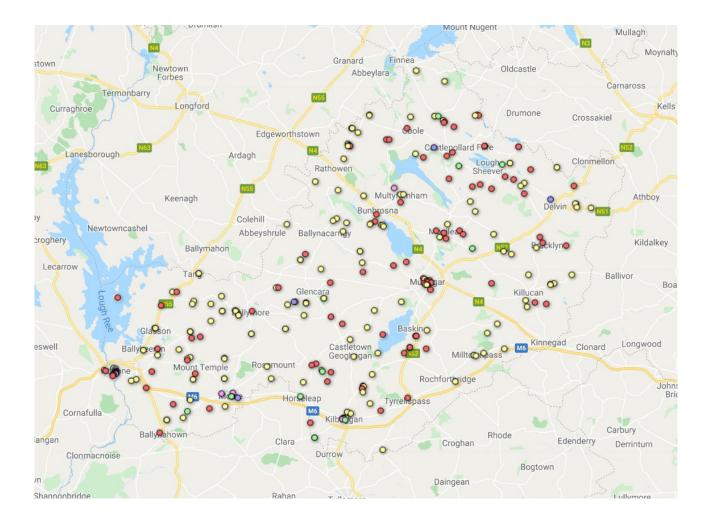
The next phase of this project will be visiting the sites identified, to see if there are any upstanding remains, and to assess each site's significance in order to narrow down a list of industrial sites in Westmeath that could be protected in future Westmeath Development Plans. The existing NIAH and RMP surveys already cover 485 sites. It is further recommended that the quarry sites identified are not assessed, leaving a total of 4,007 potential industrial heritage sites to assess in Westmeath.



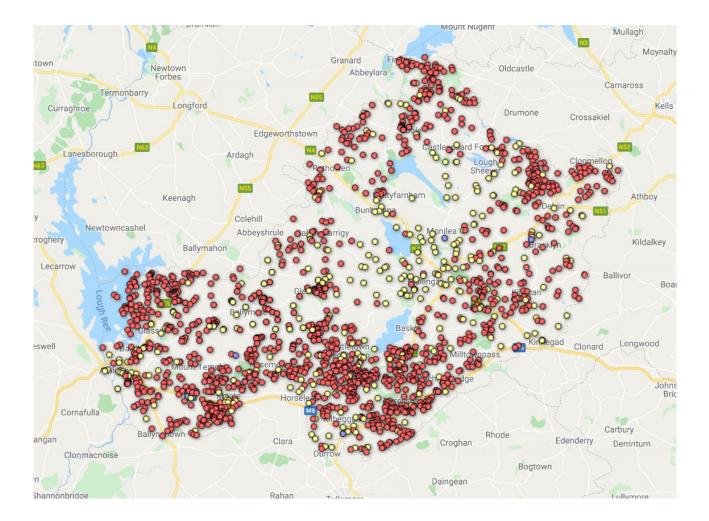
Distribution map showing location and type of non-mill mnaufacturing sites: Smithies (blue), Tanneries (purple), Factories (red) and Timber (green)



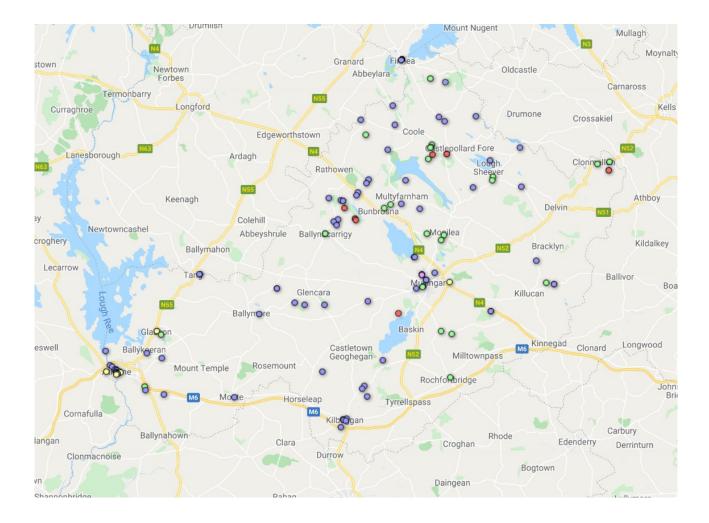
Distribution map showing location and type of mills: Watermills (blue) Breweries and Distilleries (yellow), Windmills (red), Steam Mills (purple) and Capstan Mills (Green)



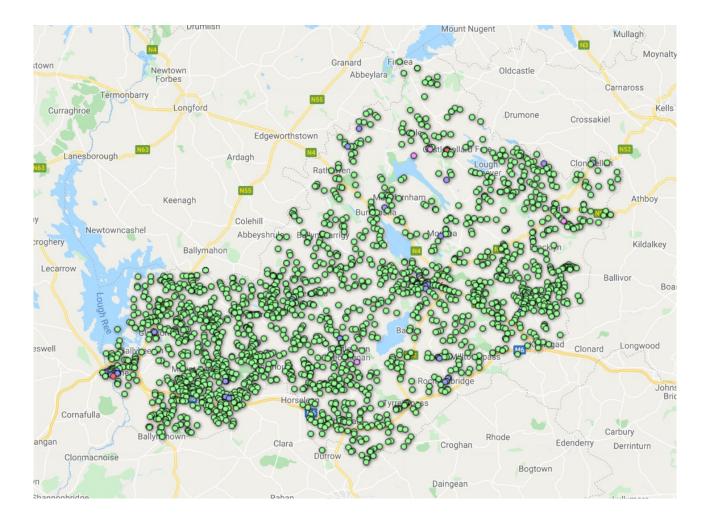
Distribution map showing location and function of mills: Flour/corn (yellow), Brewing and Distilling (purple), Textiles (Green), Timber (blue), and Unclassified - most of which will be flour or corn mills (red).



Distribution map showing location and type of extractive site: Lime Kilns (red), Quarries (yellow) and Brick or Tile (blue). The distributions of lime kilns and quarries are notably different, with quarries clustered in the centre of the county and lime kilns at the edges.



Distribution map showing location and type of sites classed as 'complexes': Weirs or Sluices (blue), Worker's Houses (green), Ice Houses (red), Workhouses (purple) and 'Other' (yellow).



Distribution map showing location and type of utility-related sites: Water (green), Post (blue), Gas, Oil and Electricty (purple), Sewerage (red), and Unidentified utilities (yellow).

Section 2 Athlone Wollen Mills

Location

The Athlone Woollen Mills (WIHS 180) were situated at Northgate Street and Abbey Road, Athlone, in Athlone townland (Athlone barony). The site lies on made ground on a strip of land between Shannon to the west and Northgate Street to east. The premises extended along the river bank as far as the railway bridge over the Shannon, with a second large rectangular waterpowered structure adjacent to the bridge and separated from the main woollen mill ranges by the grounds and bulk of Gleeson's Abbey House. It is unclear whether this was a separate establishment (the Shannon Saw Mills and Lock Mill being converted for use as possibly independent woollen manufactories).

Cartographic information

Not depicted on First Edition OS 6 Inch map of 1837. Site location partly lying within predredging course of Shannon as eastern bank before construction of Shannon commissioners-sponsored quays followed curving line of eastern edge of Abbey Street (to W of ruined abbey structure) before jutting sharply southwestwards, following the line of the wall of the brewery that backed onto the river from the NW corner of Northgate Street. Some suggestion from contour lines on river-bed that traces of 17th-century military modifications of the eastern river-bank were still extant in the 1830s, and that these may have provided the base upon which the subsequent quays and infill ground were constructed. According to Murtagh (1994, 5), mills initially occupied the disused brewery complex before expanding northwards along infilled eastern river-bank for approximately 150m. This probably facilitated by and coincident with the Shannon Commissioners dredging and canalization of the river in the 1840s to 1850s.

The woollen mills may also have expanded southwards, between 1850s and 1870s as, on OS 1st edition 25 Inch map of c. 1897-1913, the complex was shown occupying the area bounded on the S by the laneway extending westwards towards the river from Northgate Street and on which the Methodist church stood. Also unclear from the 25 inch map whether the structures lining western side of Northgate Street (to E of woollen mills river frontage) were the probable commercial/domestic premises shown on the 1837 map, or whether these had been demolished, allowing the construction of further mill premises along the street front. Location of gas works in angle between old Northgate Street frontage just inside medieval North Gate and additional range extending along river-bank probably sited to facilitate the factory, particularly as Smith and Gleeson lobbying corporation for improved gas service in later 19th century.

Between 1913 and the OS 6 Inch Cassini map of c. 1920 to 1940, major site clearance and rebuilding of main mill ranges appear to have occurred. Rationalization of river-side buildings into single long range extending NNW-SE along long axis from laneway on which Methodist church sited, to access laneway leading to river from junction of Abbey and Coosan Roads. Northgate Street frontage also appears to have been considerably altered, with large yard areas and fewer structures, suggesting the demolition of any surviving houses and premises along western street frontage. Later 19th-century photographs of the new bridge over the Shannon indicate that the main mill range characterized by series of single pitch roofs forming triangular profiles with possible windows occupying vertical surfaces.

A later 19th century mill range is still visible on the 1995 OS Ortho B&W aerial photograph, shown as partially demolished on 2005 aerial photograph, and as the Radisson Hotel there-after.

Site description

In 1856, when Nenagh-man and British army doctor, Edward Moloney Gleeson, decided to establish woollen mills on the eastern bank of the Shannon at Athlone, the town was only starting to recover from the economic hardship and human suffering caused by the Great Famine just a few years earlier. Despite the construction of some new infrastructures, such as the new railway bridge over the Shannon (Burke 2007, 66), the town's built fabric was generally run down (e.g. Hall and Hall 1853, 12), and the town's population had been reduced by the death and emigration of many of its poorer inhabitants (Burke 2007, 63-64). The Famine had also limited the ability of the town's economy to recover from the early 19th-century decline of traditional industries, such as the manufacture of woollen cloth, specifically a type of heavy cloth used called frieze, which was often used for making overcoats. Friezemaking had itself supplanted the manufacture of linen as 'the main non-farming occupation of the rural areas adjoining Athlone' in the later 18th and early 19th centuries, when linen had declined after the Napoleonic wars and due to competition from machine-spun imported fabrics (Murtagh 1994, 4). The long-established tuck mill on the Elizabethan bridge had been demolished in 1844 at the same time as the old bridge itself (O'Brien 2014, 38), and the felt hat manufacturing for which the town had been



famous in the later 17th and 18th centuries (Barry 2015, 34; Murtagh 2000, 183) had largely wound down, with only a few hats being made for local consumption (Lewis 1837, vol. 1, 87). By the 1850s, when Gleeson decided to establish his woollen mill, no strong industrial tradition of textile manufacturing survived in the town.

To add to this gloomy overall picture, it appeared that the general decline in Ireland's woollen industry would be increasingly hard to reverse, as the demand for Irish woollen fabrics had decreased significantly after the end of the Napoleonic wars and as factories in northern England accelerated their production of massproduced, cheap woollen fabric for sale to Irish consumers (Bielenberg and Solar 2007, 15; Clarkson 1989, 29-30). In order to survive, exmanufacturers, isting who were already struggling due to a shortage of skilled weavers and to high wage rates within the industry, were being forced to invest heavily in machinery and associated infrastructure and many were unable to make the transition to mechanized production (Rynne 2006, 217).

Against this backdrop, Gleeson's decision to establish a woollen mill on the site of a disused brewery, which extended from the street frontage just inside the medieval gate to the river-bank on the western side of Northgate Street seemed at best foolhardy. Initially, it appeared that his efforts to produce woollen fabric at the site would be thwarted by the difficult economic situation as well as by his own lack of experience within the textile sector. Limited returns meant that in 1864, his early business partnership with his brother-in-law James Simpson, the son of a Manchester ironfounder had to be dissolved (Gleeson n.d.). To make matter worse, after 'a short diversion into the manufacture of other products such as iron fences' (probably on Simpson's advice; Bourke 2007, 97) Gleeson was forced to entirely close the factory. Fortunately for him and for the future of the Athlone Woollen Mills, in 1867 he convinced William Smith of Moate to join him as a full partner, at which time Smith injected a vital $f_{,500}$ into the business (Gleeson n.d.). Two years later, in a further boost to the factory's fortunes, Gleeson's wife Harriette agreed to invest the large sum that she had inherited from her mother in Gleeson's struggling business. With this capital investment, Gleeson and Smith were able to purchase power looms and other recently developed technology (Rynne 2006, 217), allowing the business to expand 'from being a little place making up wool from country farmers' (Burke 2007, 97) to a being a significant local employer and manufacturer of woollen fabrics by the early 1880s.

While the success of the partnership appeared to rest on the fortuitous combination of Smith's technical proficiency and Gleeson's willingness to promote the mill's products (ibid., 99), it was also bolstered by their access to and use of the latest developments in 19th-century technology, transport and communication infrastructures. From 1858 onwards, transatlantic orders could be sent and received by telegraph, allowing the woollen mills company to engage in overseas trade, particularly with the United States and Canada. By 1885, this trade was so extensive that the company was supplying large amounts of fabric for uniforms to the Canadian police force, while the United States government 'had appointed an American consular agent' to oversee all American transactions (Burke 2007, 98-9). The postal service had also been greatly improved by the carriage of mail on the new train systems of the mid-19th century, while potential customers could be made aware of the factory's products by trade advertisements placed in some of the numerous newly established local and national newspapers.

For the management team of Athlone Woollen Mills, these efficient communications systems operated in tandem with the expanded local rail and canal networks, which allowed fabric, machinery and raw materials to be speedily shipped to and from the port at Dublin. The existence of the railway, and the Shannon navigation and canal networks may also have allowed the woollen mill company to take advantage of surviving remnants of the large-scale pre-Famine sheeprearing systems of the wider midland region. These in the 18th and early 19th centuries had supplied wool to former woollen manufacturing centres, such as Carrick-on-Suir (Clarkson 1989, 24). By the later 19th century, Athlone Woollen Mills lay at the centre of an extensive wool supply network, as sheep farmers in counties Westmeath, Roscommon, Galway, Dublin and Kilkenny all sent their wool to be processed in the factory. Indeed, so crucial was access to the rail service to the financial viability of the woollen mills and to the general survival of Athlone local industry as a whole, that in 1893, Smith felt impelled to contribute to the public outcry that followed a decision by the Irish rail companies to raise rail freight costs. His letter, criticising that decision, was published in the Freeman's Journal in March of that year.

Access to both the telegraph and rail services had also allowed the company to swiftly recover from the fire of October 1882, which had destroyed the recently completed engine and boiler house and which had threatened to engulf the newly built three storey spinning mill building, which had opened for use only five weeks earlier (Anon. 1882). The construction of these buildings reflects Smith and his managers' policy of keeping abreast of the latest technological developments in textile milling, and of continuously investing in buildings and staff training in order to compete with the increasingly successful woollen textile producers of northern England (Burke 2007, 98). The construction of the new ranges along the river-bank also took advantage of the dredging and bank-building activities that had been carried out under the auspices of the Shannon Commissioners in the 1840s and 1850s.

Once established, the complex, with its chimneys, and its long ranges of 'three-storey spinning mills, two-storey carding mills and weaving sheds' (Rynne 2006, 234) dominated the views of the town from the river and from the new vehicular and rail bridges across the Shannon. In addition to its physical presence, the factory shaped some of the policies that determined how Athlone developed, as Smith and Gleeson negotiated with the town's commissioners on a range of issues, including the improvement of the municipal gas service, and the necessity of training children and other workers for employment in the mill (ibid.). As progressive, if paternalistic, business owners, Smith and Gleeson also supported a range of activities that aimed to improve the moral and cultural lives of Athlone's citizens. Smith, for

example, contributed funds to the local temperance hall, which was dedicated to Fr Mathew, and mill employees could also participate in organized sporting activities, such as the company's annual sports day, or its later 19thand earlier 20th-century cricket teams.

