

# Glenmore Brickyards

## A Forgotten Industry

By Daniel Dowling

AT no time in the whole history of man is the wind of change so apparent as it is to-day and this is especially so in the field of industrial enterprise. The age of the craftsman has almost disappeared, and the small factory which replaced him, is likewise, rapidly passing into the realms of history, the victim of the sophisticated industrial establishment of to-day, where complex machines churn out manufactured articles in mass production.

Even the South Kilkenny landscape, has not been spared this change, and what were common place sights and landmarks in our fathers' and grandfathers' time, no longer exist to be viewed by the present generation. The Boatmen of the Barrow, Nore and Suir, who daily plied these rivers carrying merchandise on their Gabbards, Sail Boats, and Lighters; the numerous corn mills that dotted the Ida and Iverk landscape; the Millstone works on Gibucter Hill, near Slieverue; the limekilns for burning the Kilmacow limestone, and the industry which I intend to describe, the Glenmore Brickworks, are but a few of our ancestors activities which now come within the ambit of that new branch of historical research, known as Industrial Archaeology.

For thousands of years, man has been engaged in the making of bricks, and the earliest specimens of the craft, were the sunbaked bricks made from clay mixed with grass or straw. This sun-baked type dates back to the civilizations of Egypt, Assyria and Babylonia. The next stage in the evolution of brick making, was the discovery of the technique of firing about 300 B.C. This method of manufacture produced an article which, unlike the sunbaked variety, was rigid and durable, and capable of withstanding the frosts and weathering of the Northern climate. It was the Romans who introduced the craft into Britain, but, on their departure it more or less died out. It was not until about the fifteenth century, that the modern or Flemish type of brickmaking was introduced from the low countries. Here in Ireland, there are examples of brickwork dating back to the early decades of the seventeenth century.

Bricks are an artificial stone manufactured from certain types of clay to a shape and size for convenience in buildings, the quality of which depend upon the chemical composition of the raw material and how it is processed. Earths suitable for the making of brick vary in composition but in general, they consist of silica, and

alumina, with small amounts of iron-oxides, lime, magnesia, potash, and soda. When heat is applied in sufficient quantities, these constituents fuse together to make this artificial stone. The chemical effects of these constituents may be briefly summarised as follows: the silica produces hardness, resistance to heat, durability, and prevents cracking, shrinkage, and warping. The alumina produces hardness, the amounts of iron and magnesia determines the eventual colour of the brick, while potash, soda and lime act as fluxes which cause the various particles of the brick to unite and retard contraction both in drying and burning. As to the methods of manufacture, bricks were either hand or machine made and it was the former method of hand moulding that was employed in the Glenmore Brick Works. These Works or Yards, as they were called, were situated in the marshy area adjacent to the right bank of the River Barrow, in the townlands of Ballyverneen, Graiguenakill and Carrigcloney, at a distance of about five miles downstream from the town of New Ross, and a mile or so from the village of Glenmore.

The Glenmore Brickmaking was a seasonal industry and preparatory work usually commenced, dependant upon weather condition, in late March or early April. This consisted of removing the vegetation, and portion of the top soil from that part of the Marsh which was to be used as the floors, and the pumping out of the water from the mud holes. The floors were the areas on which the actual operation of brickmaking took place, in the stages of mud preparation moulding, and the drying of the brick preparatory to burning. Encallowing was the term used for this skinning and removal of the top soil. The water was pumped out by man-operated wooden pumps, which operation took a number of days, depending upon the amount of water present in the mudholes. With this preparatory work completed, the gangs of men set about their respective tasks. The gang or crew consisted of 12 men where the whole operation was by hand; and 10 men, where a Pug Mill was used in the operations. The members of the crew were named from the particular nature of the work they performed in the course of the operations as follows:-

“CUT MEN” There were two “CUT MEN,” the “First Cut Man,” and the “Second Cut Man.” They were down in the mud hole, digging and chopping the mud which was the first step in the process of brickmaking. The implement which they used was a type of large spade.

TEMPERER: He was down on the floor of the hole with the Cut Men. His job was mixing the mud with water to the right consistency, and the removing of stones from the mix. This was done by treading it with his bare feet. He also used a type of wooden bladed shovel known as a paddle in the operation. The object of tempering was to knead

or prepare the mud into the proper condition for moulding, and it was important from the fact that the ultimate quality of the brick depended upon the degree to which the mud was subjected in the process of mixing.

