

# “FROM INCEPTION...” THE EVOLVING BEACON ON HOOK PENINSULA

By Pat Power

Ireland is the world's 20th largest island, measuring 488 kilometers (303 miles) long and 225 kilometers (140 miles) at its widest; if you could unravel its coastline it would stretch more than 3,219 kilometers (2,000 miles). We are fortunate to have some of the most beautiful coastal regions to be seen anywhere in the world. However, what is so attractive to native and visitor alike can be a major hazard to the seafarer.

The east and southeast coasts, although featureless, are probably the most treacherous of Ireland's coastline: some sandbanks between Dublin Bay and Rosslare Harbor extend up to nine miles, and the south Wexford coast is particularly hazardous with a great spine of shallow reefs and scattered islands and rocks that extend for a distance of up to seven miles to the seaward. However, with today's technology and modern markings, these noted dangers do not pose the threat they did hundreds of years ago.

The east and southeast coastline, and in particular the Hook peninsula which overlooks the entrance to Waterford estuary, has always been notoriously dangerous and a point of peril to mariners. It derives its name from Vedra Fjord, words credited to the Vikings, which in the Norse language means “windy haven.” This must have been apparent to the Welsh missionary Dubhán, a pilgrim saint and the fifth son of Brecaun (sometimes referred to as Braccan), a petty king or chieftain, resident in Cambria, South Wales. Seeking a life of solitude, Dubhán arrived at the southern extremity of the region, then known as Hy-Kin-sellagh, around 452 A.D. and built his oratory on the spot where the ruins of the church at “Churchtown over Hook” now stands. In later times this church was renamed St. Saviour of Rendean.

More to the point, early Christian records attribute the first beacon fire on this long neck of land called Hook Head, to Dubhán. The peninsula (meaning almost an island) became known as Rinn Dubhán; the word rinn in Irish Gaelic meaning “a point of land running into the sea,” while dubhán translates as “fishing hook.” This later was later anglicised as Hook Head.

This first primitive beacon is almost certain to have been a chauffer [brazier] on top of a mound of stones, which would have consisted of a strong upright timber post secured at its base to support a surmounted iron basket.

The basket was stacked and fed with combustible material, mostly wood, and burned throughout the night, being visible for some miles out to sea.

This beacon was Ireland's inaugural navigational aid to shipping, and as a result Dubhán became the country's first lighthouse keeper. The medieval navigational aid remained for approximately 760 years with Dubhán bequeathing its care and maintenance, as a legacy of duty and benevolence, to his religious successors (monks and canons).

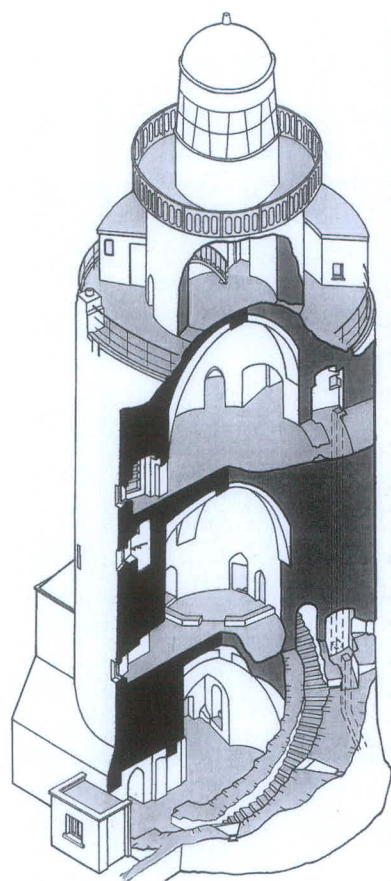
In the early 13th century, the medieval beacon was replaced by the ancient structure which was to become the famous Tower of Hook Lighthouse. However, while traditions and legend are valuable to the historian and archaeologist alike, conflicting theories and perhaps even fable have associated the building of the great tower with many prominent people of that era—the Danes, Sir Florence de la Hogue, Rose Macruim, and Raymond Le Gros have all been given credit at one time or another. Nevertheless, the honor of establishing the ancient beacon tower must be accorded to one William Marshal, an Anglo-Norman soldier, described as one of the greatest knights and magnates in medieval English history.