By providing employment for between 300 and 400 local people, the majority of whom were women, the mill also bolstered the local economy and supported its various shops and businesses. In Athlone as elsewhere, this increased the spending power of local families, while at the same time providing women with access to money at a time when opportunities for women to work outside the home were dwindling as living standards rose and as more men found full-time employment (e.g. Breathnach 2004, 82, 89-91). Although generally beneficial for women, the lower wages that women were paid relative to men in many textile factories led to assertions that such practices undercut established labour markets and were intended to artificially reduce labour costs. This for example, was the thrust of the argument made by the representatives of the Amalgamated Society of Tailors, Dublin, in 1899, when they requested that professional tailors should be employed to transform the cloth supplied by Athlone Woollen Mills to the North Dublin Union workhouse into clothes. The Society argued that the employment of skilled tailors was preferable to the existing 'factory system in which women and machines [were] employed' (Anon. 1899). Notwithstanding this argument, from the outset, when Harriette Gleeson invested her inheritance in the business, the partners may have had some idea of benefitting local women even if the management never intended that the wages paid to them would equal those paid to men.

Whatever the case and regardless of whether large numbers of women were employed at the mill for philanthropic or hard-nosed business reasons, the overall results were the same; by employing women, the Athlone Woollen Mills gave many women some degree of economic independence and had a beneficial knock-on effect on their families' access to education, food and material comforts. It also allowed women to re-establish themselves to some degree within the Irish textile industry, and to regain at least a part of the significant role that they had played in the pre-industrialized linen and woollen trades (Clarkson 1989, 32-2, 40). This perhaps incidental reconnection of women with textile production was also played out within Gleeson's own family, as Gleeson's daughter, Evelyn, perhaps inspired by her family background extended her interest in textiles and design into the higher end of the market, establishing An Túr Gloine with the Yeats sisters in 1902 (O'Brien 2014, 120).

The Athlone woollen mills continued to produce cloth into the early 20th century, successfully negotiating the economic and financial difficulties associated with the end of British rule and the establishment of the Free State. In 1940, however, a catastrophic fire caused extensive damage to the main ranges of the mill, causing the evacuation of the nearby Abbey House, which Gleeson had built for his son in 1878 (O'Brien 2014, 15). It also spread to the adjacent technical school building, leading to a long-running and significant legal case in which the school administration sought to recover damages from the mill company's insurance company. The operation of the mill never fully recovered from this fire, and it closed twenty years later in 1960 (Burke 2007, 99). Although the mill complex was no longer viable as a manufacturing site, its situation on the river bank and its large scale meant that it became attractive as a potential leisure, rather than industrial site, particularly as the existing boat slip and river frontage could allow access to a new boating marina. In the late 1990s and early 2000s, the surviving mill ranges were demolished, and the current Radisson Hotel was built on the site. Although its physical remains no longer survive, as Burke notes, the Athlone Woollen Mills Company, with its Shannon Mills brand, was 'without doubt the most successful large-scale enterprise that Athlone had seen during the Victorian period'. Not only was it a regionally significant employer that adopted the latest techniques and infrastructure in order to maintain an international presence and to successfully compete with British textile businesses, but it was also a catalyst for change and development within the town and it had a significant and long-lasting impact on the lives of several

generations of Athlone's citizens.

References and resources

Heritagemaps.ie

https://www.heritagemaps.ie/WebApps/HeritageMaps/index.html

Anon. (1882) 'Fire at Athlone. (From our reporter)', Freeman's Journal, Tuesday, 3 October: 7.

Anon. (1899) 'North Dublin Union: the tailoring contract and trade wages', Freeman's Journal, Thursday, 19 January: 2.

Barry, P. (2015) 'The journeys of Samuel Molyneux in Ireland, 1708-1709', Analecta Hibernica 46: 1-83.

Bielenberg, A. and P. M. Solar (2007b) 'The Irish cotton industry from the industrial revolution to Partition', Irish Economic and Social History 34: 1-28.

Breathnach, C. (2004) 'The role of women in the economy of the west of Ireland, 1891-1923', New Hibernia Review/Iris Éireannach Nua 8 (1), Spring: 80-92.

Burke, J. (2007). Athlone in the Victorian era, Athlone: The Old Athlone Society.

Clarkson, L. A. (1989) 'The Carrick-on-Suir woollen industry in the eighteenth century', Irish economic and social history 16: 23-41.

Gleeson, M. (n.d.) 'GCG2016 - Dr Edward Molony Gleeson J.P. (Michael G Gleeson)', video including sound recording and powerpoint presentation to the Gleeson Clan Gathering, posted on YouTube, 3 October 2016; https://www.youtube.com/watch?v=2PjWqb_uin8; accessed 14/09/19).

Hall, S. C and A. M. Hall (1853) Hand-books for Ireland. The west and Connemara, London: Virtue, Hall & Virtue; Dublin: James McGlashan.

Lewis, S. (1837) A topographical dictionary of Ireland comprising the several counties, cities. boroughs, corporate, market and post towns. Parishes, and villages, with historical and statistical descriptions; embellished with engravings of the arms of the cities, bishopricks [sic], corporate towns, and boroughs. And of the seals of the several municipal corporations: with an appendix, describing the electoral boundaries of the several boroughs, as defined by the Act of the 2d & 3d of William IV, Vol. 1, London: Gilbert & Rivington.

Murtagh, H. (1994) 'Athlone', Irish Historic Towns Atlas, No. 6, Athlone, pp. 1-16, Dublin: Royal Irish Academy.

Murtagh, H. (2000) Athlone history and settlement to 1800, Athlone: Old Athlone Society.

O'Brien, D. (2014) The houses and landed families of Westmeath, Athlone: Temple Printing Co.

Rynne, C. (2006) Industrial Ireland 1750-1930: an archaeology, Cork: The Collins Press

Section 3 Athlone Workhouse

Location

The former Athlone Workhouse (WIHS 155, 185-8, 190) stood on Coosan Road, Athlone, Athlone townland, Athlone barony. It lay on the eastern (Leinster) side of the town, to the north of North Gate of the medieval town. It was bounded by what was to become Northgate Street, by the site of the former Franciscan friary to the west, and by the railway line to north. In the later 19th century the workhouse lay at the centre of what was effectively an industrial zone that lay to the north of the commercial and residential town core.

Cartographic information

The Athlone Workhouse was not depicted on the First Edition Six Inch map of c. 1837, as it was not yet built. The site of the Workhouse occupied parts of two sub-rectangular fields that immediately to N of point at which Abbey Road extended NW-wards from Northgate Street. These fields flanked to W by ruined remains of abbey church, which according to NIAH was built by Franciscans in 17th century on the probable site of the earlier Franciscan foundation at Athlone. Fields and abbey occupy southern portion of roughly sub-circular area defined by field boundaries to S, E and N and by Shannon to E. This subcircular area, presence of probable medieval church and location in proximity to the medieval bridge and presumable early medieval crossing point all suggest that the workhouse was built within a possible early medieval enclosure. If multiple enclosures, then western part of workhouse footprint site likely to have abutted (if not actually extended into) vallum around early medieval church building.

The OS 25 inch map of c. 1897-1913 shows N-S orthogonally laid out ranges of workhouse

still functioning as a coherent complex and following standard Wilkinson-designed plan. Northern portion of site designated as Fever Hospital.

Three main E-W ranges (and see NIAH for listing of these structures) survive today. The depiction of the workhouse complex on 20th century maps show that surrounding walls have been largely removed and access roadways leading in front of each range between Northgate Street and Abbey Roads may have been established. This suggests a separation of functions of different parts of workhouse complex reflected in the physical separation of buildings from each other with short stretches of road and independent operation of each building as separate institutions. The northernmost element of complex referred to as 'District Hospital' (St Vincent's Hospital), the middle range designated as 'Hall' and the southern portion appears to have been in operation as part of a 'Tech. Sch.'

Site description

Despite pockets of prosperity, the expansion of some towns and ongoing infrastructural improvement, the Irish economy of the early 19th century was 'in terms of structure and development, extraordinarily uneven' (Foster 1988, 320; and see Fotheringham et al. 2014, 221-222, 224, 231; O'Brien 1999, 9-12, 57). For many Irish people of the time, the country in which they lived was under-resourced, over-populated, heavily reliant on agriculture and characterized by very high levels of poverty and unemployment (Lynch 2014, 189-91). Some of this unemployment was systemic, reflecting the ongoing social problems caused by emigration and the seasonal nature of much agricultural work. In the early decades of the 19th century, these already difficult conditions were exacerbated by the decline of local cottage-based textile indus-



tries following the Napoleonic wars. Between 1800 and 1840, successive government attempts to address worsening Irish poverty had led to 'no fewer than one-hundred and fourteen Royal Commissions and sixty-one Special Commissions of Inquiry', which were established to enquire into the causes and potential remedies of the phenomenon (Kelly 2012a). Perhaps the most important of these was that chaired by the Church of Ireland archbishop of Dublin, Dr Richard Whately in 1836, which produced a voluminous report that not only recommended providing social services to the poor, but also addressed the causes of destitution through programmes of education, housing and industrial employment (ibid.).

The thoroughness of Whately's report acted against its implementation, however, as highranking British politicians, such as Lord John Russell, the then Leader of the House of Commons in Britain, believed that the Commission had exceeded its remit and interpreted its recommendations as a demand that large amounts of British public money be spent to prop up the Irish economy. This was not considered to be an acceptable approach, and instead it was decided to apply the new English Poor Law system to Ireland. In 1838, George Nicholl, one of the English Poor Law Commissioners was tasked with finding out whether the system was appropriate to Ireland's legal and administrative structures. To this end, he carried out a whistlestop tour of Ireland, on the basis of which (and with very little knowledge of the country and its specific problems) he recommended that the English system of rate-paying unions centred on market towns be applied to Ireland (Kelly 2012b; O'Brien 1982, 98-9). Under this system, people living within the various Irish unions would be taxed or rated and the money raised would be used to build and run workhouses that would provide indoor relief on a temporary or permanent basis to poor inmates.

In 1839, Assistant Commissioner William Handcock arrived in Athlone, which was to be the centre of one of the 130 proposed Poor Law Unions in Ireland. The money levied on the ratepayers of the Athlone Union (which 'took in a sixth of the County of Westmeath and a quarter of the County of Roscommon',

Kelly 2012b) was to be used to fund a workhouse. This institution was to replace the chaotic and patchy system of municipal and private philanthropic programmes that, until then, had attempted to help the destitute poor of the locality (e.g. Barry 2015, 49; O'Brien 1982, 100). Handcock's initial proposal that the new workhouse be erected at a cost of $f_{10,000}$ on the Roscommon side of the river near the Ranelagh Endowed School was refused by the military, who owned the proposed site and who refused to make it available (O'Brien 1995, 7-8). An alternative site was identified on the eastern end of Northgate street, extending over seven and a half acres of the former 'Abbey fields' to the west of the ruined 17th-century Franciscan abbey church and ecclesiastical complex (RMP/SMR No. WM029-042050-). These former abbey lands, which were then in use as an orchard (and which may have originally lain within an early medieval ecclesiastical enclosure, based on the depiction of the wider area on the 1837 Ordnance Survey First Edition Six Inch map) were purchased from their owner, William Sproule for f,798. 10s. 0d. The construction contract was won by Anthony Clark, and building work on the new workhouse complex began in 1840 (ibid., 8) according to the designs of the young Oxford-based architect George Wilkinson.

Although Wilkinson's designs adopted some of the architectural flourishes of the fashionable Neo-Gothic and Classical styles of the early 19th century, the workhouses that he proposed were primarily utilitarian structures. They were required to be cheap to build, durable, adaptable, and they had to be able to be scaled up or down to accommodate from 200 to 1000 occupants (Ó Cléirigh 2003, 68). Wilkinson's workhouses, whether small (200-300 inmates), medium (400-600 inmates) or large (800-1000 inmates) followed a standard layout of parallel building ranges separated by walled yards and surrounded by a high external wall. At the front of the workhouse was the administrative building, containing the clerk's room and the Board Room, and the main gate and processing rooms through which paupers entered the workhouse. To the rear of this front building, separated from it by the childrens' yard, stood the main accommodation range, within which occupants worked and ate and slept. This range, like all of the spaces within the workhouse, was segregated according to sex as well as age, health and ability to work, with accommodation for girls and women on the left and for boys and men on the right. Separated from the main range by the adults' yard, stood the infirmary or hospital building, which accommodated those who were ill as well as long-term residents who were characterized as 'idiots, lunatics and epileptics' (ibid., 71). A separate yard for these inmates lay to the rear of the infirmary buildings. In addition to these standard ranges, workhouses complexes also included a range of ancillary structures, such as sheds, stores and outhouses.

The workhouse that was built on Northgate Street in Athlone, and which was intended to accommodate 800 inhabitants, followed this standard layout. Built of local un-coursed limestone, with yellow brick window surrounds, decorative bargeboards and cut-stone sills, the workhouse complex (see National Inventory of Irish Architecture), may also have contained sheds and outhouses for the storage of turf and other commodities. While it was considered 'handsome and commodious' at the time of its erection (Slater 1846, 5), the scale of the workhouse complex, its location, its multiple windows and repeated architectural elements were more reminiscent of contemporary industrial buildings, such as mills, breweries and warehouses than contemporary hospitals or other grander administrative institutions. Indeed, Wilkinson, who was also an architect of Irish train stations and lunatic asylums explicitly compared the Workhouse to 'the largest military barracks, but without that institution's great open spaces, extended buildings or large expenditure of public money' (Ó Cléirigh 2003, 73).

The issue of money and how Athlone workhouse was to be financed without running into debt and overstretching ratepayers was a constant theme in the operation of the complex. The availability of money, rather than any philanthropic interest in the lives of its inmates, dominated how the workhouse was run, particularly in its early years. It was intended from the outset that many of the same principles that governed a large business enterprise would be

in force at Athlone workhouse. Emphasis was placed on routines and the operation of a standardized 'clock' time. Internal spaces were strictly organized and controlled in ways that placed great emphasis on the discipline of inmates and the overall financial self-sufficiency of the workhouse. Food and fuel bills were kept as low as possible and, as a general rule, staff were underpaid for the roles that they were expected to play. This extreme frugality operated in conjunction with middle and upper class fears regarding the physical and moral dangers that the unruly poor posed to society as a whole (O'Brien 1999, 36, 38, 58) and with widespread beliefs that some categories of poor people were more deserving than others (King 2011, 46). The end result was that, at Athlone workhouse, despite an emphasis on teaching people trades that could support them in the wider world, the regime that operated throughout the 1840s to 1860s was often an authoritarian and punitive one. By separating families, by insisting on uniformity of clothing and diet, by regulating waking, working and sleeping hours (Ó Cléirigh 2003, 72-76), it was intended that inmates would be stripped of their individuality and effectively reduced to the status of an obedient cog in a greater social and industrial wheel.

