

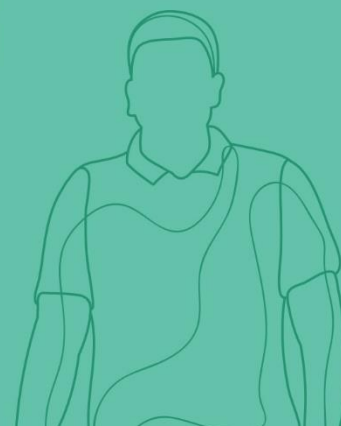


# COPPER COAST CONNECTS

*The Journal of the  
Copper Coast UNESCO  
Global Geopark*

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# COPPER COAST CONNECTS:

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The Journal invites contributions on any dimension of the history and heritage of the Copper Coast as noted previously. These could be very brief articles or extend up to several thousand words or more. Illustrated articles will be particularly welcome, but in all instances, we will require that the sources of information cited in articles be provided. While the preferred submission format guidelines are outlined below, any prospective contributor should not be deterred by difficulty in meeting these guidelines, as the Editor/ Editorial Board will be able to provide assistance:

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- Unformatted text, Calibri 10 point, left aligned, double space lines.
- Format in MS Word. Use no more than three levels of headings.
- Article to include a very brief abstract immediately below the article title and name of author
- Good quality (minimum 300dpi resolution), digital colour illustrations welcome. Please supply as separate TIFF or JPG files and **do not** embed in Word documents: their intended location therein to be indicated "Figure 1 here" etc.

**References.** Use the end note format only. Full references therein to be cited using the Harvard system on first use, as per this example:

- Cowman, D. 2007. The Mining Company of Ireland's operations at Glendasan-Glendalough 1825-1895. *The Journal of the Mining Heritage Trust of Ireland*, Number 7, pp. 45-50.

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# SHIP BUILDING ALONG THE COPPER COAST: A FORGOTTEN 19<sup>TH</sup> CENTURY INDUSTRY.

**John H. Morris**

## **Abstract**

The history of 19<sup>th</sup> Century ship building in Waterford city has been very well documented and while passing mention is made of shipbuilding in Dungarvan, until now there has been no published record of similar activities along the stretch of coast between those urban centres. A chance discovery of documentary records in the National Archives, London, provides the first known evidence of the existence of shipbuilding as an industrial activity in suitably sheltered coves along the Copper Coast during the 19<sup>th</sup> C. This paper explores the history of the vessels constructed in those coves, their classification and likely usage. Later contributions will explore the biographies of the individuals associated with those and other vessels, as well as the copper ore – coal trading routes between the Copper Coast and ports in south Wales, especially Swansea.

## **Introduction**

It is perhaps now difficult to envisage that by 1776, some 40% of all ships<sup>1</sup> constructed in Ireland were built in shipyards in Waterford (city) and Dungarvan<sup>2</sup>. While knowledge of the Waterford city industry is now well documented for posterity in the seminal study by Bill Irish<sup>3</sup>, awareness, let alone knowledge of shipbuilding elsewhere in the county has all but faded from memory, a fate which perhaps reflects a combination of factors, such as the infrequency and cursory nature of contemporary references during the 19<sup>th</sup> C, and non-survival of business records. Nonetheless, a shipbuilding and repairing industry, capable of building quite significant size wooden vessels, such as brigs and sloops, as well as more modest fishing vessels, was seemingly well established in Abbesside by 1822<sup>4</sup>. Two years later, two shipbuilders are listed under Dungarvan in Pigot and Co.'s Trade Directory for 1824 (John Risbill, Borheenatra St., and George Thompson, Main St., also a block and pump maker)<sup>5</sup> but only one is

listed in Slaters Directory for 1846 (Barnabas Cochrane)<sup>6</sup>.

Slender as such records might be, they at least provide tangible proof of the one-time existence of such an industry in Dungarvan, but of the intervening coast between Dungarvan and Waterford, there is no record whatsoever – until now. A chance discovery of documentary records in the National Archives, Kew, London, provides the first known evidence of the existence of shipbuilding as an industrial activity in suitably sheltered coves along the Copper Coast during the 19<sup>th</sup> C. This paper explores the history of the vessels constructed in those coves, their classification and likely usage.