Artist's depiction of the earlier lighthouse on Hook Head. Author's collection.

Marshal was born around 1146, the second son of John the Marshal and Sibyl, sister of Patrick, Earl of Salisbury. He married Isabel de Clare, daughter of Richard “Strongbow,” second Earl of Pembroke, in 1189 and consequently acquired large estates, in-





A cutaway look at the Hook Head Lighthouse. Courtesy of Hook Heritage Association.

ordered skilled castle builders employed by the Pembroke estate, as well as many locals, to commence work on the building of the Tower of Hook Lighthouse.

It is worth noting that the Hook and the world's inaugural lighthouse, the Pharos, built around 280 BC, both functioned simultaneously, overlapping by more than 100 years until the Pharos was destroyed by an earthquake in 1323.

Marshal was the only man who had the combination of knowledge, wealth, and the services of masons who could have built this type of round tower. It was modelled on, and constructed using similar technology to, his castles (cylindrical towers) in Chepstow and Pembroke (Wales) and in Kilkenny, Carlow, Ferns, and Wexford (Ireland), all from the same period.

The exact height of Marshal's Tower of Hook when first constructed is debatable; it was enlarged in later years and now stands approximately 35 metres (114 feet) high. The tower, built from local limestone and burned lime mixed with ox's blood, (traces of which can still be seen coming through the paint work today) has two distinctive tiers. The lower section is 12 meters (39 feet) in diameter (it is not truly circular) while the upper tier is 6 meters (19 feet) wide and which originally supported the fire beacon, later replaced by a lantern. Mural stairs built into the wall and consisting of 115 steps, link both tiers.

This medieval architecture has walls approximately 4 meters (13 feet) in width. This lower tier is sectioned into three chambers with

cluding some in Ireland. However, he did not obtain Pembroke in Wales, nor the title of Earl of Pembroke, until 1199. It was while Marshal was in the Holy Lands (from 1183-85) fighting for the Knights' Templar that he is thought to have seen the great Pharos Lighthouse of Alexandria in Egypt (built by Ptolemy II, Egypt's Macedonian ruler) and the Crusader's Lighthouse at Acre (Tower of Flies) in Israel and where he acquired his great castle and tower building techniques.

Marshal first visited Ireland in the year 1200, returning again in 1207-08 with his wife, Isabel. It was during this time that he developed New Ross (some 20 miles away) into one of the major ports of Ireland. It is reasonable to assume that it was also during this period that he

stone rib-vaulted ceilings which provided fireproofing from the beacon above. The base was used for storing coal (and as a magazine by the military in the late 18th century), and on the east of the tower there is a small annex, possibly a chapel for use by the monks. In the second chamber, an original 13th century fireplace can be found in the living quarters (occupied by the assistant keeper) along with remains of timber used in the construction of the ceilings, which contribute toward identifying the historical period the tower was built. The upper chamber contained the principal lightkeeper's quarters.

Continuing with tradition, Marshal appointed the local monks as custodians of the lighthouse. He introduced settlers from his lands in Wales who brought with them the methods of spring and winter sowing and three-field crop rotation as well as sheep for wool and leather. He had a vested interest in seeing that ships could safely navigate to and from his new port. In 1210 Marshal obtained the right of free passage from King John for any ships bound for New Ross to pass the royal port of Waterford, as well as favors in trade for his merchants there. Marshal died on May 14, 1219, and is buried in the Temple Church in London.

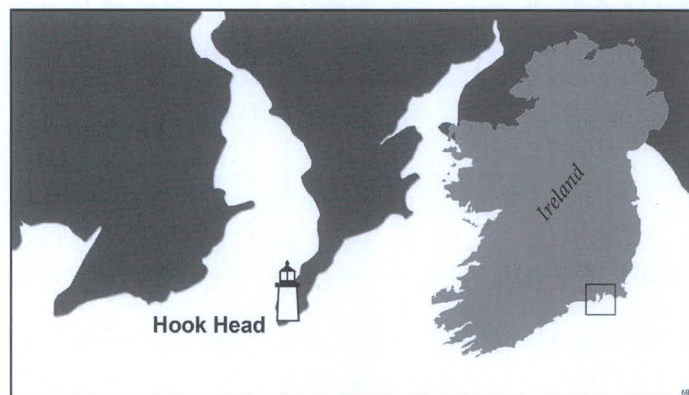
The first authentic record of the Tower of Hook and its use as a lighthouse is reflected in this verbatim account:

**1245-1246.** Mandate to William de Cheeny and Master Gervase de Pershore, Custodees of the lands, which belonged to Walter, late Earl of Pembroke in Ireland, to cause the Custodian, and Chaplains of St. Saviour of Rendean, to have such maintenance in money, and otherwise, as they had of the Earl's gift in his lifetime, with all arrears due to them.

**1247.** Mandate to John Fitz Geoffrey, Justiciar of Ireland, that so long as the lands of Walter, late Earl of Pembroke, shall be in his hands, he shall cause the Custodian and Chaplains of St. Saviour of Rendean, who there built a Tower as a Beacon for Ships, to have out of the issues of these lands a maintenance in money, and otherwise, with all arrears due to them.

Reference to the lands of Walter, late Earl of Pembroke, is actually to Walter Marshal, fourth son of William Marshal and fifth Earl of Pembroke, who had only married in 1242 and died on November 24, 1245, in Goodrich Castle, Herefordshire, England.

The discourse surrounding how long the monks continued to maintain and tend the Hook beacon continues among historians. From 1536-40 King Henry VIII made an interesting contribution to lighthouses. His Dissolution of the Monasteries closed many early lighthouses as they were usually maintained by monks, canons, and



Map showing the location of the Hook Head Lighthouse on the Irish coast. Map by Mary Borkowski.



hermits. He would, however, have been aware that monasteries were the wealthiest institutions in England, Wales, and Ireland. It is still not conclusive if Henry's reasons were spiritual or financial. However, he also established the first standing navy and granted Trinity House its charter of incorporation on May 20, 1514, which ensured the ongoing development of lighthouses. Some say the monks continued to tend the beacon at Hook through Henry's suppressions, remaining there until the Irish Rebellion (civil war) in 1641 when their light-keeping duties ceased and they left nearby Churchtown.

Oliver Cromwell did not make any attempt to sustain the beacon at Hook, and by 1650 the Hook Tower Lighthouse was no longer in operation. Despite a petition in 1657 by Colonel Cymon Rudgeley, the governor of Duncannon Fort, to the Revenue Commissioners to re-establish the Hook beacon, this and numerous other petitions by mariners were to remain unsuccessful. As a result shipwrecks became a common place off the Hook peninsula and adjacent seas.

However, King Charles II (England) approved via letters patent to Sir Robert Reading c.1665 annual funding to build and repair six lighthouses around the island of Ireland. Two of these were to be found in Howth (County Dublin). The others were the Old Head of Kinsale (County Cork); Charlesfort, formerly Barry Oge's Castle, (County Cork); Isle of Magee (near Carrickfergus, County Antrim) and included the rehabilitation of the Hook Tower in County Wexford. Consequently, the beacon was reestablished with Reading erecting the first glass lantern to shelter the coal fire from the strong winds and with a flue projecting through the cupola, or dome, to extract the smoke. Now the passing mariner was able to benefit from a brighter and more visible light.

During 1704 Queen Anne transferred custody of lighthouses

around the island of Ireland to the Revenue Commissioners. This however, did not affect the Hook as it was under a 21-year lease by Henry Loftus, of nearby Loftus Hall, who had acquired the lands of the Hook following Cromwell's conquest of Ireland. The lease passed to Henry's son Nicholas who in 1728 threatened to extinguish the light at Hook failing renewal of the lease on his terms with the Revenue Commissioners. In the end agreement was reached and a yearly rent of £120 secured—arguably more favourable to the Crown—but not before Loftus allegedly implemented his threat, earning him the name "the extinguisher."