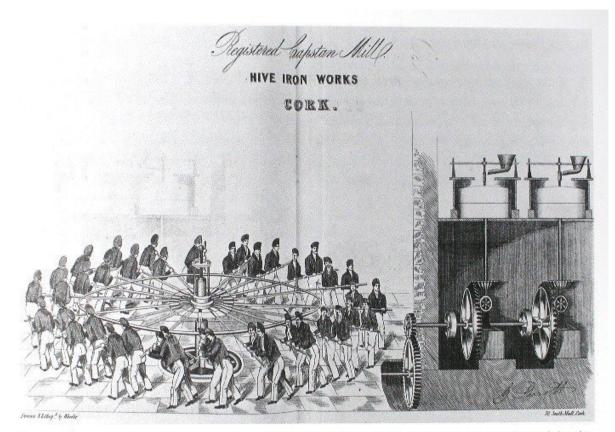
Perhaps the most egregious expression of this tendency at Athlone was the installation in 1848 of a manually-operated capstan wheel, which was attached to mill-stones that ground flour and also (during the Famine) Indian meal for use in the workhouse complex (Coffey 2006; O'Brien 1995, 22-3; Rynne 2006, 22). The Athlone capstan was 'a large spoked wheel set horizontally and geared to a series of wheels [that was] powered by a hundred or more human beings pushing it as they walked around and around in a circle' (O'Brien 1995, 22). Capstans had also been installed in the workhouses in Cork city and in Midleton, Co. Cork, but their use had faced criticism almost from their inception, particularly as children as well as adults and the elderly were all required to spend often lengthy periods turning the heavy stones. The use of the capstan also coincided with the Famine of the late 1840s and early 1850s, and its cruelty was heightened by the fact that those forced to turn its wheels were often ill, desperate or had sought refuge in the workhouse in an attempt to escape starvation. An additional factor in the capstan's unpopularity was that man-powered milling had been a feature of life in Westmeath's jails for decades, and contemfrequently sentenced porary judges those convicted of offences such as attempted rape and assault to operate treadmills for periods of several months at a time (e.g. Anon. 1828). Notwithstanding any satisfaction that local Poor Law Guardians or administrators might have got from seeing inmates literally earning their bread, as Rynne (2006, 22) notes, eventually the 'self-evident inhumanity of their continued use, [...] persuaded the Poor Law Commissioners to abandon them in 1855'.

At Athlone, as at other workhouses, the highly regulated approach to the management of staff, buildings and inmates was often an aspiration to be attained rather than a lived reality. Poor funding and oversight as well as widespread corruption often led to high levels of dirt and disease, poor food, lack of work and training among inmates, as well as to high mortality rates and the abuse of the most vulnerable inmates, particularly children (Lynch 2014, 193-5; O'Brien 1995, 15-8, 24-26, 36-8). Overcrowding during the Famine years greatly exacerbated these problems, and at Athlone as elsewhere, the Poor Law Guardians were forced to rent auxiliary buildings within the town to accommodate the very large numbers of desperate people seeking refuge in the workhouse. During this period, the weekly reports of the Board of Guardians which were published in the Athlone Sentinel tracked the increase in the numbers of admissions and of severely ill inmates from 387 people (approximately 1/3 occupancy) in July 1846 to 690 people in January 1847, to 1,140 in June 1848. By July 1849, the workhouse system was straining to support almost 3,000 destitute people (1,250 of whom were accommodated within the main workhouse ranges) on a reduced rate, as many local ratepayers had emigrated, were in financial straits or had themselves been reduced to penury (and see O'Brien 1999, 34-5, 38). Unsurprisingly, conditions in the workhouse were appalling at this time and did not significantly improve until the potato crop started to show signs of recovery from 1849 onwards.

While conditions in Athlone workhouse improved significantly during the decades following the Famine years, the lives of inmates in the latter half of the 19th century were arguably characterized by monotony rather than by any great degree of material comfort (Ó Cléirigh 2003, 76-7). This was partly due to the ongoing determination of authorities both local and national level that life within Ireland's workhouses should not be more attractive to inmates than their existence outside the workhouse walls. Later 19th-century attempts to make workhouse life unattractive to the able-bodied poor were greatly assisted by lingering popular memories of the Famine and the terrible conditions that had prevailed within the workhouse walls. In 1862, writing more than 20 years after the establishment of the Athlone workhouse, a journalist writing for Saunder's Newsletter noted that 'The people will endeavour to keep out of the workhouse as long as they can, and will endure the direst suffering rather than enter it, so intense and deep-seated is their dislike to the system' (Coulter 1862, 4). Popular fear of the workhouse was likely to have been particularly intense at that time, as the economic recession of the early 1860s was causing hardship for many people in Athlone and its hinterland, and as the local Poor Law Guardians had noted that they would not be distributing outdoor (i.e. non-workhouse) relief 'except under circumstances of extraordinary pressure, which they [did] not anticipate' (ibid.).

This popular dislike, together with policies that dictated that 'all able-bodied inmates should be facilitated to leave the Workhouse as soon as they were capable of taking up a position outside' meant that by the 1870s, workhouses had largely become 'the domain of the aged and of younger children' (Ó Cléirigh 2003, 76). The arrival of nuns in many workhouses from 1861

Image showing operation of a Capstan Mill similar to the mill at Athlone Workhouse



Capstan mills were used for grinding corn in a number of workhouses. Turning the capstan was tiring, but the authorities believed it induced discipline. (National Archives.)

onwards led to an improvement in conditions at many workhouses, and at Athlone, as elsewhere, the workhouse played an increasingly important role as a local hospital. It is likely that the use of the northern range at Athlone as a fever hospital (as recorded on the Ordnance Survey First Edition Twenty-Five inch map of c. 1897-1913) dates to this later-19th-century period and by 1915 the majority of Athlone workhouse's 200 inmates were hospital patients (Anon. 2014).

The removal of the high walls around Athlone workhouse in the later 19th or early 20th century not only signalled the end of the operation of the workhouse as a self-contained complex ostensibly divorced from the outside world, but also facilitated the integration of its surviving buildings into the wider community. With independence in 1922, the main buildings became the county hospital, while other workhouse buildings, such as the administration block and main accommodation range were used at various times by a range of local businesses and organizations including the technical school, local youth groups and the fire service (Anon. 2014). Although negative images of workhouses persist in the popular memory to the present time, as Ó Cléirigh (2003, 89) notes, they 'performed vital and novel functions in their day'. In many instances, they provided vocational training that could potentially lift inmates out of poverty and they also stimulated local trade and industry through contracts for fuel, food, textiles and other commodities. Before the development of a national welfare system, Athlone workhouse and other workhouses around country served as 'hospitals, orphanages, old people's homes, homes for [those with mental and physical disabilities], maternity units, schools and general refuges for those who found themselves in emergency situations' (ibid.; see also Lynch 2014, 191). The Athlone example, despite its inauspicious early years represents the remains of a system that, although flawed 'represented the first awakening of Government concern about the private misfortunes of its humblest citizens' (Ó Cléirigh 2003, 89). It is in this context that it should perhaps be understood.

References and resources

Heritagemaps.ie

https://www.heritagemaps.ie/WebApps/HeritageMaps/index.html

National Inventory of Architectural Heritage http://www.buildingsofireland.ie/niah/search.jsp?county=WM&checkbox1=true&datefrom= 0&dateto=2000&checkbox2=true&classification=workhouse&checkbox3=true&name=&checkbox4=true&town =Athlone&checkbox5=true&townland=&type=advanced&page=1

Anon. (1828) 'Westmeath Quarter Sessions', Westmeath Journal, 23 October: p. 3 of 4.

Anon. (2014) 'Westmeath workhouses to be remembered at conference', Westmeath Advertiser, Friday, May 09. (https://www.advertiser.ie/athlone/article/69390/westmeath-workhouses-to-be-remembered-at-conference; accessed 17/09/19).

Barry, P. (2015) 'The journeys of Samuel Molyneux in Ireland, 1708-1709', Analecta Hibernica 46: 1-83.

Coffey, P. (2006) 'Cork manual capstan mills', Grist to the mill: the newsletter of the Mills & Millers of Ireland 10: 22-24.

Coulter, H. (1862) The west of Ireland: its existing condition and prospects, Dublin: Hodges & Smith.

Foster, R. F. (1988) Modern Ireland 1600-1972, London: Allen Lane, The Penguin Press.

Fotheringham, A. S., M. H. Kelly and M. Charlton (2014) 'The demographic impacts of the Irish famine: towards a greater geographical understanding', Transactions of the Institute of British Geographers 38 (2): 221-37.

Kelly, T. (2012a) 'That pitiful place: Athlone workhouse', Westmeath Independent, Wednesday, 27 June. (https://www.westmeathindepend-

ent.ie/news/roundup/articles/2012/06/27/4011101-that-pit iful-place-athlone-workhouse; accessed 17/09/19).

Kelly, T. (2012b) 'Athlone Miscellany: the establishment of Poor Law Unions', Westmeath Independent, Wednesday, 4 July.

(https://www.westmeathindepend-

ent.ie/news/roundup/articles/2012/07/04/4011233-athlon e-miscellany-the-establishment-of-poor-law-unions; accessed 17/09/19).

King, S. (2011) 'Welfare regimes and welfare regions in Britain and Europe, c. 1750s to 1860s', Journal of Modern European History / Zeitschrift für europaïsche Geshichte/Revue d'histoire européenne contemporaine 9 (1), Space, borders, maps: 42-65.

Lynch, L. G. (2014) 'Death and burial in the Poor Law Union workhouses of Ireland', The journal of Irish archaeology 23: 189-203.

O'Brien, B. (1995) Athlone workhouse and the Famine, Athlone: The Old Athlone Society.

O'Brien, G. (1982) 'The establishment of Poor-Law Unions in Ireland, 1938-43', Irish Historical Studies 23 (90), November: 97-120.

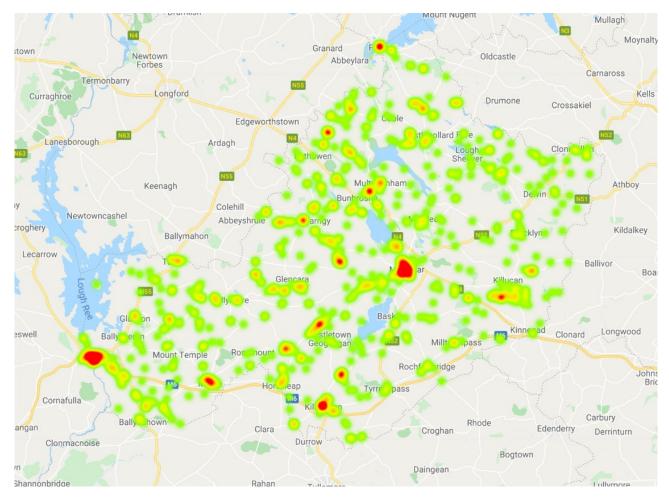
O'Brien, S. (1999) Famine & community in Mullingar Poor Law Union, 1845-1849: mud huts and fat bullocks, Maynooth Studies in Local History 21, Dublin: Irish Academic Press.

Ó Cléirigh, N. (2003) Hardship and high living Irish women's lives 1808-1923, Dublin: Portobello Press.

Rynne, C. (2006) Industrial Ireland 1750-1930: an archaeology, Cork: The Collins Press.

Slater, I. (1846) I. Slater's National Commercial Directory of Ireland: including, in addition to the trade's lists, alphabetical directories of Dublin, Belfast, Cork and Limerick. To which are added, classified directories of the important English towns of Manchester, Liverpool, Birmingham, Sheffield, Leeds and Bristol; and Scotland, those of Glasgow and Paisley, Manchester and London: I. Slater.

Distribution heat-map of all industrial heritage sites identified in the survey, showing areas of more sites ith a warmer colour. The urban centres of Athlone and Mullingar are clearly discernable, as are smaller towns, however industrial heritage is pspread evenly throughout the county.



Section 4 Gneevebane Quarry

Location

The 'Gneevebane' limestone quarry (WIHS 2363 & 2364) is situated in Garrane townland, Clonfad parish, Fartullagh barony. It is situated in the northern portion of Garrane Townland (Townland ID No. 230648; heritagemaps.ie), approximately 3km to the southwest of Rochfortbridge. The townland of Garrane bounded to the N and E by Gneevebane Td, to the SSE by Rahincull Td, to the S and SW by Rathgarret, to the W & N by Newcastle Td.

The quarry site lies immediately to the south of and abutting the R446 (which lies to the north of the M6, between Junction 4 Tyrrellspass to the SW and Junction 3 Rochfortbridge to the NE). Partially bounded to east by the local road that extends NNW-SSE from the R446 in Garrane towards Rahincull and that ends at the edge of the large expanse of bog to the SE.

Cartographic information.

The quarry is depicted on the First Edition OS Six Inch map 1830s, on the First Edition 25 Inch map 1910s (where it is marked as 'Disused'), and on the 20th century Six Inch Cassini map. See heritagemaps.ie. It is described on the Geological Survey of Ireland's Spatial Resource viewer, 'Mineral Localities' layer as a 'Disused quarry in light grey thick bedded limestone' (Geological Survey of Ireland Spatial Resources viewer).

Site description

Quarrying, carried out at a variety of scales, has been a feature of Irish rural and life for millennia. By opening quarry pits, Irish farmers and businessmen could provide stone for building purposes and by processing some of that stone,

for example by burning, crushing and soaking limestone, they could also produce the mortars, whitewashes and lime-renders that were used so frequently on Irish stone buildings from the Middle Ages into the 20th century (Evans 1967, 61; Farrelly 2007; O'Reilly 2011, 202, 210). From the 18th and 19th centuries onwards, quarrying also supplied raw materials for widespread soil improvement and land drainage activities as burnt and pulverized limestone and sand could be spread as fertilizers or as land reclamation agents (Castle 1849; Rynne 2006, 157; O'Sullivan and Downey 2005). Small limestone cobbles and stone slabs could also be used to create linear networks of stone-lined drains that drew ground water away from new and from poorly-drained fields (O'Sullivan and Downey 2010).

Large quantities of stone were also extracted for use in transport infrastructure schemes such as the canals and river navigations of the later 18th and early 19th (e.g. Anon. 1849) and in the railway stations, platforms and rail-track substrates of the mid- to later 19th-century railways. Successive attempts to improve Ireland's often unreliable road network also often required large volumes of stone, and the amounts quarried increased from the 1860s onwards as various local authorities adopted the crushed-stone road surfaces pioneered by the Scottish engineer, John Macadam (e.g. Wilde 1866, 2). As the 19th century drew on, limestone was also extracted for use in a range of manufacturing processes that included industries as diverse as sugar-refining (Downey and O'Sullivan 2017), flour, paint and toothpaste manufacture (Rynne 2006, 157) and iron ore extraction (Kane 1844, 122, 134-53).

In Westmeath, by the early 19th century, extensive use was being made of the limestone beds that underlay the rolling fields of the county's southern half, particularly where cultivated



View of the site of former 'Gneevebane' limestone quarry from the R446, looking south.

lands dipped down to meet the edges of the raised bogs of northern Offaly and the expanses of the Bog of Allen to the east. While much of the stone extraction in this area was likely to have been carried out on a relatively small scale by individual farmers or at the behest of particular landlords, some quarries operated on a commercial scale, supplying local builders and businesses with larger quantities of stone. When Lewis' Topographical Dictionary was published in 1837, for example, limestone was being extracted from the Westmeath parishes and townlands of Ballymoran (vol. 1, 25), Fore (vol. 1, 616), Castlelost and Rochfortbridge (vol. 1, 300), Clonfad (vol. 1, 361), Killucan (vol. 2, 157), Mullingar parish (vol. 2, 412), Multyfarnham (vol. 2, 414) and Rathconrath (vol. 2, 491).

The quality and colour of the limestone substrates of these parishes dictated the uses to which quarried stone was put (and see the online Geographical Survey of Ireland's Spatial Resources Viewer for more information on Westmeath's geological profile). For instance, at Killucan, the local bedrock was a dark grey to black limestone that could be easily split into thin sheets and used as flagstones for kitchens and yards. In the later 18th/early 19th century, Killucan stone was also transported to Dublin, where it was used in the construction of the new Custom House Docks. Black flagstone was also extracted from Rathconrath and from quarries near Rochfortbridge. Other quarries, particularly those adjacent to Westmeath's towns and villages supplied building stone for the many new houses, businesses, banks, churches, institutions and bridges that were erected throughout the 19th and early 20th centuries.