The mechanical contrivance known as the Pug Mill, where used, did exactly the same work as the temperer. It was a machine consisting of a square wooden box, about five feet high, and four feet wide, in which revolved a central vertical spindle or shaft, to which was attached a number of knives or harrows fixed at such an angle, that as the spindle revolved, they macerated the mud into a plastic mix ready for the immediate use of the moulder. This was powered by a single horse, mule, or jennet, which was attached by means of a "swing" to a rotating arm. There were also cast iron pug mills constructed on much the same principle, one of which was used in Thomas Forristall's brickyard on the Ballyverneen Marshes.

**SPITTER UP:** When the mud hole reached such a depth that the wheelers were unable, owing to the steepness of the slope, to push the mud barrows to the surface, the service of a spitter-up became necessary. His job was to shovel the mud on to a raised wooden platform erected on trestles in the hole, and connected to the surface by means of what was known as a "harbour plank." This was a strong wooden board about three inches thick and a foot and a half wide with sufficient strength to carry both the wheeler and his barrow filled with mud. From this platform the wheelers removed the mud either to the pug mill or Moulder's Table.

**WHEELERS:** There were usually between two and four wheelers in each crew, the numbers depending upon a variety of factors such as slope of gangway from the mudhole, distance to moulder's table, and whether a Pug Mill was available on the workings. Their work consisted of removing either the tempered or raw mud from the mudhole in specially built straight sided wooden open-fronted wheel barrows. The wheelers used paddles for shovelling the mud both into and from the barrows to the Moulders table. Where the Pug Mill was used, there were two operations for the Wheelers, transporting the raw mud to the Mill, and, in turn, the tempered mud from the Mill to the Moulder's table.

The mud barrows were larger than the conventional splayed wheelbarrow by about one and a half times, with a wooden wheel bound with iron two inches wide. These were pushed on a gangway of planks laid end to end on the soft mud surface, otherwise the wheel would become embedded in the marsh surface. Wheeling was a hard laborious work and called for plenty of strength.

**MOULDER:** This man was the head of the Crew, and directed the entire operations. He stood at the Moulding Table

which was a smooth surfaced bench about six feet long, three feet wide and three feet high. His tools were three single wooden hand moulds, and a Strike, which was made of smooth wood, about 15 inches long which resembled a slating lath, slightly rounded. On the table was placed a wooden box containing water, which was used for dipping both the moulds, and the strike. The moulds had to be kept completely wet, and free from adhering particles of mud, otherwise the moulded brick would not slip intact from the mould. These moulds were made of American Oak. The work of the moulder consisted of kneading the tempered mud, and pressing it with his hands into the mould, and then smoothing off the face of the brick by drawing his "strike" across the top of the mould. This was very fast work, and some moulders were capable of making, single handed, 5,000 or more brick in a single day, although an official day's work was calculated at 3,000 brick. The average weekly output per crew was, however, 27,000 brick, but it is on record, that one of the great Moulders of the day, Patrick Walsh of GRAIGUENAKILL, Glenmore, formerly a weaver by trade, made the enormous number of 39,000 brick, singlehanded in 6 days, which was equivalent to 13 days work in the one week. This Moulder, instead of using the Strike, always skimmed the excess mud from the mould, with his hand, which was a more rapid operation. This man in his early years, worked as a moulder in the CORRIGANORE — KNOCKHOUSE, Brickyards in Co. Waterford, and it was there that he created the record for a week's output of brick.

It was the Moulder who always set the pace and any crew member who was unwilling or "Swung the Lead," was speedily replaced.

**BEARERS OFF:** These were usually strong agile youths, and their work was to carry the moulded brick from the table to the floors, where it was placed in single rows on the flat to partially dry in the open air. The floors were covered with a layer of fine sand, and levelled off with a wooden rake-like tool known as a "RAWSHTHEEN." This sand was obtained from Kenny's Sand Bank in the river Barrow off RAHEEN near Rosbercon. The raw brick was allowed to remain in this position for, at least, a week or more depending on weather conditions, and whilst here it was sprinkled over with a very fine powder-like sand which was raised from the River Barrow, off Rochestown, Glenmore, and also with some of the Raheen sand.