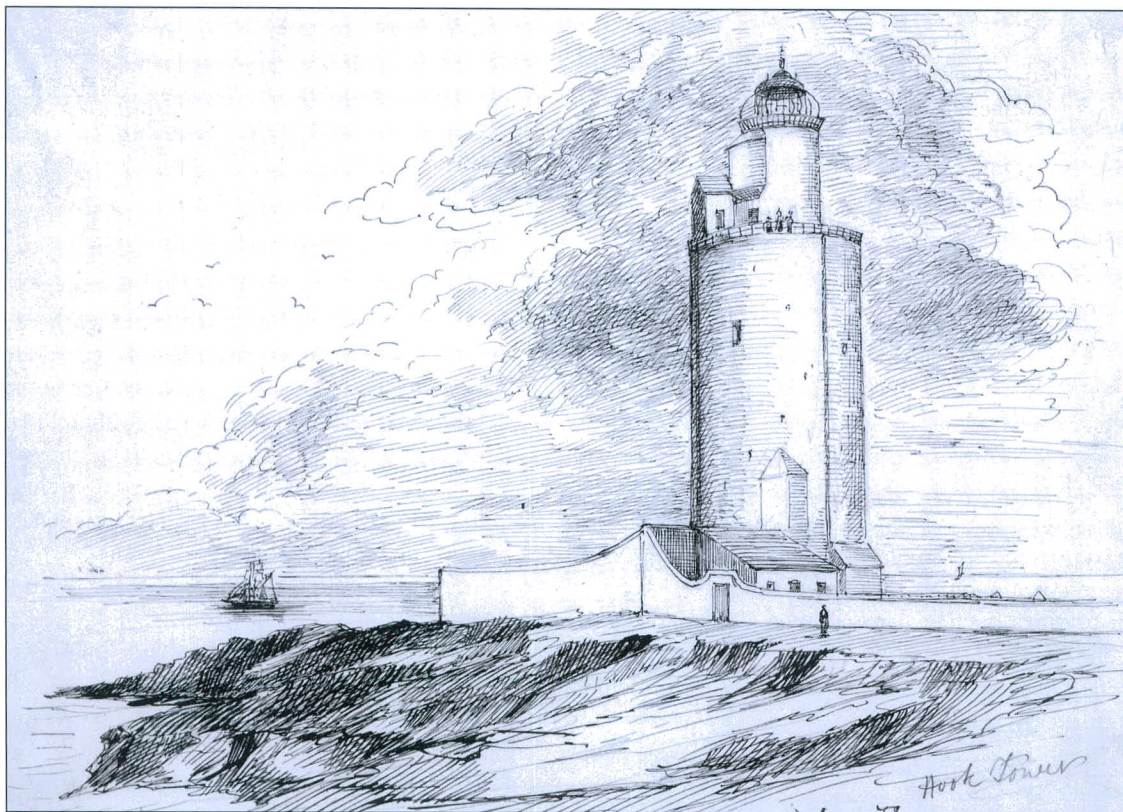
By 1791 the Hook tower had fallen into disrepair and the Revenue Board approved Thomas Rogers to contract improvements. This proved a quantum leap in beacon development with Rogers replacing Reading's (coal) lantern and erecting a new 3.65-meter (12 foot) diameter lantern housing 12 Argand (whale oil) lamps and a reflector system typical of the period. The light was replaced 20 years later when the tower was handed over to the Corporation for Preserving & Improving the Port of Dublin (Ballast Office) in 1810 with a catoptric apparatus that had a parabolic reflector behind the light.

In 1838 the first fog signal bell sounded at the Hook, providing an additional navigational aid. By 1872 this was replaced by a gun, and later in 1905 an explosive charge fixed on the end of a jib that was attached to the dome of the lantern was fired twice every six minutes to sound the warning. The character of the signal was altered in 1937 to one shot every five minutes accompanied by a brilliant flash during hours of darkness. During World War II the flash was withdrawn and reintroduced four years later.

Further improvements in 1864 saw another new lantern erected, this time with a fixed dioptric Fresnel lens. This branch of optics (in-

vented by Augustin Fresnel 1822) is a system of annular prisms that refracts and reflects light into a beam and which replaced Rogers' lantern and gave the Hook its current shape. In addition to lantern alterations and improvements, the tower was painted with three red bands on a white background, providing a characteristic day mark for the mariner. This color was altered in 1933 to white with two black bands. Three dwelling houses were also added on site, providing accommodation for lighthouse keepers and their families.