In this context, the quarry in the townland of Garrane, adjacent to the hill of Gneevebane in the parish of Clonfad is of particular local interest as it was reported to have been the source of a pale grey stone that '[bore] a high polish and [was] manufactured into handsome mantelpieces' (Lewis 1837, vol. 1, 361). The development of the pit was likely to have occurred in the later 18th or early 19th century, and may have been an initiative of local landlords such as the Hornidges of Calverstown or of a local builder, who spotted an opportunity to build upon already established local lime-quarrying activities. Despite the introduction of dynamite in the later 19th-century, the techniques and technology involved in limestone quarrying remained relatively crude throughout the 18th and 19th centuries (Rynne 2006, 151); labourers continued to use wedges and levers to split chunks of stone from weak points or 'natural lines of breakage', which occurred where the natural deposition or bedding lines ran through the bedrock. With relatively little investment, quarries could be opened on an ad hoc basis to meet local needs and 'to take advantage of favourable building trends', thus minimising the costs associated with transporting stone (ibid., 151-152). Quarries also provided additional employment opportunities in predominantly rural areas, where local employment was heavily reliant on agricultural and often seasonal labour.

At Garranes Townland, the location of the quarry pit (referred to as the 'Gnewbaron Hill' quarry by Lewis, reflecting garbled older forms of the name of Gneevebane Townland; 1837, vol. 1, 361) adjacent to the road from Kilbeggan to Rochfortbridge meant that stone could be carted away with relative ease. While the First Edition Ordnance Survey Sheet of c. 1837 shows two possible stone-cutters' buildings situated at the approximate centre of the pit, it is possible that the mantelpieces were manufactured elsewhere, as contemporary accounts indicate that the industrial cutting and polishing of stone was often done by water-powered grinders and saws (Rynne 2006, 154-5). While the absence of a significant source of water and the relatively small size of the quarry mean that it was unlikely that engines (whether expensive steam-driven specimens or more economical water-driven examples) were used on site, their presence at Garranes cannot be ruled out, particularly as many quarries required the constant operation of pumps, as rain and ground water accumulated in the quarried-out pits. It is possible, therefore, that one or both of the buildings shown on the Ordnance Survey Six Inch map of the 1830s-1840s may have contained engines as well as possible accommodation for on-site stone-cutters. The presence of yards attached to both of the structures at the centre of the quarry may also indicate that one or both were used as stables for some of the horses that would have been required to haul the stone away from the quarry (ibid., 151-6).

Whether manufactured at the quarry or finished nearby, the completion of the Kilbeggan depots of the Grand Canal and of the Midland Great Western Railway between the 1830s and 1840s meant that the mantelpieces of 'Gnewbane' or Gneevebane may have been sold to wealthy families from outside as well as within the local area. Despite the local fame of the quarry, however, by the time that the first edition Twenty-Five Inch Ordnance Survey map of Westmeath was compiled, the quarry was marked as 'Disused'. As Colin Rynne (2006, 152) has remarked 'The abandonment of a quarry, more often than not, was a function of diminishing returns, brought on by the increasing depth of the workings, reduced demand, and a lack of space for the removal of waste rock and flooding'. It is likely that all of these factors were instrumental in the closure of the quarry at Garranes, while the economic downturns of the Famine years and of the early 1860s, the greater availability of imported building materials and changing architectural fashions may also have impacted upon its operations.

From the earliest years of its existence to its eventual closure, the Garranes quarry can be understood as a typical local expression of a widespread Irish industrial phenomenon that was both rural and industrial and that reflected the economic fortunes as well as the geological underpinnings of the wider local landscape. The depiction of quarries on historic maps as well as surviving traces of their pits, structures and associated infrastructures are often all that survive of what were once locally significant physical and social phenomena. The opening and eventual infilling of the numerous small quarries that are represented on successive Ordnance Survey maps also document wider economic and ideological imperatives, including the desire of landlords, local authorities and individual

farmers to improve soil productivity, to maintain and improve the rural built environment and to boost rural incomes. Their depiction also maps the growth of Irish towns and villages, and the gradual later 19th-century improvement in the fortunes of local people as housing stock improved and as places that were formerly difficult to reach became ever more accessible by road, canal and rail. The depiction of larger commercially-exploited quarries such as that at Garranes Townland also map potential flashpoints of local class and denominational tensions, as the larger quarries brought together local and imported labour, potentially dangerous substances such as dynamite, as well as disrupting or delaying established seasonal labour patterns (and see also Murtagh 1999; Burke 2007, 83-4).

Despite the closure of the Garrane quarry, limestone extraction activities continued in the wider vicinity throughout the 19th and into the 20th centuries. In the present day, the Geological Survey of Ireland's Spatial Resources viewer maps extant quarries in Drumman and Derryarkin townlands a short distance to the southeast of the Garrane site. Given the continuing local and national demand for building materials and the ongoing use of lime in industrial processes, it is likely that, like their 18th and 19th-century counterparts, the fields and hills of Westmeath will continue to be the site of stone extraction and processing into the future.

References and resources

Geological Survey of Ireland Spatial Resources viewer https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aaac3c228

Heritagemaps.ie

https://www.heritagemaps.ie/WebApps/HeritageMaps/index.html

Anon. (1849) 'Shannon Navigation. Steam communication between Killaloe, Athlone and Lanesborough, to Boyle, Carrick-on-Shannon and Lough Allen', Westmeath Independent, Saturday, 20 October 1849, page 1 of 4.

Burke, J. (2007). Athlone in the Victorian era, Athlone: The Old Athlone Society.

Castle, H. (1849) 'To the Editor of the Westmeath Independent. On the advantages and disadvantages of lime in agriculture', Westmeath Independent, Saturday, 21 April, p. 2 of 4. Evans, E. Estyn (1967) Irish heritage: The landscape, the people and their work, Dundalk: W. Tempest, Dundalgan Press.

Farrelly, Jean (2007) 'Decorative render in the late sixteenth/early seventeenth century', in Manning, C. (ed.) From Ringforts to Fortified Houses: Studies on castles and other monuments in honour of David Sweetman, Wicklow: Wordwell Press, pp. 237-48.

Kane, R. (1844) The industrial resources of Ireland, Dublin: Hodges and Smith.

Lewis, S. (1837) A topographical dictionary of Ireland comprising the several counties, cities. boroughs, corporate, market and post towns. Parishes, and villages, with historical and statistical descriptions; embellished with engravings of the arms of the cities, bishopricks [sic], corporate towns, and boroughs. And of the seals of the several municipal corporations: with an appendix, describing the electoral boundaries of the several boroughs, as defined by the Act of the 2d & 3d of William IV, Vols 1 and 2, London: Gilbert & Rivington.

Murtagh, A. (1999) Portrait of a Westmeath tenant community, 1879-85: the Barbavilla murder, Maynooth Studies in Local History 25, Dublin: Irish Academic Press.

O'Reilly, Barry (2011) 'Hearth and home: the vernacular house in Ireland from c. 1800', Proceedings of the Royal Irish Academy: Archaeology, Culture, History, Literature, 111(C), special edition, pp. 193-215.

O'Sullivan, M. and L. Downey (2005) 'Lime kilns', Archaeology Ireland 19 (2), Summer: 18-22.

O'Sullivan, A. and L. Downey (2010) 'The archaeological imprint of agricultural drainage systems. Part 2 – early modern drains', Archaeology Ireland 24 (2), Summer: 36-9.

O'Sullivan, M. and L. Downey (2017) 'Sugar-refining', Archaeology Ireland 31 (4), Winter: 49-52.

Rynne, C. (2006) Industrial Ireland 1750-1930: an archaeology, Cork: The Collins Press.

Wilde, W. R. (1866-69) 'On Scandinavian antiquities discovered near Islandbridge, County Dublin', Proceedings of the Royal Irish Academy 10: 13-22.

Section 5 Locke's Distillery

Location

Locke's Distillery (WIHS 2735, 2744, 2746, 2747, 2751, 2753) is located on both sides and to the rear of Main Street, Kilbeggan. It is generally situated in Kilbeggan townland, but also extents into Aghamore td. To the north and northwest, and Meadowpark to the south on the opposite side of Main Street. The largest part of complex is on the north side of Main Street to the west of the curving approximately NE-SW course of the Brosna. A second (and apparently unrelated) small distillery complex is located a short distance to the east of Locke's establishment on the northern side of Main Street (WIHS 2745).

Cartographic information

Bielenberg (2007, 120) includes three diagrammatic maps in which he traces the evolution of the complex from 1837 (First Edition Six Inch map) to 1913 (Third Edition Six Inch map). Bielenberg locates Locke's Distillery complex as a whole to the west of the Brosna. This complex initially consisting of the former brewery on the S side of Main Street (just S of the junction with Camagh Road), and 2 ranges of buildings on the N side of the street. Western of two bounded by Camagh Road to W, and occupying corner of Camagh Rd & Main Street. Separated by a yard/open space from larger range to E, which was comprised several relatively long rectilinear structures extending away from Main Street frontage. Larger E structure of this range containing mill wheel, and building bounded to E by approx. N-S oriented mill race drawn off Brosna a short distance to E.

According to Bielenberg's diagram depiction of 1871 Second Edition OS Six Inch sheet, the distillery expanded within its overall site with the construction of additional ranges on formerly open ground within the distillery complex on both sides of Main Street. Most significant addition was large bonded warehouse to E of larger northern range (shown on 1837 map), which lay in a roughly triangular area bounded by a bend in the Brosna to the S, the mill race to the W/NW and by a further water-channel extending NW-wards from the Brosna to the N/NE.

The same pattern of infilling of available spaces is identifiable on Bielenberg's diagram of the 1913 Third Edition OS Six Inch sheet. It is of interest that the majority of the new structures were built either wrapping around existing structures, as in the case of the main eastern mill range (where a series of long narrow structures were built up against the outer and inner walls of the older buildings) or inserted into available spaces (e.g. the rectangular building with projecting outshots squeezed in between the northern side of the bonded warehouse block and the mill race. Fewer buildings appear to have been constructed on the site between 1871 and 1913, than between 1837 and 1871, however.

Site description

A long stretch of the northern side of Main Street, Kilbeggan is dominated by the whitewashed buildings and tall chimney of the long-established Locke's distillery complex. Considered to be of national interest as a surviving industrial complex (see NIAH Reg. No. 15321006), the distillery historically produced large quantities of single pot still whiskey for Irish consumption and, in the later 19th century for export, particularly to British as well as North American markets. The current complex represents successive building and restoration campaigns that in turn reflect the changing fortunes of the distillery, from its origins in the 18th century, to its closure in 1958, to the community restoration programmes of the 1980s, and the launch of a new Locke's whiskey brand in 1992. The current configuration of buildings, comprising a visitor centre, coffee shop, surviving later 19th-century steam engine and cooperage, a small-scale distilling operation, and extensive bonded warehouse spaces reflect the combined efforts of community restoration efforts undertaken since the early 1980s, as well as the commercial activities and capital investment programmes of the Cooley Distillery Company and its successors, which purchased the site and the John Locke and Company brand name in 1987 (Bielenberg 2007, 108-9).

Originally, Locke's distillery, which traces its origins from a business that was established in c. 1757, was one of three similar businesses, which were situated within the town and which reflected a later 18th-century shift from small scale domestic distilling to larger scale operations. This shift reflected the gradual growth in popularity of Irish whiskey over the course of the 18th century as a whole, as well as the accelerating impact of import duties on the price of popular imported spirits such as rum and gin from the 1770s and 1780s onwards (ibid., 9). It is likely that the mid-18th-century phase of Locke's distillery was founded and operated under the auspices of Gustavus Lambert, who - as the main landlord in the locality - was also the owner of the much of the town as well as a member of parliament, the Collector of Excise for the Trim district, and a member of the Grand Jury for Westmeath (ibid., 11-12). Lambert's political influence as well as his role within the excise authority meant that in the third quarter of the 18th century, all three Kilbeggan distilleries appear to have operated largely outside the authority of the Dublin excise board and untroubled by excise inspections (Bielenberg 2007, 12-13).

By 1782, when whiskey consumption by poorer members of Irish society was on the rise, a Matthew McManus was listed as the operator of a small still of 232 gallons capacity that stood on part of the current distillery site on the southern side of Main Street. Although McManus managed to stay in the whiskey business despite increased government regulation in the 1780s

(unlike the two other later 18th-century Kilbeggan distilleries which closed at that time), by the end of the century, he had converted his distillery into a brewery. It is possible that this decision was prompted by the death of two of his sons in the 1798 rebellion (Flynn and Mc-Cormack n.d.) as well as by the fact that beer brewing had become 'a more attractive business proposition' as the government sought to centralize Irish whiskey production and to concentrate it in larger, more easily controlled distilleries (Bielenberg 2007, 16). Distilling continued to be carried out within the town, however, as members of the Codd family, who were active in the malting trade, decided to open a distillery on the opposite side of the road to the McManus brewery in the final years of the 18th century (ibid., 17). Despite the difficulties associated with distilling at this time, the Codds increased the capacity of their business, investing in a 451 gallon still and constructing the current distillery entrance and the old still house on the western side of the present yard. Despite this, their output was still relatively low, and by 1804 they too had converted their distillery for use as a brewery.

It was not until the relaxation of the distilling regulations and the reduction on duties imposed on Irish spirits in 1823 that distilling resumed on the site. Even then, the operation of whiskey stills were stringently controlled, and it was required that 'all Malt to be used by a Distiller [was] to be ground in a Mill belonging to him, and situate in, or adjacent to, his distillery' (Hardman 1823). According to the same regulations, no still under 40 gallons capacity was permitted to operate commercially. Distillers operating under the new act were also required to invest heavily in standardized equipment and plant, and were also periodically required to supply additional information on the utensils used, the processes followed and the nature and alcohol content of the washes used in distillation.

The individual who took up this challenge at Kilbeggan was John Fallon 'a tobacconist from Tullamore with limited financial resources' (Bielenberg 2007, 26) who rented the brewery buildings from George Codd's widow, and who in 1824 entered into a financial partnership for



the purposes of establishing a distillery with Patrick Brett of Clara and Henry Gower of Dublin. Fallon and his partners invested heavily in the complex, purchasing 'copper vessels, brewing pans, utensils, machinery, horses, drays, barrels' and other equipment, as well as constructing the eastern range and water-wheel of the present distillery complex (ibid., 26, 25). The significant increase in the output of spirits from the Kilbeggan distillery under Brett and Fallon which saw 29,554 proof gallons of whiskey being produced almost exclusively for the Westmeath and Offaly market - illustrated the continuing rise in demand for whiskey as well as the dramatically improved viability of distilling as a business venture. However, despite the relatively large volume of whiskey produced, the water-wheel installed under Fallon and Brett's auspices was also used to power a corn mill as well as to carry out the malt and grist processing operations required by the distillery, ensuring that the business was not entirely reliant on profits from the sale of whiskey.

Fallon encountered financial problems in the late 1820s, and the partnership was dissolved in 1831, leading to the establishment of a new partnership between William Codd and William Cuffe of Kilbeggan and Patrick Brett (Bielenberg 2007, 26). This second partnership was more successful than the first and continued for a further 14 years, during which time operations at the distillery benefitted from improved local transport networks (such as the newly-built Kilbeggan branch of the Grand Canal), as well as sky-rocketing public demand for whiskey in the 1830s (ibid., 28-30). In this context, it is of interest that Fallon was originally a tobacconist, as the dual consumption of alcohol and tobacco were integral elements of Irish socializing by men throughout the 19th century (just as tea was for women; Cusack 2018). Indeed, the presence of a 'manufactory for tobacco and snuff' (Lewis 1837, vol. 2, 51) at Kilbeggan in the 1830s, as well as the existence of the distillery, may have promoted his initial interest in the town.