Subsequent articles, currently in preparation, will explore biographic details of builders, owners and masters, as well as the copper ore and coal shipping trade between Knockmahon and Dungarvan and various ports along the south coast of Wales, with Swansea in particular, a global epicentre of the copper smelting industry for about 100 years from about the mid-18<sup>th</sup> C to well into the 19<sup>th</sup> C<sup>7</sup>.

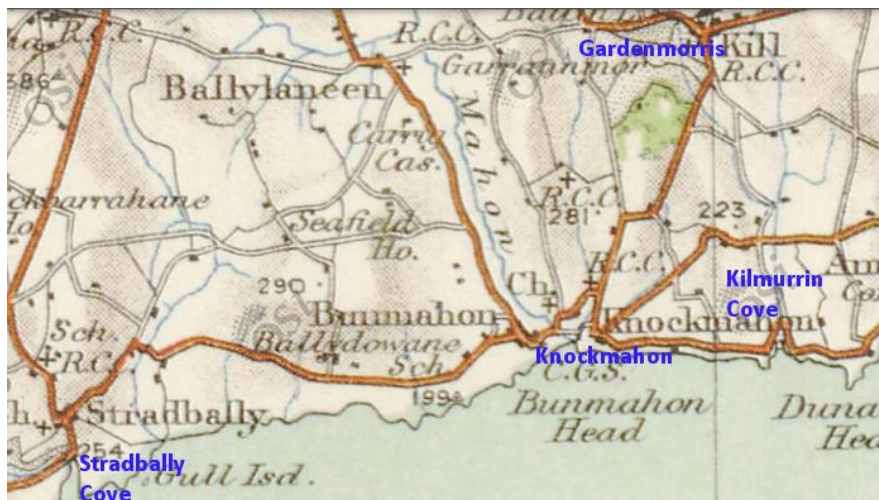
## **19<sup>th</sup> C ship building in Co. Waterford.**

Shipbuilding in Co. Waterford did not arise out of nowhere in the 19<sup>th</sup> C. Its origins can be traced back to at least the 13<sup>th</sup> C, founded upon a tradition of skilled carpenters, those skills gradually evolving over subsequent centuries into a variety of specialist and allied ship building skills<sup>8</sup>. By 1776, the industry was well established in Waterford and Dungarvan, as noted above, and although the proportion in later decades is not mentioned, examples of vessels constructed after 1776 testify to the continued vibrancy of that industry on into the 19<sup>th</sup> C<sup>9</sup>.

Shipbuilding in those centres, especially Waterford, focussed on construction of larger sailing vessels which participated in the coastal trade to ports in Ireland, Britain and Europe and even larger, ocean-going vessels built to service trade routes to North and South America. They did, however, also service the demand for more modest vessels involved in a variety of coastal trading and inshore commercial applications,

ranging from fishing to grain and coal transport and almost certainly to more unusual applications such as conveyance of limestone to lime kilns located at suitable coastal locations, for example at Annestown, Boatstrand and Stradbally.

But perhaps one of the more significant demands for vessels which developed during the 19<sup>th</sup> C



**Figure 1.** Map showing the location of the three sites along the Copper Coast, **Stradbally** and **Kilmurrin** Coves and **Knockmahon**, where vessels were constructed in the first half of the 19<sup>th</sup> C, as well as Gardenmorris inland from Kilmurrin. OSi base map, c. 1898-1909, reproduced by kind permission of Ordnance Survey Ireland, permit number MP 007021.

centred upon servicing the copper ore – coal trading routes between Dungarvan/Knockmahon and Swansea, the global centre of copper smelting during the 19<sup>th</sup> C, and for coal between Waterford/Dungarvan and other ports in South Wales, such as Llanelli, Neath, Port Talbot and Cardiff. But how and why shipbuilding spread outward from Waterford and/or Dungarvan is unknown, perhaps reflecting a combination of factors, such as the bigger, established shipyards gradually eschewing production of smaller and more modest size vessels and/or in combination with suitably skilled entrepreneurs seeking to develop their own enterprises, rather than continuing to work as paid employees. Whatever the reason, shipbuilding had been established on the Copper Coast by 1827 – at Stradbally and, at slightly later dates, in Knockmahon and Kilmurrin as discussed in more detail below (Fig. 1).