The job of bearing off called for all out effort by the runner, because if he fell behind in his turn, he was sure to get a tongue lashing from the Moulder, who always had to have an empty mould ready for him on the table. This operation was so nicely timed that while the Moulder was filling one mould,

one bearer-off was returning with the empty one, and the other going out to the floor with the full one. There was a certain skill! attached to bearing off, as the mould full of "slop" mud, had to be taken from the table, at such an angle and pace, that the mud did not fall out of the mould which had neither top nor bottom.

**HACKER :** The function of this worker in the scheme of operations, was to remove the partially dried brick from the floors, and build them into a type of wall known as a Hack, where the process of drying was completed. This took anything from three days to well over a week, depending on weather conditions, and easterly winds were best for drying.

The Hack was the width of two brick laid on the length, and extended over the full distance of the floor which could be up to 60 yards in length. The number of hacks depended on the amount of floor area in use. In each brick yard, there were usually about seven or eight floors in use, and the hacks were built on both sides of each floor. As the width of each floor was about six yards, this meant that there was a floor space between the hacks of about 14 feet. The hacks were built on a raised platform of sods, about five inches high so as to ensure that even the lowest course of brick would be able to dry out. A small drain ran at either side of each hack, along its entire length. As the first course of brick in the hack was laid on the flat with spaces between each for air circulation, the next course was laid in reverse order to the first, but at an angle, and also spaced. This bond or arrangement of the brick was continued until the entire hack was one unified mass to form a continuity of the structure. When completed, the hack was about five feet in height.

**CLAMPING :** When the hacked brick had reached the required state of dryness all the separate operations of the crew such as digging, wheeling, tempering and moulding etc., were suspended, in order to concentrate on the preparation and building of the clamp which was the final stage in the manufacture of the brick, preparatory to burning.

The clamp sites were always situated on ground adjacent to the Pill, so as to facilitate later on, the loading of the burnt brick on to the boats for transportation. This ground had to be well drained, levelled off, and consolidated with layers of stone and broken brick from previous burnings. When the site was prepared, the entire crew, plus additional helpers, commenced the building of the clamp which was a highly skilled operation. It was built somewhat similar to a hayrick, rectangular in shape, about 16 feet wide, and from 12 to 15 feet high, with the raw brick closely packed in alternate layers of stretchers and headers, which arrangement or bond, tied the entire brick mass together until the required height was reached. The building was so

designed that when it was completed, both sides were inclined towards the centre, in other words, the structure was narrower at the top than at the base by the width of about two brick laid lengthwise

Along its entire length were built, in the course of construction a series of arches or fire holes, spaced about every three feet. These were two and a half feet high and two feet wide, and extended right through the structure from side to side at right angle to the length of the clamp. The number of these arches depended upon the length of the structure, and sometimes up to 20 of them were in a single clamp. When this structure of raw brick was completed, the sides and top were encased with burned brick. This facing which was known as "SCOVING," was the width of a single brick, and was designed to control the burning temperature of the raw brick when fired.

Each crew on average manufactured and burned about eight clamps of brick in each Summer season.

**BURNING:** The final stage in the manufacture of the brick, having been reached, the arches already filled with furze and topped with coal, the kindling was ignited. It took about three to four hours after the fires were started, before the raw brick commenced to burn, during which time large quantities of coal were added to the flames.

The brick continued to burn for about five days, during which period large volumes of whiteish smoke were given off, and the peculiar smell associated with burning brick, permeated the air of the countryside for miles around. If strong winds coincided with the burning, a wind shield of sacking attached to high poles was erected on the windward side, in order to prevent the clamp overheating and the contents clinking. On the night the clamp was set on fire, a liberal supply of beer was always provided on the site, by the owner of the Brick Yard, for the crew and helpers, who had worked so hard in the previous weeks. The beer, like most other things in those days, was the product of the local breweries of either Howlett's or Cherry's in New Ross, or Strangman's of Waterford.

After the burning, the clamp of new brick took at least about four days, before it cooled sufficiently, for handling and loading on to the boats. The last clamp of the season was usually finished burning during the period 10th to the 15th August after which all operations in the Brick Yards were suspended until the following March or April. This was to enable the members of the crews to take part in the cutting and saving of the harvest.

The amount of brick produced on the Glenmore Marshes varied from year to year. This depended on a number of factors, principally weather conditions and the number of crews operating. During some seasons, there were five separate crews operating,

which meant that there were between 60 and 70 men employed on these Brick Marshes.