The concerns of middle class commentators that excessive alcohol consumption by many poorer Irish people posed a range of social dangers (Bielenberg 2007, 29-30) were partly borne out by the fact that the excessive consumption of both tobacco and alcohol by men could in some cases lead to the impoverishment of their entire families, particularly in urban settings (Breathnach 2004, 87; Bielenberg 2007, 36-7). This problem was addressed in the 1840s by the dramatically successful Temperance Movement led by Fr Theobald Mathew which, together with a significant economic slump and the impact of the Famine, drastically reduced Irish whiskey consumption in general in the 1840s and early 1850s. At Kilbeggan, this slump in demand led to financial losses at the distillery, the dissolution of the Codd, Cuffe and Brett partnership and the opportunistic purchase of the distillery complex by John Locke in 1843.

Locke, who at various stages of his career had been a 'small merchant' in Monasterevin, and who had augmented his income with farming both in Offaly and later in Kilbeggan, had married into the Kilkenny Smithwick brewing family, and had gained experience of whiskeymaking when running an unsuccessful distillery in Tullamore (Bielenberg 2007, 34-5). Locke had obviously learned from his Tullamore experience and this, together with the large scale corn-milling activities that were carried out within the distillery complex in the later 1840s (Slater 1846, 49), allowed the Locke family to ride out the difficult years between 1840 and 1860. During this period, the production of whiskey at the site remained small in scale and was almost exclusively for the local market. In 1846, shortly before he died, Locke signed a 999 year lease on the distillery complex, securing its possession for his family. His wife died in 1848, and within a year of her death, Locke's son, also John, married into the Devereux distilling family of Wexford. The combined success of the milling and gradually expanding distilling business allowed the Locke's to position themselves firmly within the burgeoning ranks of the 19thcentury Catholic middle-classes, and in addition to supporting local relief efforts during the Famine, the patronage of Mary Anne Locke, née Devereux was also instrumental in bringing the Sisters of Mercy order of nuns to Kilbeggan in 1879.

After John Locke died in 1868, Mary Anne ran the distillery with the assistance of head distiller and manager Walter Furlong until 1880, after which her two sons took over the running of the business. This phase of the distillery's operations saw considerable capital investment, and successive revisions of Ordnance Survey maps of Kilbeggan document the construction of new ranges of buildings to north and south of Main Street (see heritagemaps.ie and Bielenberg 2007, 120). The Lockes also invested heavily in new plant and machinery, including the purchase and installation of a horizontal cross compound steam engine from the firm of Turnbull, Grant and Jack of the Canal Basin Foundry, Glasgow in 1887. This engine was intended to supplement the distillery's power supply when low summer water levels rendered the water-wheel inoperable and is one of only two surviving examples of engines produced by that company (Bielenberg 2007, 54; Rynne 2006, 63).

Part of the reason for this expansion and investment was that Locke's distinctively-flavoured and traditionally pot-distilled whiskey rendered it suitable as a base for blending with other blander patent-still-produced whiskeys. The establishment of the Midland Great Western Railway close to Kilbeggan, as well as the Grand Canal branch allowed Locke's Distillery to exploit this 'blendability' on a very large scale, as both modes of transport allowed the company to export significant quantities of spirits to England and to the large whiskey blending businesses of Ulster (Bielenberg 2007, 53-5). Expansion in production necessitated the expansion of office and administrative spaces at the complex, as well as the construction of a new corn store, kiln and warehouses (ibid., 55-6). It is of interest, however, that the type of expansion pursued generally involved the upgrading or enlargement of existing structures, plant and processes rather than successive episodes of demolition and rebuilding.

Thus, for example, even after the installation of the Glaswegian steam engine, the complex continued to rely heavily on its relatively inefficient undershot water-wheel, which, rather than being replaced, was given a technological make-over with the installation of more effective curved Poncelet-type vanes (Rynne 2006, 33-4). Bielenberg (2007, 60) also notes that the later 19th-century operations at Kilbeggan were characterized by 'a reverence for the rule-ofthumb methods which had been passed down from generation to generation [and which] had evolved through trial and error rather than through any rational application of scientific knowledge'. This approach can be contrasted, for example, with the approaches taken by other successful contemporary Westmeath businesses, such as Athlone Woollen Mills, where highly efficient and continuously evolving manufacturing processes and the adoption of the latest technology ensured financial success and often involved the wholesale demolition and removal of earlier buildings and plant.

While the continued use of older technology had an obvious financial aspect (e.g. the use of the Poncelet-type wheel married 'low construction and maintenance costs to the demands of increased mechanical efficiency'; Rynne 2006, 33) it is likely that the specific nature of the whiskey business also contributed to this approach. In the later 19th and earlier 20th centuries as today, the older a whiskey was, the more valuable it was considered to be in terms of money and quality. Additionally, by highlighting the antiquity and established traditions of Locke's Distillery, the management team could perhaps deflect some of the criticism that was aimed at blended whiskeys in the early 20th century, as producers and consumers debated what whiskey was, how to define it, and whether blended whiskeys were inferior products (Buxton and Hughes 2014, 44-5). By maintaining older operational practices, Locke's whiskey could also maintain a distinctive brand identity that allowed historical discontinuities and modern practices (such as the installation of new machinery and the large-scale importation of American bourbon casks) to be disguised or downplayed. Consequently, consumers of Locke's whiskey could be confident that they were consuming an authentic and high quality product.

It was arguably a failure to maintain this association between high quality and the Locke's brand that played a significant role in the eventual closure of the distillery in 1953. By that date, despite expansion and innovations, the complex had suffered a decline due to the later 19th-century over-supply in the Irish whiskey market and also due to a serious fire in the lower mill in 1901, which occurred at a time when money was not available to replace destroyed machinery (Bielenberg 2007, 69-70). Although both World Wars had resulted in brief upswings in production and employment at the complex, the deaths of both Locke brothers in early 1920s had also coincided with the industry-wide crisis caused by prohibition in the United States. The distillery floundered for several years, and production was suspended entirely between 1924 and 1931 (ibid., 76-86). Revelations that large quantities of Locke's whiskey had been and were about to be sold on the English black market both before and after the attempted sale of the distillery as a going concern by the two Locke heiresses in 1947 severely damaged the reputation of the company. So too did perceptions that the sale itself was the product of political corruption and incompetence. The reputational damage to the business was so severe that it negatively impacted upon subsequent attempts by the company management to find business partners capable of injecting much needed capital into the business. Loss of consumer confidence was therefore instrumental in the eventual closure of the distillery in 1953 and in the resulting disuse of much of the five-acre complex and its buildings throughout the second half of the 20th century.

In 1992, however, this process of decline and disuse began to be reversed, after the Locke's Distillery complex was bought by the Cooley Distillery, and was subsequently transferred to the ownership of the American Beam Global group and then to the Japanese brewing and distilling conglomerate, Suntory, after the sale of the Cooley enterprise and its associated brands (O'Connor 2015, 104). Once again, successive management teams began building a wider awareness of the Locke's Whiskey brand, based on changes to the distillery's business model combined with appeals to the established and distinctive character of its surviving traditions, buildings and plant. Since the 1980s, local community restoration programmes have re-established the strong historical links between local people and the complex as a source of employment as well as of craft training and skills. In addition to the distillery's national archaeological and historical significance as a surviving industrial complex, it continues to play a significant role in the economic life of Kilbeggan as a major regional tourist attraction (Illingworth 2016, 119), as a generator of local economic activity and as a major whiskey-storage facility. In these capacities, it is likely that the distillery will continue to play a significant role in the life of Kilbeggan and of county Westmeath as a whole into the 21st century.

References and resources

Heritagemaps.ie https://www.heritagemaps.ie/WebApps/HeritageMaps/index.html

National Inventory of Architectural Heritage http://www.buildingsofireland.ie/niah/highlights.jsp?county=WM

Bielenberg, A. (2007) Locke's Distillery: a history, second edition, Dublin: The Lilliput Press.

Buxton, I. and P. S. Hughes (2014) The science and commerce of whisky, Cambridge: RSC Publishing.

Cusack, T. (2018) "This pernicious tea drinking habit": women, tea, and respectability in nineteenth century Ireland', The Canadian journal of Irish studies 41 (The food issue): 178-209.

Flynn, K. and S. McCormack (n.d.) Westmeath 1798 a Kilbeggan rebellion, Westmeath: The Westmeath Examiner. Hardman, E. (1823) 'Excise Office Dublin', Westmeath Journal, Thursday, 25 September: p. 3 of 4.

Illingworth, R. (2016) The little book of Westmeath, Dublin: The History Press.

Lewis, S. (1837) A topographical dictionary of Ireland comprising the several counties, cities. boroughs, corporate, market and post towns. Parishes, and villages, with historical and statistical descriptions; embellished with engravings of the arms of the cities, bishopricks [sic], corporate towns, and boroughs. And of the seals of the several municipal corporations: with an appendix, describing the electoral boundaries of the several boroughs, as defined by the Act of the 2d & 3d of William IV, Vols 1 and 2, London: Gilbert & Rivington.

O'Connor, F. (2015) A glass apart: Irish single pot still whiskey, Victoria, Australia: The Images Publishing Group. Rynne, C. (2006) Industrial Ireland 1750-1930: an archaeology, Cork: The Collins Press.

Slater, I. (1846) I. Slater's National Commercial Directory of Ireland: including, in addition to the trade's lists, alphabet-

ical directories of Dublin, Belfast, Cork and Limerick. To which are added, classified directories of the important English towns of Manchester, Liverpool, Birmingham, Sheffield, Leeds and Bristol; and Scotland, those of Glasgow and Paisley, Manchester and London: I. Slater.

Section 6 Clibborn Textile Mills of Moate

Location and components

This site comprises a series of structures and features, concentrated adjacent to and within c. 55m to 85m of Moate View on the southern side of Main Street, Moate, plus additional buildings (no longer extant) that were reported to have stood in the fields (where houses now stand) opposite the Carmelite church and friary in The Newtown to the NE of the eastern end of Moate village. The following individual elements have been identified:

(i) Possible linen mill/industrial building on S side of Main Street (WIHS 3569) in Moategranoge Townland, Kilcleagh Parish, Barony of Clonlonan.

(ii) Possible industrial building, part of Moate View complex, S side of Main Street (WIHS 3569) in Killeenboylegan Townland, Kilmanaghan, Clonlonan.

(iii) Possible 4-storey industrial building to west of open area in front of Moate View, short N elevation facing onto S side of Main Street (WIHS 3569) in Moategranoge Townland, Kilcleagh Parish, Barony of Clonlonan.

(iv) Possible site of mid-18th century linen mill, thereafter an early 19th-century brewery (WIHS 1219) in Cartronkeel Townland, Kilcleagh Parish, Barony of Clonlonan.

(v) Possible site of later 19th-century woollen mill, opposite Carmelite friary and church (WIHS 3571) in Cartronkeel Townland, Kilcleagh Parish, Barony of Clonlonan.

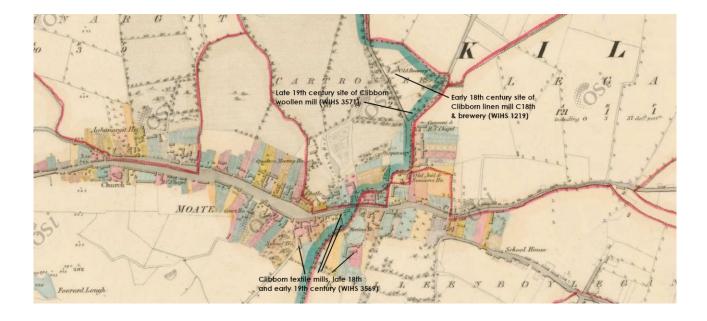
Cartographic information

(i) Possible industrial building/textile mill on southern side of Main Street (NIAH Reg. No.

15317051), comprising a nine-bay, three-storey commercial building standing opposite Moate Castle. To the rear of the street-front range, the building also includes a large rectangular threestorey return that extends southwards to a possible mill race or pond. This pond also potentially serving part of the Moate View complex (see (ii) below), while the associated stream may also have powered water-driven machinery in а third industrial building immediately to the W of the entrance to Moate View (see (iii) below). Depicted on OS 1st Edition Six Inch map of 1837 and on all successive maps.

(ii) Possible three storey 18th-century industrial building, currently included in the overall NIAH listing (Reg. No. 15317054) for the outhouses, coach house, stables and possible worker's house that form part of a quadrangle of buildings extending westwards from the main block of Moate View House. An inscription on a plaque above the door of the house records that the house was built by James Clibborn in 1762, and the outhouses may be of varying 18th to early 19th-century dates. The suggestion that the three storey part of this complex may have some industrial significance is partly based on the size of the building and its similarity to other nearby potential 18th-century industrial buildings, and partly due to the fact that the stream that likely powered machinery within the Main Street building a short distance to the NW seems to have been diverted to also potentially supply this building/building range. It is possible that this building may have served as a corn mill rather than as a textile factory, but its association with the various textile enterprises promoted by the Clibborns from the 1760s to 1860s cannot be ruled out.

(iii) Possible 18th-century industrial building/mill stands with its long axis at right angles to southern side of the road, immediately to W



of open area in front of (to N of) Moate View. Not currently listed in either the NIAH database, nor as part of the National Monuments or other datasets of HeritageMaps.ie. Upper storey and roof altered with the addition of a mansard-type tile cladding to fourth storey and roof level, possibly reflecting alteration in late 1980-1990s that sought to create a more uniform appearance after alterations to the N street-facing elevation of the building. The fourstorey structure is currently entered at first floor level via a ramp from Main Street leading to a door in the N gable of building. A roundheaded door at ground level on the E elevation is probably the original door. The size and position of the 4th storey windows on E elevation relative to those below suggest that they may be the original (possible 18th-century) windows, and that the mansard-style cladding is a superficial surface treatment only.

On the 1836 OS 6 Inch and subsequent maps, a section of stream or watercourse (currently covered over with an iron grille) is shown running around the E side and S of this building, before expanding into a roughly-rectangular NE-SW pool that also supplied the probable 18th-century mill building (NIAH Reg. No. 15317051; see (i) above), and also extending to the western end of the long range of outbuildings extending from the western side of Moate View House (see (ii) above).

(iv) Possible site of linen mill and brewery complex in td of Cartronkeel td to N of town and a short distance to the south of the current railway line. Historical accounts suggest that the 1750s linen mill operated by Joshua Clibborn was on the road to Toorphelime. The configuration of local streams in the area, plus the presence of an 'Old brewery' on the 1837 OS 1st Ed 6 Inch map suggests that this mill may have stood adjacent to the eastern side of the current Cartronkeel Road, to the north of the fork between the Cartronkeel road and The Newtown. Water was likely supplied to the complex from the stream to the east and the complex comprised three building ranges forming the sides of a rough quadrangle, oriented NE-SW along its long axis and open to the NW. This area is currently occupied by the modern houses on the Cartonkeel road and those of the Cartron Grange development to the east.

(v) Possible site of 19th-century woollen mill on N side of road opposite Carmelite church and convent to NE of town, depicted on OS 1st Ed 6 Inch map as complex of several relatively small buildings, again served by local streams, one of which approaches from the west, another from the east. Shown on the Griffiths Valuation town plan as a complex of four large and one small buildings in the triangular area where Cartronkeel Road meets the Newtown, with a further sixth larger structure flanking the

northern side of The Newtown to the northeast. This sixth building was probably the structure referred to in Grouden (1990, 26). Not recorded on either the NIAH database, nor on the National Monuments or other datasets of HeritageMaps.ie. The scale of these buildings suggests a relatively small-scale or highly atomized production process, with different buildings serving distinct functions and potenoperating significant tially without any economies of scale. Indeed, the scale of the buildings is such that implies that wool was possibly being spun elsewhere (e.g. at a domestic scale in the neighbourhood, mirroring pre-Famine textile-manufacturing practices in the wider locality), or that pre-spun yarn was being imported rather than manufactured on site (perhaps taking advantage of the very large quantities of wool that travelled to and from Athlone Woollen Mills throughout the 1860s to 1880s).