In 1867 another landmark in the life of the Hook saw accountability for the provision



One of the earliest surviving drawings of the tower from the 1780s. Image courtesy of the Royal Irish Academy.





Hook Head Lighthouse from 1906. Photo courtesy of the National Archives of Ireland.

of lighthouses and other aids to navigation for the entire island of Ireland being handed over to the Commissioners of Irish Lights (CIL), who still remain the responsible authority today. After only four years at the helm, the CIL replaced the oil lamps with new gas lights, powered by gas produced in the gas-yard. Like its predecessors, coal gas too had a limited shelf life, lasting just 40 years before it was succeeded by paraffin (vaporised) oil. At the same time, on January 1, 1911, a 500 mm optic replaced the dioptric lens. This new optic, consisting of three large lenses mounted on a bath of mercury, was fitted with a clockwork (rotation) mechanism that had to be wound up by hand every 25 minutes, which also facilitated the light being changed from a fixed to a flashing beam.

As the conflict in Northern Ireland worsened in the early 1970s, security tightened and the explosive fog signals were withdrawn from all lighthouses. The signal at the Hook was replaced by a pneumatic fog signal operated by compressed air sounding one blast every 30 seconds. A year before automation (1995), an electric horn was introduced, replacing the pneumatic system with a character of two blasts every 45 seconds. Finally, after 173 years, in a Notice to Mariners on September 24, 2010, the discontinuation of the Hook fog signal was to take place on January 11, 2011.

After 61 years, paraffin, although a more penetrating light during fog, succumbed to electricity. Consequently, the intensity of the light was increased to 480,000 candelas. The power or strength of a light (and indeed a lighthouse) is measured by candelas, a unit of luminous intensity originating in the 17th century when candles were first used

as the source of light, mostly on European lighthouses. Since 1978 the light at the Tower of Hook is exhibited during poor visibility.

In 1977, after 113 years (1864 -1977), lightkeepers' families were withdrawn from Hook lighthouse. This was to allow for the introduction of the relieving (month on/month off) system at headland stations like their offshore rock counterparts. As a result, staff increased to a total of six, two principal keepers and four assistant keepers.

Finally, after almost 800 years the Tower of Hook Lighthouse was converted to unwatched and the last lighthouse keepers were permanently withdrawn on March 29, 1996. While still one of the CIL's operational lighthouses, the Hook is now remotely monitored and controlled along with an additional 77 (automated) lighthouses around the island of Ireland. All technical data is instantly relayed via telemetry link to the central control at the lighthouse headquarters in Dun Laoghaire, County Dublin, Ireland.

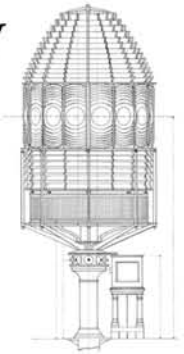
Tower of Hook is the oldest lighthouse on the island of Ireland, and unquestionably one of the oldest operational lighthouses in the world. Recently, the *Lonely Planet Ireland Guide* nominated the Hook as the "flashiest lighthouse in the world," beating off stiff competition from Creac'h in France, Green Cape in Australia, and Cape Hatteras in the U.S., to list just a few.

In the early years of the 21st century, the iconic Hook Lighthouse is a lasting reminder of the ingenuity of long-gone engineers and builders and a fitting testimony to those generations who have served to keep the seas safe for mariners.





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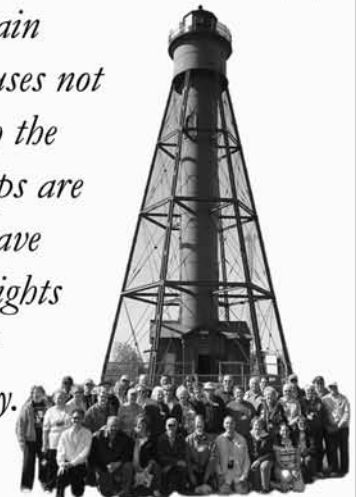
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