The Glenmore Brick Industry, goes back at least to the early years of the last century, but there is evidence to indicate that brick was being made in the area at a much earlier date. In 1784, we find that the Commissioners, engaged in the government sponsored project to build a City on the shores of Waterford Harbour between Passage East and Dunmore, to resettle Swiss Huguenots, which was to be named New Geneva, were involved in negotiations for the manufacture and supply of brick. Among the number of brickmakers consulted for this purpose, was one whose works were located on the banks of the Ross River, which was the name then used in respect of the Barrow, above its confluence with that of the River Suir. This man who was described as a maker of great quantities of brick, was prepared to undertake the manufacture of a million or more brick, on his Brickyards; if required, during the Summer of 1784, at a rate of 9/- per thousand, which was the lowest price quoted. The New Geneva Project, of course, never materialised.

During the nineteenth century, there were, at least, six separate family owned Brick Manufacturing Concerns operating on the Glenmore Marshes, but not all of them survived into the present one. The earliest workings, according to tradition, were on the Carrigcloney Marshes, where the mud deposits were very deep. One such venture here in the early years of the last century, proved a failure, as the section on which the working was located, was subject to tidal flooding. This forced the owner into a situation where he had to use the higher ground adjoining the marsh, for the manufacture and drying of the brick. As this involved longer mud transportation, the venture proved uneconomic, and had to be abandoned after a short period.

The families involved in the brickmaking business during this period were Forristal's, of Ballyverneen, Walsh's, Coady's, and Rockett's of Carrigcloney, and Robin Irish of Ballygawvouzgh, Ballinlammy, who had his manufactory on his own six and a half section of the Carrigcloney Marsh. He discontinued brickmaking about 1870, and sold his marsh to William Forristal of Ballyverneen, who later revived the workings there. It appears that the best quality brick that was produced in the Glenmore Brickworks, was manufactured on Irish's Marsh, where the chemical content of the mud deposits, would seem to have been more suitable for brick making than that found in the others. The old brick makers always said that the whiter the mud, the more suitable it was for brickmaking. This type of mud was usually obtained in the deeper layers, whereas the top layers

beneath the skinned surface was a bluish colour known as "MALLY."

Robin Irish, was only a few years engaged in the brick-making business, having inherited the Marsh and workings from his uncle, David Walsh, of Carrigcloney.

The family having the longest association with brickmaking on the Glenmore Marshes, during this period, were the Walsh's of CARRIGCLONEY, who operated on their own sections of the marshes in that same townland. As the male line of this family died out, the property devolved upon Michael Rockett, of Slieverue, a nephew of the widow of Walter Walsh. He continued the brickmaking for only a few years before abandoning operations about 1894.

Another brickmaking concern to discontinue operations in this decade, was that of the Coady family of CARRIGCLONEY. Three generations of them had been involved in the business, Michael, his son Daniel, and grandson Richard. It was on their Carrigcloney Marsh that they first began brickmaking, but later on transferred operations to their nearby GRAIGUENAKILL Marsh. Here they continued until finally opting out about 1897. The layer of mud on this marsh was very deep, and one of the holes from which the brick mud was excavated reached a depth of close on 40 feet which necessitated the use of a man operated winch to raise the mud. As in other areas of the Glenmore Marshes, quantities of bog oak were frequently found, during excavations, at various depths. Also found in the lower depths of mud in this particular Marsh, were the antlers of deer, and wild boars tusks.

After the exit of the Coady family, all that remained on in the business were the brothers Thomas and William Forristal, of BALLYVERNEEN, both of whom had separate workings on the Ballyverneen Marshes. They continued operating until 1899, when they were obliged to discontinue the making of brick, due to the commencement of the Dublin, Wicklow and Wexford Railway link between New Ross, and Waterford.

The building of this stretch of line was a difficult operation, and in addition, to the navvies who accompanied this type of construction, all the available local labour was also recruited at rates of wages, never before paid all the year round, in the district. This meant that for the next five years, every local man willing and able to work, became an employee of S. Pearson & Son, who were the contractors for the project. Apart from the labour problem created, the route that this rail link took, involved the crossing of the BALLYVERNEEN Marshes, on a line directly over the best mud deposits. The huge embankment to carry the line, that had to be built to bridge the valley, between BALLYVERNEEN and CARRIGCLONEY, covered and destroyed a good section of this marsh.