Site description

In the National Inventory of Architectural Heritage, the nine-bay three storey commercial premises that stands on the southern side of Main Street, Moate, opposite the wall of Moate Castle has been recorded as NIAH Reg. No. 15317051. Its inclusion in the Inventory is partly due to its scale and later 18th century character and features, and partly due to the existence of the large return to the rear. The size of this return led the compiler to believe that 'this was originally a large-scale industrial structure or a mill, a suggestion supported by the small stream which runs past the east elevation of this building and may have been used as a mill race'. The compiler of the entry further observed that 'The proximity of this building to Moate View [NIAH Reg. No. 15317053], a house built by James Clibborn in 1762, suggests that this commercial operation may have been in the ownership of the Clibborn family', and noted the active involvement of the Clibborn family in the later 18th-century flax industry. On this basis, it was concluded that 'it is quite possible that this building was [used] in the manufacturing of linen and frieze'.

Other than the complex of later 19th- to 20thcentury features associated with Moate Railway Station a short distance to the north of Main Street, this structure is the only NIAH listing that reflects the industrial activities of the Clibborn family in and around their ancestral centre at Moate. The family's primary seat in the town was the Castle, which was purchased by Captain John Clibborn in 1655 (O'Brien 2014, 149-50), and in subsequent centuries, other family members established houses in and around the town, such as Joshua Clibborn's Moate View, built in 1762 (ibid., 150), and the now demolished Georgian house that stood in the townland of Hall to the southwest of the town (ibid., 119). As the reference to textile manufacturing in the NIAH entry cited above indicates, these houses and the agricultural lands that supported them represent only one element of the Clibborn family's activities at Moate; from relatively early in their association with the town, the family also established and supported a number of manufactories, perhaps the earliest of which was a tanyard that lay to the east of the castle gate, and that was founded in the 1730s by James Clibborn to replace an earlier local tannery (Grouden 1990, 21).

The Clibborn association with linen manufacture built upon an established local manufacturing tradition in a similar way. Since the 1680s and possibly since the later 16th/early 17th centuries (Grouden 1990, 22-3; Piers 1786, 3), flax had been grown, processed, spun into thread and woven into linen in the farms and cottages of the wider area. The early indigenous manufacture of linen in the vicinity of Moate is evidenced by the 'tuar' element of local Gaelic placenames such as Toorard and Toorphelim, which indicated the presence of bleach greens to north and south of the town (ibid., 22). As Samuel Molyneux noted in 1709, however, although local women 'made the rent sometimes in this country and in Connaught by making their 20 or 30 yards of cloth in a year besides supporting ye necessary linen for the own family; this manufacture [was] not so much improved here as to make any cloath for sale further than immediate necessity constrains them' (Barry 2015, 34, footnote 139). With the establishment of their linen mill on the Toorphelim Road in the 1750s (Grouden 1990, 22), the Clibborns added a commercial impetus to local linen production, taking advantage of a mid- to later-18th-century Irish boom in linen, which was promoted by a system of premiums and by commercial networks that extended northwards into Ulster as well as into the midlands and south. At Moate, Joshua Clibborn promoted the production of flax on tenant farms, which was then processed at the bleach green in Aghanargit Townland, was spun into thread at Clibborn's mill, after which locallybased cottage weavers converted the thread to cloth, which Joshua's uncles Robert and Abraham then sold from their premises on Meath Street in Dublin (Grouden 1990, 23; O'Brien 2014, 150). From the 1750s, Joshua himself appears to have also had a Meath Street premises, as he offered this building for rent in 1756 (Grouden 1990, 24).

Although the NIAH suggests that the large Main Street commercial and industrial premises (Reg. No. may 15317051) may have formed part of the Clibborn's linen business, historical accounts and cartographic analysis suggest that the Clibborn linen mill may have stood adjacent to the narrow accessway that extends between modern houses on the eastern side of the Cartronkeel Road towards the houses of the Carton Grange development. This conclusion is partly based on the fact that on the First Edition Ordnance Survey Six Inch map of 1837, before the construction of the Midland Great Western Railway line to the north, the local streams in this location had been organized to supply water to a relatively substantial brewery complex on the eastern side of the Cartronkeel Road. Given the later-18th-century decline of the Irish linen industry in Westmeath and in the south of Ireland as a whole (Flynn and McCormack n.d., 30; Murtagh 2000, 185-6), this brewery may have replaced the 18th century mill, as it was common practice for mill owners to respond to shifts in demand for particular commodities by converting their mills to process whatever product was most lucrative at a particular time. However, the designation of the Cartronkeel brewery as 'old' on the 1837 map suggests that by the 1830s, the brewery too was in decline, a suggestion supported by Lewis' Topographical Dictionary of 1837 (vol. 2, 229), in which it was recorded that 'The manufacture of cottons and linens, formerly carried on [at Moate] to a very great extent, is now much diminished, affording employment only to about 100 persons; and several large distillers and breweries have been altogether discontinued'.

The reference to cotton manufacture in Lewis' description of Moate reflects the fact that, in the later 18th century, many landlords as well as industrialists experimented with the production of cotton cloth, importing raw cotton directly from the Americas, or through British wholesalers (Bielenberg and Solar 2007, 3, 7) and processing it in their mills. As Bielenberg and Solar (ibid., 1) note, 'The cotton industry is one of the great 'might-have-beens' of Irish economic history', with hopes for its development in the 1780s leading 'the Irish parliament, the Dublin Society and the Linen Board [to] all [rush] in with subsidies' for manufacturers. In the south of Ireland, landlords and business owners concentrated on the production of coarser forms of cloth for local consumption, as by the 1830s, Women commonly wore cotton on Sundays, gala days, weddings and other special occasions, while younger men and women were also attracted by its more fashionable appearance' (ibid., 10).

Initially, Irish cotton manufacturing largely adopted practices that were already established in the older linen industry. Landlords keen to attract professional cotton weavers to their estates built suitable cottages for the generally male weavers and their families, and built up clusters of hand-loom operators who wove thread spun on estate mills. At Moate, it is probable that the existence of an established linen industry plus the trade networks operated by his uncles encouraged Joshua Clibborn or his heirs to try their hand at cotton manufacturing. It would have been relatively easy to convert the existing network of weavers' cottages and the linen mill at the eastern end of the town to accommodate the similar demands of cotton spinning and weaving. However, as ceasing linen production entirely would have had a considerable impact on local tenant farmers dependent on flax production for their family income, it is possible that the Clibborns built new buildings to accommodate their cotton venture, rather than repurposing their existing linen mill. This argument is supported by Lewis' 1837 description, which implies that cotton and linen were simultaneously manufactured within the town and its immediate surroundings.

The suggested later 18th-century date of the commercial/industrial large Main Street premises is suggestive in this regard, as is the presence of two further potential industrial structures that stand close by and in proximity to Moate View house. Both of these buildings appear to have been supplied with water by the same stream that ran to the rear of the Main Street property, where it formed a tapered, roughly rectangular north-east/south-west-lying pond. The first of these buildings is a four storey building that has been given a modern mansard-style roof treatment, the short northend of which fronts Main Street ern immediately to the west of the entrance to Moate View. The second of these potential industrial buildings forms a three storey element within the rough quadrangle of outbuildings that are attached to the western side of Moate View house. It is possible that all three buildings functioned together as part of a manufacturing complex that may have produced or processed cotton, and that was closely overseen by Joshua Clibborn or his daughter and her heirs. With the ultimate decline of the southern Irish cotton industry in the decade following of the Napoleonic wars, any cotton-related function that these buildings may have had is likely to have ceased. It is also possible that, together, they reflect a previously unrecorded Clibborn manufacturing business, such as the processing, storing and milling of locally grown cereal crops, as well as the storage of goods sold in the shops that later occupied the Main Street premises.

In addition to the production of linen and cotton, the Clibborns also engaged in the manufacture of woollen cloth, establishing a frieze and felting mill in the vicinity of Burgess Lane opposite the Anglo-Norman town motte in the 1750s (Grouden 1990, 24). Once again, the family's investment in this industry represented the intensification and reorganization of an indigenous manufacturing tradition as, by the 1780s, Irish domestic spinners and weavers produced considerable volumes of woollen cloth for local markets. By that date, it is estimated that 'adult Irishmen annually used 8 lbs. of wool in the form of clothing', with women potentially requiring even more finished cloth, while drapery imports 'satisfied only a small fraction of this demand' (Clarkson 1989, 24). Although earlier 18th-century Irish friezes, such as those produced around Carrick-on-Suir, catered for the higher end of the clothing market (ibid., 27-8), by the 1770s, higher wool prices, the shift from pasture to tillage and the greater availabil-English cloth had led itv of many manufacturers to produce coarser fabrics in an attempt to attract less affluent local consumers (ibid., 29-30). This market shift may be reflected in the decision of the Clibborns to move their woollen factory premises at Moate from Burgess Lane to the Newtown in the 1790s (Grouden 1990, 25) and operations may have expanded at this time in order to take advantage of the brief initial boom in Irish woollen production after the lifting of Irish trading restrictions in the 1780s.

This new mill complex appears to have been situated in the fields immediately to the north of the Cartronkeel Road/Newtown fork. The town plan associated with Griffiths Valuation (carried out between 1848 and 1864) showed the complex as a cluster of four medium-sized buildings positioned around a smaller fifth central structure standing close to the eastern side of the Cartronkeel Road, with a sixth large building a short distance to the northeast flanking the Newtown (and see Grouden 1990, p. 26). The Valuation listed James and Thomas Clibborn as proprietors, and described the mill complex as a business of two parts, consisting of a manufactory and a woollen stores, each of which had its own separate yard. In its entirety, the complex was valued at an annual rate of f_{18} , the bulk of which (f_{15}) was payable on the woollen stores and its associated yard. The position of the complex close to the fork in the road suggests that it was established to the south of the old brewery and possible former linen mill complex, perhaps reflecting discontinuities in ownership or tenancy agreements, as well as the disruption of the older water courses in the area following the mid-19th-century construction of the railway line to the north. By the later 19th century, streams that lay to both east and the west of the site had been redirected to supply water to the complex, suggesting the operation of multiple wheels and associated machinery at the site as well as the storage of significant amounts of wool and woollen cloth.

Given the pre-Famine collapse of the Irish frieze industry, it is unsurprising that, by the 1860s, James and Thomas were manufacturing tweeds and other types of woollen cloth as well as friezes at their Newtown premises. In trade advertisements inserted into many Irish newspapers in 1864, for example, they noted their participation in the Dublin Society Exhibition of Irish Manufacturers that year, and drew the attention of visitors to the 'Irish Friezes, Meltons, Plain and Fancy Tweeds' that were available for viewing at their trade stall (Clibborn and Clibborn 1864). By the time that the First Edition Twenty Five Inch map was published between c. 1897 and 1913, however, the probable large woollen store building along the Newtown appears to have been demolished, together with at least one or more of the combing manufactory buildings. From this, it seems that the Clibborns, like many other smaller-scale Irish manufacturers were unable to compete with large enterprises like the Athlone Woollen Mills and its northern English counterparts, which identified and targeted international markets and which invested very heavily in the latest steam and milling technology. The fact that William Smith, the managing director of the Athlone Woollen Mills was reportedly from Moate, however, suggests that over the course of its existence, the Clibborns mill acted as a local training centre for the wider wool production industry as well as a source of local employment. Despite its later 19th-century closure, its influence on local business people and on the local commercial economy may have persisted for several decades after its demise.

Together, the multiple sites and range of business ventures developed and supported by the Clibborns at Moate show a high degree of adaptability, a willingness to shift business locations and models to maximize profitability, and an awareness of and responsiveness to shifts in the wider economic patterns of Westmeath and of Ireland as a whole. Their willingness to promote local industry places the Clibborns among a group of later 18th- and 19th-century landlords who encouraged manufacturing activities on their estates as part of efforts to diversify tenant earnings away from a strict reliance on agriculture (Almqvist 1979, 323). In the case of the Clibborns, their status as Quakers is also likely to have played a significant role in their commercial and industrial activities; the rules of the Society of Friends not only governed personal behaviour, but also encouraged members engaged in industry to deal 'in basic and necessary products such as iron, wool, wood and grain and their manufactured derivatives' and to avoid 'dealing in products that implied luxury and waste' (Harrison 2003, 88). The Clibborn manufacture of leather, basic linens, affordable cotton cloth and woollen textiles at Moate met all of these broad requirements.

The close-knit nature of Irish Quaker society could help its members to ride out economic ups and downs, as family and marriage networks provided conduits through which business, commercial information and capital could easily travel allowing members of the Society to respond rapidly to changing economic circumstances (ibid., 89-90, 96). This was particularly true in the Irish midlands, where families such as the Clibborns, the Grubbs, the Perrys, the Goodbodys, the Leckys, the Malcolmsons and the Robinsons had intermarried and interacted since the 17th century (e.g. Langrishe 1890-91, 378; Stokes 1890). In the process, they established trade networks that extended from Clonmel and Tipperary, to Carlow, to Clara in Offaly, to the Westmeath towns and townlands of Moate, Kilbeggan, Loughnagore and further afield (e.g. Robinson 1824). While many of these businesses existed as independent entities, many smaller mills, such as those at Moate, were supported by the landownership and wider farming activities of their founders. Many smaller businesses became progressively less commercially viable towards the end of the 19th century, as Irish society gradually shifted in the direction of tenant landownership and as more and more food, clothes and goods were imported into Ireland from the great industrial centres of England and North America. At Moate, although the textile and manufacturing businesses established by the Clibborn family from the early 18th century onwards have not survived, they have left a

significant mark on the town – directly in the form of surviving industrial buildings and indirectly through the handsome 18th- and 19th-century houses that were built as successful local industries brought money and prosperity to the town's inhabitants.

References and resources:

Heritagemaps.ie https://www.heritagemaps.ie/WebApps/HeritageMaps/index.html

National Inventory of Architectural Heritage http://www.buildingsofireland.ie/niah/highlights.jsp?county=WM

Almqvist, E. L. (1979) 'Mayo and beyond: land, domestic industry, and rural transformation in the Irish west', The journal of economic history 39 (1), March: 323-4.

Bielenberg, A. and P. M. Solar (2007) 'The Irish cotton industry from the industrial revolution to Partition', Irish Economic and Social History 34: 1-28.

Clarkson, L. A. (1989) 'The Carrick-on-Suir woollen industry in the eighteenth century', Irish economic and social history 16: 23-41.

Clibborn, T. and J. Clibborn (1864) 'Dublin Society. Exhibition of Irish manufacturers. Irish woollens', Dublin Daily Express, Monday, 18 July: p 1.

Flynn, K. and S. McCormack (n.d.) Westmeath 1798 a Kilbeggan rebellion, Westmeath: The Westmeath Examiner.

Grouden, B. (1990) 'The contribution of the Clibborn family to Moate town and district', Moate Historical Society Occasional Paper 4, November: 1-36.

Harrison, R. S. (2003) 'Irish Quakers in flour milling', in Bielenberg, A. (ed.) Irish flour milling. A history 600-2000, pp. 88-105, Dublin: The Lilliput Press.

Langrishe, R. (1890-91) 'The sieges of Athlone and 1691 (continued)', Journal of the Royal Society of Antiquaries of Ireland 21: 370-80.

Lewis, S. (1837) A topographical dictionary of Ireland comprising the several counties, cities. boroughs, corporate, market and post towns. Parishes, and villages, with historical and statistical descriptions; embellished with engravings of the arms of the cities, bishopricks [sic], corporate towns, and boroughs. And of the seals of the several municipal corporations: with an appendix, describing the electoral boundaries of the several boroughs, as defined by the Act of the 2d & 3d of William IV, Vols 1 and 2, London: Gilbert & Rivington.

Murtagh, H. (2000) Athlone history and settlement to 1800, Athlone: Old Athlone Society.

O'Brien, D. (2014) The houses and landed families of Westmeath, Athlone: Temple Printing Co.

Robinson, S. (1824) 'To the editor of the Westmeath Journ-

al', Westmeath Journal, 25 March: p. 3 of 4.

Stokes, G. T. (1890) 'Athlone in the seventeenth century', Journal of the Royal Society of Antiquaries of Ireland 21: 198-215.

Section 7 Mullingar Railway Station

Location

Mullingar Railway Station (WIHS 3765 and other associated entries) is situated in Mullingar townland, in the parish of Mullingar and barony of Moyashel and Magheradernon.

Cartographic information

It is not depicted on 1837 OS map (the railway was not yet built). By the publication of the OS First Edition 25 Inch sheet of c. 1897-1913, the majority of structures recorded in present NI-AH survey and that form the complex of Mullingar Railway Station were in existence and occupied more or less the same relative positions as today. Engine sheds and turntable on southern side of tracks to west of main station building, flanked to south by road leading from Clonmore towards canal bridge to north. Current plaza/parking area in front of main entrance (to W of main station building) was formerly partly enclosed, with access via the northern half of this area only. Goods shed attached to W side of main station building marked as such, as were platforms to both N and S flanking the Longford/Cavan/Sligo and Galway lines respectively.

The historic maps show considerable continuity since construction of existing railway station building in c. 1856 coincident with the laying of the northern branch towards Longford, Cavan, and ultimately Sligo. This is demonstrated by the relatively high survival rate of mid- to later-19th-century structures as recorded in the NI-AH survey of Westmeath. Characterized by relatively large area and relatively low density of features, reflecting the construction of features to serve different functions, such as servicing of trains, passenger access, and cattle loading. Relatively narrow site widths also reflecting character of railway operations, as majority of structures and features constructed relative or adjacent to the rail tracks.

Site description

Located to the south of the curving channel of the Grand Canal as it loops around the northern edges of Mullingar town centre, Mullingar railway station currently comprises a collection of 19th- and early 20th-century buildings that together 'represen[t] one of the best collections of Victorian railway architecture/engineering in Ireland' (NIAH Reg. No. 15310046). The railway buildings include the station itself (NIAH Reg. No. 15310049), an unusual structure built in 1856 and altered in c. 1896, which consists of a two-storey bow-ended central block connected to two walled and multi-bayed single-storey platforms, that fan out to form a 'V' shape. The station complex also includes a twin-track train shed with turntable that currently houses decommissioned steam engines and rolling stock belonging to the Railway Preservation Society of Ireland (NIAH Reg. No. 15310044), as well as an early 20th-century signal box (NIAH Reg. No. 15310052), platform shelters (NIAH Reg. Nos 15310050 and 15310053), bridges (NIAH Reg. Nos 15310047 and 15310051) and embankments that carried trains over the local road network (e.g. NIAH Reg. No. 15310046).

The buildings lie at various points along two railway lines that originally met at Mullingar – the first being the main line that formerly linked Dublin and Galway, which curves gently southwestwards away from the main station building, the second being the branch line to Cavan and ultimately to Sligo, which extends northwards across the northern loop of the Royal Canal. Both lines were constructed and operated by the Midland Great Western Railway (MGWR), which had its headquarters at its Broadstone terminus on the northern outskirts of Dublin city until the closure of that terminus in 1937. As the meeting point of these two lines, Mullingar station rapidly assumed the character of 'an important junction station' (Measom 1870, 285; Ó Conláin 1998a, 7), connecting the bogs and drumlin landscapes of southern Ulster with the wider midland region as well as with both east and west coasts.

The MGWR was the third largest railway in 19th-century Ireland, and of Ireland's railways, it has been described as 'the least influenced by English companies in operation or construction' (Mulligan 1990, 67). Incorporated as a company in 1845, with the aim of constructing 'a line from Dublin to Mullingar, with a branch to Longford' the Directors sought and gained permission to expand their scheme to include Athlone in 1846, Galway in 1847, Longford in 1852 and Cavan in 1856 (Measom 1870, xvi). The furious competition between rival railway interests in the 1840s was driven by the ultimately erroneous belief that, if connected to Dublin, Galway would become the dominant transatlantic Irish port. At a local level, proximity to a railway station gave business owners, farmers and landowners the opportunity to access wider markets and to considerably expand local economies. Consequently, gaining permission to build the railway lines was not just a lengthy process but was also a fraught and difficult one, involving much political manoeuvring by company directors, affected landowners and their allies in the Westminster corridors of power (Mulligan 1990, 67-8; Ó Conláin 1998a, 2). Following initial engineering surveys, the MGWR company directors decided to buy the Royal Canal which, at that time was struggling to remain commercially viable, and which was sold to the railway at considerably less than it had cost to build between 1790 and 1817. Possession of the canal allowed the railway line to run along its banks, thus avoiding lengthy negotiations with numerous individual landowners in advance of construction and allowing work on the railway to commence in 1846 under the auspices of the Carlow-born engineer, William Dargan.

By 1847, the line had reached Kinnegad, at which point it was decided to 'to leave the canal and strike across country to Mullingar which opened to traffic on 2 October 1848' (Mulligan 1990, 69). Construction of the track and of the earliest buildings at Mullingar station coincided with the onset of the Famine, which ravaged Westmeath, placed immense pressure on its nascent Poor Law infrastructures and causing extensive suffering among the poorer inhabitants of the county. Work on the line to Mullingar during these years was characterised by frequent tensions between the local labourers hired on to complete the work and the managers and subcontractors directing their efforts. Failure to pay wages in a timely way could mean the difference between starvation and survival (Ó Conláin 1998a, 3), and periodic works stoppages occurred in 1846 and early in 1847 when one of the subcontractors absconded with three weeks-worth of labourers' wages and as different groups of workers attempted strike action in pursuit of higher rates of pay (ibid., 2-3). Notwithstanding these problems, Dargan was generally seen as a fair and humane employer, paying workers in cash rather than in kind, and employing thousands of local men and boys along each stretch of track laid (Mulligan 2014, 82-84, 91, 114). Although railway construction employment could provide only limited relief (as labourers were laid off as each stretch was completed) the construction of the MGWR line between Mullingar and Athlone, and Dargan's fair employment policies have been credited with saving many lives during the worst years of the Famine (ibid., 85 and Mulligan 2015, 44-5).

Despite transporting very large quantities of goods and livestock out of the greater midland region (particularly in the immediate lead-up to the Ballinasloe fair; Mulligan 1990, 74), poor management and the failure of Galway to develop as a premier transatlantic port meant that the fortunes of the MGWR dipped in the early 1860s. This had a knock-on effect on staff morale and station infrastructures, and it was not until the years following the appointment of Englishman Joseph Tatlow as general manager of the MGWR in c. 1864 that the company's fortunes started to improve. By the 1870s, the MGWR operated 2611/4 miles of track, at a total expenditure (in 1865) of \pounds 3,689,808, including \pounds 38,039, which was spent on 'Stores, machinery, and plant; Furniture at stations and termini, and temporary advances'



(Measom 1870, xviii). By that date, in addition to the original embankments and track, the current station building had been constructed according to the plans of Dargan's architect, John Skipton Mulvany, replacing an older structure that had been demolished when the northern branch line to Longford and Cavan was laid in the later 1850s.

Although initially regarded with relative indifference by local people too preoccupied by starvation and disease to pay much attention to the arrival of the railway in Mullingar in 1848 (O'Brien 1999), the railway gradually ushered in a suite of social as well as economic changes that impacted the lives of rich and poor alike. Possession of railway shares and access to wider markets enriched company directors, such Thomas James Smyth who lived in Ballynegall, Mullingar in the 1870s (Measom 1870, n.p, list of directors). The regular wages that were paid to station and railway staff percolated into the wider local economy of Mullingar and its hinterland, supporting local shops and promoting a market for imported consumer goods such as tobacco, clothes, fabrics, books and household wares which were all carried to the town on the

train. In the town's hinterland, local livestockrearing practices and food processing businesses re-organized themselves to avail of cheap freight haulage rates. Patterns of landownership that had already been altered by the Famine shifted further to accommodate the demands of servicing the railway (for example Dargan's purchase and rental of the estates of Mosstown near Killure and Moyvoughley House, near Moate as grazing land for the horses used to haul materials and machinery during the railway construction phases; O'Brien 2014, 152, 157; see also Murtagh 1999, 15). The railway also influenced the daily routines of local people, as the complex timetables and arrival and departure times of the railway introduced centrally-controlled clock time to lives that had previously been structured by the passage of the sun and the seasonal cycles of the agricultural year.

In 1848, the editors of Athlone Sentinel reflected this trend by reproducing a short article by an anonymous correspondent, in which it was observed that, due to the railway, 'Dress, manners, thought, are becoming everywhere the same; the shop windows display the same prints, music, and books as you have left in London, and in the same matter affords subjects for conversation here as there'. Arguably, however, the author's prediction that the end result of this process would be that 'Local prejudices and narrowness will follow' was incorrect, as the advent of the railways opened Mullingar to wider social and political phenomena. The fast connection times, regular postal services, telegraph connections and population movement associated with the railway meant that local events were perceived within a wider national and international framework; in the context of Mullingar railway station, the most notorious of these was the murder in 1869 of station master Thomas Anketell, who was shot and killed in the garden of his house, which stood adjacent to the engine shed and turntable (Shepherd 1998, 17).

Although possibly related to the firing of a local railway policeman and local porters, Anketell's murder also took place against a backdrop of agrarian and labour-related attacks that, in the absence of trade unions, sought to influence the hiring policies of the MGWR company, local landlords and business-owners (ibid., 18-19, 21; Whelehan 2012, 12-13). Worried members of the law enforcement authorities as well as different sectors of the local community also interpreted Anketell's murder in light of contemporary sectarian tensions, the actions of traditional secret societies, and the spread of radical nationalist politics such as Fenianism (Shepherd 1998, 20-21). Consequently, while Anketell's death reflected tensions that were specific to Mullingar and to the operation of the station, it was also understood as part of the wider social and political changes that were associated with industrialization, increased literacy, nationalism and the homogenization of Irish 19th-century society as a whole.

While trade unions were not established at the MGWR until the 1890s, levels of violence against railway workers and managers declined in the 1870s and 1890s. However, as a primary transport corridor, the MGWR was affected by the unrest between 1916 and the civil war of the early 1920s. In Easter week of 1916, 'all east-bound trains ran no further than Mullingar' forcing travellers to disembark and seek lodgings in the town (Carrick 1998, 14). The

British army stationed an armoured train at Mullingar station between 1917 and 1918, and the station was the scene of the arrest of General Seán Mac Eoin in March 1921 (ibid.). During the war of independence, the MGWR, like Ireland's other rail-lines, suffered 'derailments, burnings and hijacks' (Mulligan 1990, 82) and the railway bridge between Mullingar and Streamstown was blown up in February 1923.

At a day to day level, however, the later 19th and early 20th century operations of the railway station were characterized less by violence and more by ongoing platform expansions, wagonwashing operations, the installation of new technologies (such as the 1920s signal box) and occasional innovations such as the invention and operation of the Bretland track-laying system in the early 1920s (Ó Conláin 1998b, 38-41; Roe 1998). These actions were carried out by a large work-force, and by the early 20th century, up to 700 people were employed at Mullingar station (Illingworth 2016, 120). In 1925, the station became part of a wider national rail network as the MGWR amalgamated with its former rival, the Great Southern Railway. Diesel engines replaced steam on the network in the early 1950s, coinciding with gradual a decline in railway use, as road haulage and car ownership impacted on passenger numbers. In 1959, 'the Cavan line was lifted [...] and the Clara branch in 1963' (Ó Conláin 1998b, 39). The Galway line was downgraded, while travel and mail services on the Mullingar to Athlone line ceased in 1982. The use of the Mullingar station gantry for scrapping steam trains had almost wound down by that date, and employee numbers dropped to reflect the reduced number of activities carried out at the station. Despite this overall decline, the local railway network continues to function as a significant carrier of people and goods. Mullingar Station also continues to function as a major local station on the Sligo to Dublin line, serving the wider local hinterland. It therefore continues to fulfil its role as a transport hub connecting Mullingar to both eastern and western coasts and - as its fine collection of rail buildings demonstrates - connecting the modern town with its rich railway heritage and its wider industrial history.

References and resources

Heritagemaps.ie https://www.heritagemaps.ie/WebApps/HeritageMaps/index.html National Inventory of Architectural Heritage http://www.buildingsofireland.ie/niah/highlights.jsp?county=WM

Anon. (1848) 'Influence of railways on the national character', Athlone Sentinel, Friday, 4 August: p. 4 of 4.

Carrick, J. C. (1998) 'Midland memories', in Illingworth, R. (ed.) When the train came to Mullingar: 150 years of Mullingar Railway Station 1848 to 1998, pp. 9-16, Mullingar: The Westmeath Examiner.

Illingworth, R. (2016) The little book of Westmeath, Dublin: The History Press.

Measom, G. S. (1870) The official illustrated guide to the Midland Great Western, and Dublin and Drogheda Railways, via London and North-Western Railway, with a description of Dublin, and an account of some of the most important manufactories in Dublin & in the towns on the lines, second edition, London: C. Griffin & Co.

Mulligan, F. (1990) One hundred and fifty years of Irish railways, second edition, Belfast: Appletree Press.

Mulligan, F. (2014) William Dargan: an honourable life 1799-1867, Dublin: The Lilliput Press.

Mulligan, F. (2015) 'William Dargan: an honourable life', Studies: an Irish quarterly review 104 (413), Spring: 40-50.

Murtagh, A. (1999) Portrait of a Westmeath tenant community, 1879-85: the Barbavilla murder, Maynooth Studies in Local History 25, Dublin: Irish Academic Press.

O'Brien, S. (1999) Famine & community in Mullingar Poor Law Union, 1845-1849: mud huts and fat bullocks, Maynooth Studies in Local History 21, Dublin: Irish Academic Press.

O'Brien, D. (2014) The houses and landed families of Westmeath, Athlone: Temple Printing Co.

Ó Conláin, M. (1998a) 'Mullingar and the railway', in Illingworth, R. (ed.) When the train came to Mullingar: 150 years of Mullingar Railway Station 1848 to 1998, pp. 1-8, Mullingar: The Westmeath Examiner.

Ó Conláin, M. (1998b) 'Mullingar as a railway centre', in Illingworth, R. (ed.) When the train came to Mullingar: 150 years of Mullingar Railway Station 1848 to 1998, pp. 37-42, Mullingar: The Westmeath Examiner.

Roe, W. F. (1998) 'The Bretland tracklayer: one of Mullingar's contributions to railway history', in Illingworth, R. (ed.) When the train came to Mullingar: 150 years of Mullingar Railway Station 1848 to 1998, pp. 23-27, Mullingar: The Westmeath Examiner.

Shepherd, W. E, (1998) 'Murder at Mullingar', in Illingworth, R. (ed.) When the train came to Mullingar: 150 years of Mullingar Railway Station 1848 to 1998, pp. 17-21, Mullingar: The Westmeath Examiner.

Whelehan, N. (2012) 'Labour and agrarian violence in the

Section 8 The Multyfarnham Mills

Location

Multyfarnham Mill (WIHS 4150, and possibly associated with 3841) is located in northeastern portion of Rathganny townland (Multyfarnham parish and Corkaree barony), abutting the southern bank of the River Gaine, and immediately to the south of the medieval Francisan monastery complex that lies in the southern portion of Abbeyland townland. The townland boundary currently follows the considerably altered course of the river Gaine to the north of the former mills site; on the 1837 map, however, the stretch of the Gaine that served the mill ran further to the wouth and the mill building was shown straddling both the river and the townland boundary, so that its southern half lay in Rathganny and its northern half in Multyfarnham.