The link was completed in 1904, and the first passenger train to run was a special excursion for the celebrations in Waterford, occasioned by the State Visit to that City of King Edward VII, on the 2nd of May of that year.

It was not until 1907, that the Glenmore Brickmaking was resumed, by the brothers Thomas and William Forristal, on their Ballyverneen Marshes. The Summer of that year was very wet, and resulted in a poor output of brick. I may add here that the open air method of brickmaking as practised on the Glenmore Marshes, was completely dependent on good Summer weather conditions for output and quality.

William Forristal discontinued operations at the close of the 1908 season, but his brother Thomas, remained on as the sole surviving manufacturer. He kept operating until 1910, and in August of that year, he closed his yard for good, and so ended a local industry which had lasted for several generations.

The week's wages per worker on the Glenmore Brick yards, depended on what was known as the "Rise of the Table." This was a fixed daily rate based on each 3,000 brick output, and payment was made as follows: Moulder 2/6; Wheelers 2/4; Cut Men, Temperer, Spitter Up, and Hacker, each 2/-; and Bearers Off 1/6. As the average output per week was 27,000 brick, this meant that each worker received nine official days wages in each week. During the same period, the price of brick ex. the Brick Yards was 25/- per 1,000.

The principal markets for the Glenmore manufactured brick were those of Waterford, New Ross, and Carrick-on-Suir. This was due to the facility and cheapness of water transport, and also to the fact that fairly big boats and lighters were able to navigate the Glenmore Pill, to the Brick Yard sidings. 25,000 brick was normal cargo for some of the Carrick Lighters, while the Gabbards and Sail Boats were capable of taking from 12,000 to 16,000 in one load.

In addition, much brick was sold locally, to farmers and others engaged in building. A lot of the early labourers cottages were built with this brick, and William McQuaid, the Belfast Contractor, who secured the Waterford Board of Guardians contract for the erection of a large number of these cottages in the Waterford No. 2 Rural District, used Glenmore Brick from Thomas Forristal's Brick Yard, in their construction. The brick used in these cottages, was transported to the various building sites, by a fleet of Scotch Carts. Waterford of course, was the biggest market, and much of the internal work in the old buildings of that City contained Glenmore Brick.

The brick manufactured on the Glenmore Marshes, was more suitable for internal, than external work, and with the introduction of the brick manufactured by the Bibberly Brick Company, in Waterford, the demand for the Glenmore Hand Made variety

began to decline. The Waterford Brick, was manufactured from the crushed rock of the Bilberry Quarries, which was puddled, machine pressed and fired. It was a high density brick, practically impervious to moisture, but surprisingly enough, it's high quality, subsequently contributed to its own demise. The Bilberry Brick Factory, closed in 1916, and I am told authoratively, that one of the major factors for the closure, were the high costs involved in transporting this heavy brick.

All that remains to-day, to remind one that brick was once made on the Glenmore Marshes, are the little mounds of brick debris which were the clamp sites, and the mud holes, now transformed into tiny lakes surrounded by reeds.

In compiling this article, I am deeply indebted and grateful to Nicholas Fornistal of GRAIGUENAKILL, and Thomas and Richard Dunphy of Ballyverneen, for their assistance, and expert knowledge of the methods employed in the Glenmore Brick-making.



## The Forgotten Market House

By Joseph O'Carroll

IT can be said that one could not walk through Kilkenny without hearing or meeting with some little item of history. Perhaps it might be a stone from some medieval building, or a piece of timber from an ancient house, or a tale from the long ago. A chance encounter led me to the discovery of an old plaque; my informant was the Rev. Fr. Robert, O.F.M. Cap. On a dark night in January, as I was anxious to see this plaque, we both went to the Friary garden, the one which is south of Pennyfeather Lane, and there with match light we read the following :

"This market was established by Buckley Butler Anno Domini 1732."

I was also informed by Fr. Robert that the market house and land were purchased some 40 years ago by the Community and when the market house was being demolished by Messrs. P. Cantwell & Sons the late Fr. Bonaventure gave instructions for the plaque to be reset in the wall.

The strange thing is, though this market was in existence for over 200 years, it was never mentioned by any of the Kilkenny Guide Books.