Cartographic information

The Down Survey map suggests that some chopping and changing occurred in the 17th century as far as ownership of lands associated with 'convent' and Franciscan complex concerned. Two potential mills are depicted along the Gaine but on the northern banks, while the ruined church is shown on the southern bank. This suggests either some inaccuracy in the representation of relative location of the church, or potential 17th/18th-century alteration to the course of the Gaine, as on 1837 map where the stream is shown arcing around the Franciscan complex and meeting the Gaine to the NW. If there was alteration to the course of the river, then the potential mills shown would lie some distance to the north. No mill marked in immediate vicinity of ruined church depicted on the Down Survey map, potentially indicating a later 17th-century date for the mill described by Sir Henry Piers, or suggesting the temporary disuse of the possible medieval mill associated with

the village and Franciscan complex (http://-downsurvey.tcd.ie).

On the 1837 OS 6 Inch map, the mill is shown as a T-shaped structure, oriented NNE-SSW that partly straddled the stretch of the Gaine over which it was constructed. This building is marked 'Corn Mill' and shown as part of a complex of five buildings that extended on both sides of the road. The second largest of these was another T-shaped structure marked 'Corn Kiln' to the site, and the remaining structured may have been grain stores or domestic buildings possibly associated with the miller/mill operator. No direct through access from one side of 'Convent' to the other, as road from village to east linking mill, convent and Franciscan complex (then described as 'Convent Chapel' and 'Bury.g Ground' and didn't meet stretch of road allowing access to convent from west.

On the First Edition 25 Inch map of c. 1897-1913, the whole complex is considerably altered, the main course of the Gaine having been rererouted to the north, the corn kiln no longer standing, and both the arms and leg of the original T-shaped mill having been extended. No label suggesting the use of this later complex as a mill and it is possible that the whole complex was operating as a farm, the original buildings having been demolished or converted for agricultural purposes. Adjacent 'Convent' demolished by this date, and trackway extending between road from west across former ground to link up with access road to Franciscan complex and past former mill site to east.

The depiction of the former mill complex on the Cassini Six Inch map of 1920s to 1940s shows no significant change from that shown on the earlier 25 Inch. This indicates that the current course of Donore Drive Road past the former mill postdates the publication of the

uendur 30 bur nugen haptip healt recenter 57:0:0 Sismoledy Menectuna 81:0:0 4 Corners 62B 101:2:29 35:2:0 64 interior Huge Sismoledy Artes 1309 J:10th Mullif 58:0:0 nugent the and nug J: post 1.p Parrish Ballencederey Jacken

Extract from Down Survey Parish Map, c. 1650s, showing two mills at Multyfarnham.

Cassini sheet, and is likely to date to the second half of the 20th century.

Site description

In 1682, Sir Henry Piers, in his chorographical description of County Westmeath, described the River Gaine as 'a small but very pleasant water of about four or five miles course traversing the barony of Corkery' from the high ground to the southeast of Monylea to the southern end of Lake Derryvaragh (Piers 1786, 6). In addition to the presence of mills at 'Kilmaglish' and 'Ballinegall', Piers recorded that the Gaine passed Multyfarnham, falling under what he described as a large bridge and 'thence to a mill, whence immediately it watereth the ground of the later Friery of Multifernan' (ibid.). This 17th century mill is WIHS 3841. The 'friery' was a Franciscan house (RMP No. WM007-006-058----) that had been established in 1235 AD by the Delamare family on a natural low island that rose above the boggy valley-bottom of the Gaine a short distance (c. 1.4km) from the southern edge of Lough Derravaragh (Illingworth 2016, 60). Given the topography of the location, it is possible that the Delamare's chose an existing secular or ecclesiastical site for their foundation as the island was situated at a point

where the bog narrowed; this meant that it may have commanded an early medieval route-way that followed the approximate course of the modern road and that allowed movement between the higher ground on both sides of the river and from one side of the lake to the other.

The names of the townlands surrounding Multyfarnham indicate some of the reasons why people may have moved through the landscape, from the farming settlements of Rathganny and Lismalady on high ground to east and west, to the bilberry patches of Froghanstown and the oak woods of Ballindurrow and Culleendarragh to the northeast and southwest. The name of Multyfarnham itself, meaning the 'mills of Farannan' (Herity 2011, 239), indicate that local people may have travelled to the townland of Multyfarnham or Fearbranagh, which lies immediately to the southeast of the present village to process their grain in a water-powered mill. Given its name, and the presence of a possible early medieval church site in Tyfarnham town-(RMP WM 012-003001-) land No. approximately 2.8km away on the other side of the valley, it is possible that these mills were more strongly associated with the territory to the west of the Gaine, rather than the site of the later friary, or may have been located near the routeway in order to facilitate its use by people on both sides of the river.

At a local level, Multyfarnham's long-established character as a locally significant crossing point and as a focus for settlement was likely to have had an equally lengthy political dimension; control over significant locations was often expressed through the construction of adjacent fortifications and structures - such as forts or church sites - by local ruling families and their allies. Throughout the middle ages and into the early modern period, these families were often motivated by the 'three primary dynamics of medieval society', namely 'the control of the production of wealth, the raising of armies for war, and the administration of justice for the achievement of civil order' (MacCotter 2007, 17). As both the creation of wealth and the provisioning of armies were based on the production of food, activities such as milling, which required technical expertise and involved the large-scale processing of flour were likely to have been involved in the creation and maintenance of local claims on land, resources and power (Lancaster 2006, 18-19; Seaver 2005, 12).

These dynamics were also likely to have played an important role in the introduction of waterpowered mills to Ireland in the late sixth or early seventh century, as the arrival of this new technology together with corn-drying kilns has been interpreted as being indicative of 'a growing need to ensure regular supplies of grain for a rapidly increasing rural population, and its corollary, the expansion of tillage' (Rynne 2003, 14, 16). In a predominantly rural landscape, water-powered significant mills were proto-industrial sites that contained relatively sophisticated timber machinery constructed by specialist craftsmen or mill-wrights, and reflecting the existence of a relatively advanced agrarian economy (ibid., 18-19). While this economy changed with the arrival of the Anglo-Normans and with later shifts in landscape management following the wars of the 16th and 17th centuries, water-wheels - both horizontal and vertical - continued to provide the main motive power for the operation of geared machinery and wheels in Ireland until the advent of steam engines in the early 19th century (ibid., 20-26).

Although placename evidence indicates that milling had been carried out at Multyfarnham for many centuries before Sir Henry Piers wrote his description of Westmeath, the mill that he described may have had its roots in the Anglo-Norman rather than the early medieval period. Local tradition collected prior to the compilation of the Ordnance Survey First Edition Six Inch map of 1837 suggested that, while the existing mill complex immediately to the south of the Franciscan church site was considered to be a 'very ancient' establishment, an earlier mill may have stood at the site of the present bridge (Herity 2011, 239). Alternatively, two mills may have been in operation, one serving the friary (and see Rynne 2003, 22), the other serving the village and the inhabitants of the associated fortified motte or castle (RMP No. WM 007-072----). However, reflecting local oral perceptions of 'old' meaning 'of my grandfathers' time' rather than 'of a distant past' may have led the Ordnance Survey Officers in the 1830s to overestimate the antiquity of these buildings, (Herity 2011, 239); it is possible that both of the mills referred to in the early 19th century were relatively new, and had been built to exploit the boom in flour milling that occurred after the establishment of the government flour bounty in 1756. After this date many smaller mills, a large number of which were already in existence and grinding oat or wheat meal for local consumption, gradually switched to flour milling to supply increased local and Dublin demand for baked goods and finer breads (Cullen 2003, 42-3).

However, writing of the mill complex depicted to the south of the Franciscan house on the First Edition Six Inch map, John O'Donovan of the Ordnance Survey, who was an experienced recorder of antiquities, considered it likely that the mill building had been built before the 18th century. Based on its relative location, he further suggested that it was identical to the one mentioned by Piers in 1682 (Herity 2011, 239). It is possible that when O'Donovan and Lieutenant Broughton were collecting information for the Ordnance Survey, the miller was Bernard Mulligan, who was listed some years later in Griffiths Valuation as the holder of a corn mill, land and offices at Multyfarnham. The listing of a house and outbuildings as well as the mill at the site is consistent with the depiction of what is effectively a small mill complex on the 1837 map. On the map, the mill itself was shown as a T-shaped building that appears to have straddled the course of the Gaine, which at that time was the townland boundary. Consequently, its northern half lay in Multyfarnham, while its southern half sat in Rathganny Townland. This configuration suggests that the mill may have been driven by an undershot wheel (Rynne 2006, 33), although it is also possible, given its potential antiquity, that a horizontal wheel could still have been in use at the mill, as was the case at Fore in the later 18th and possibly into the early 19th century (Cullen 2003, 41-22). The scale of the mill relative to the cottages that dotted the surrounding roads and fields suggest that it may have been closer in size and operation to the smaller two-storey mills of the 17th and earlier 18th centuries, rather than the larger multi-storey industrial structures of 19th century towns and villages. It is probable that it was not too dissimilar in size and technology from the 'detached two-storey former corn mill' (NIAH Reg. No. 15304002) that had been constructed approximately 20 years earlier in Ballindurrow townland, some 0.75km to the southwest. This mill, like that at Multyfarnham was held by a tenant of the Nugent estate and - as at Multyfarnham, the Ballindurrow miller (listed as Walter Gaynor in Griffith's Valuation) - probably supplemented his income by farming.

The lack of any reference in the Griffith's Valuation listing to the large T-shaped corn drying kiln depicted to the south of the mill on the 1837 map may reflect the limited space available for recording information on the valuation summaries, or may indicate that the mill complex as a whole was already in decline by the 1840s. In this context, it is of interest that O'Donovan noted that in the 1830s the mill building consisted of a 'corn mill and a tuck mill [in the one house]'. The reference to both tuck- and cornmilling suggests that whatever the age of the mill building at Multyfarnham, the mill itself was fully integrated into the wider local economy of the later 18th and early 19th centuries. Tuck mills were used for the finishing of cloth, and similar examples elsewhere in the county

(e.g. the tuck mill on the bridge of Athlone) were 'linked to the domestic manufacture of friezes [a heavy woollen cloth used for coats], which by the early nineteenth century had supplanted linen-making as the main non-farming occupation' in parts of rural Westmeath (Murtagh 1994, 4).

This close integration meant that with the collapse of the woollen textile trade in the 1840s Clarkson 1989, 29-30) and the decline in Irish cereal production after the repeal of the Corn Laws in 1846 (Harrison 2003, 95) the mill at Multyfarnham as well as the farmers and labourers of the locality were vulnerable to the spread of poverty and increased unemployment. It appears that unlike the Ballindurrow mill, which appears to have weathered the economic uncertainty of the pre- and immediate post-Famine period, the mill at Multyfarnham was no longer commercially viable by the second half of the 19th century. By the time the First Edition Twenty Five Inch map of c. 1897-1913 was published, it appears that milling had ceased at the Multyfarnham mill complex. The main channel of the Gaine no longer flowed past the mill, the river having been redirected to flow through a smaller channel a short distance to the north as part of the wholesale reclamation of the formerly boggy valley floor on either side of the river (and see Lewis 1837, vol. 2, 413-4). By this date, as its depiction on the Twenty Five Inch map shows, the mill building itself had also been considerably altered.

The decline of the mill at Multyfarnham does not reflect a total decline in grain milling in the wider area, however. The fact that the mill at Ballindurrow survived, despite the general shift in Westmeath away from tillage and towards large-scale cattle grazing, indicates that local cereal processing continued to some degree and at Ballindurrow flour production probably continued 'on commission for local farmers and others', including local bakers (Cullen 2003, 42). Although both mills were owned by the Nugent family, it is possible that the Multyfarnham complex with its tuck and corn milling activities was more geared towards the production of surpluses for sale in the local and Dublin markets and was therefore more sensitive to market forces than its Ballindurrow counterpart. In its

scale and relative location, and in its closure in the latter part of the 19th century, the Multyfarnham mill is representative of a large number of small to medium-sized Westmeath mills. Despite forming part of a lengthy tradition of milling in the wider area, it too, like many mills elsewhere in the county, fell victim to negative market forces, and to competition from larger, more technologically advanced milling enterprises in the decades following the Famine. Although some smaller mills survived, as at Ballindurrow, Multyfarnham can be placed among the many Westmeath mills that were repurposed or demolished as the landscapes and markets within which they were set shifted to reflect the increasing use of steam power and the dominance of highly industrialized urban mill complexes in the towns and cities of 19thcentury Ireland and Britain.

References and resources

HeritageMaps.ie

https://www.heritagemaps.ie/WebApps/HeritageMaps/index.html

Logainm.ie, the Irish placenames database

https://www.logainm.ie/ga/; accessed October 2019

Griffiths Valuation

http://www.askaboutireland.ie/griffith-valuation/; accessed October 2019

Clarkson, L. A. (1989) 'The Carrick-on-Suir woollen industry in the eighteenth century', Irish economic and social history 16: 23-41.

Cullen, L. M. (2003) 'Eighteenth-century flour milling in Ireland', in Bielenberg, A. (ed.) Irish flour milling. A history 600-2000, pp. 39-58, Dublin: The Lilliput Press.

Harrison, R. S. (2003) 'Irish Quakers in flour milling', in Bielenberg, A. (ed.) Irish flour milling. A history 600-2000, pp. 88-105, Dublin: The Lilliput Press.

Herity, M. (ed.) (2011) Ordnance Survey Letters Longford and Westmeath: Letters relating to the antiquities of the counties of Longford and Westmeath containing information collected during the progress of the Ordnance Survey in 1837, Dublin: Fourmasters Press.

Illingworth, R. (2016) The little book of Westmeath, Dublin: The History Press.

Lancaster, S. (2006) 'Early medieval mills in Ashbourne, Co. Meath', Grist to the mill: the newsletter of the Mills & Millers of Ireland 10: 18-20.

Lewis, S. (1837) A topographical dictionary of Ireland comprising the several counties, cities. boroughs, corpor-

ate, market and post towns. Parishes, and villages, with historical and statistical descriptions; embellished with engravings of the arms of the cities, bishopricks [sic], corporate towns, and boroughs. And of the seals of the several municipal corporations: with an appendix, describing the electoral boundaries of the several boroughs, as defined by the Act of the 2d & 3d of William IV, Vols 1 and 2, London: Gilbert & Rivington.

MacCotter, P. (2007) 'Medieval Irish political and economic divisions', History Ireland 15 (5), Sept.-Oct., 17-21.

Murtagh, H. (1994) 'Athlone', Irish Historic Towns Atlas, No. 6, Athlone, pp. 1-16, Dublin: Royal Irish Academy.

Piers, H. (1786) 'A chorographical description of the county of Westmeath. Written A.D. 1682. By Sir Henry Piers, of Tristernaght [sic], Baronet', in Vallancey, C. (ed.) Collectanea de Rebus Hibernicis, Vol. 1, second edition, pp. xiii-xvi, 1-134, Dublin: Luke White.

Rynne, C. (2003) 'The development of milling technology in Ireland, c. 600-1875', in Bielenberg, A. (ed.) Irish flour milling. A history 600-2000, pp. 13-38, Dublin: The Lilliput Press.

Rynne, C. (2006) Industrial Ireland 1750-1930: an archaeology, Cork: The Collins Press.

Seaver, M. (2005) 'Run of the mill? Excavation of an early medieval site at Raystown, Co. Meath', Archaeology Ireland 19 (4), Winter: 9-12.

Appendix WIHS database