## Construction locations

Irish provides a detailed account of the processes involved in the construction of wooden sailing vessels in the Waterford shipyards, to which reference is directed rather than summarised here, including passing reference to the physical characteristics of the sites upon which the vessels

were constructed and how they were launched<sup>10</sup>. Although not exactly analogous, as the sites were located within designated shipyards, the general principles provide an analogue with which to compare to the sites where the Copper Coast vessels were constructed. As in Waterford, it may be presumed that they were constructed in the open,

rather than in sheds, at locations which were both sheltered from storms, but which also provided easy access to the sea for launching. It is reasonable to surmise that the construction sites were relatively level and floored by a soft substrate to avoid damage to vessel hulls as they were launched, either via a cradle along a temporary slipway (see Irish, *ibid*, pp. 81-2) or by digging a temporary channel from the sea up to and around the vessel to float it off under suitable tide conditions. The site would also need to have been readily accessible from the landward side to facilitate access by craftsmen, supply of timber and other construction materials etc.

Two locations were ideally suited for such construction purposes, both in sheltered coves with shallow shelving sandy beaches and easy access to roads for supply of materials etc from inland sources – at **Kilmurrin** and **Stradbally** Coves (Fig. 1). The third location is far more enigmatic – **Knockmahon**, as the cliffs and rocky foreshore along most of the shoreline of that townland are far from ideal, leaving perhaps only two possible locations, discussed further below.

## Types of vessels

The mast and sail rigging configurations of 19<sup>th</sup> C sailing vessels varied considerably, of which only the Bermuda sloop configuration, used on the vast majority of modern-day pleasure yachts, would now remain at all familiar – two triangular shaped sails attached to a single mast in a fore and aft alignment parallel to the length of the yacht, a configuration which allows the vessel to sail as close as possible to the direction from which the wind was blowing. By contrast, square rigged sail configurations, in which oblong shaped sails were hung by spars mounted on masts perpendicular to the length of the vessel, predominated on larger 19<sup>th</sup> C vessels equipped with two or more masts. That sail configuration maximised the speed of the vessel when running before the wind, but it did so at the expense of manoeuvrability when sailing into the wind, a limitation addressed by a plethora of hybrid designs which incorporated both square and fore and aft rigged sails. A detailed consideration of such configurations is, however, beyond the scope of this study, as the rigging patterns used on smaller vessels of the type constructed on the Copper Coast were much simpler.

The respective registration documents of the vessels constructed at the three locations noted above (and see following sections) are variously described as “hooker”, “cutter” or “sloop” rigged. All were relatively small vessels, and all bore only a single mast; and, despite the various names, the sails on all three types were rigged in a very similar manner, most particularly the hooker and cutter rig configurations, as depicted schematically in Figure 2:

- Two fore and aft aligned foresails mounted to the front of the mast, the most forward in this example attached to a “bowsprit”, a spar projecting forward of the bow to facilitate mounting of foresails. Bowsprits could be either fixed in position or, as in “running” bowsprits, could be run out to their operating position, or retracted back into the vessel when not so required.
- Two sails mounted to the rear of the mast: a lower, quadrilateral “gaff sail”,

the leading edge mounted to the mast, the lower edge mounted on a boom, the upper edge on a spar called the “gaff”; and, in this example, an upper, triangular shaped, “gaff topsail” mounted to the mast above the gaff spar (NB. not all cutter rigged vessels bore gaff topsails).

- The sloop rig differed only in that it bore a single foresail, rather than two.



**Figure 2.** A schematic depiction of a cutter rigged sailing vessel, with a bow sprit projecting forward of the bow. Note the fore and aft arrangement of all sails. (Image: Casito at Wikipedia: [https://commons.wikimedia.org/wiki/File:Sail\\_plan\\_cutter.svg](https://commons.wikimedia.org/wiki/File:Sail_plan_cutter.svg) ).

## Documentary records

The National Archives<sup>11</sup> in Kew, London houses a vast collection of documentary records pertaining to the shipping industry accumulated over many centuries. These are classified at a high level according to the remit of whatever body created the records in the first instance. The most important of these are the records created by the Board of Trade, and its successor bodies, classified under the label BT, with more specific subordinate sets of records assigned primary collection numbers, all of which are invariably subdivided at progressively more detailed levels. Within the BT records the following are the most relevant collections<sup>12</sup>:

- BT 98: Registry of Shipping and Seamen – Agreements and Crew lists, 1747 – 1860
- BT 99: as BT 98, but for the period 1861 – 1994

- BT 107: Registry of Shipping and Seamen, transcripts and transactions, Series I, 1786 – 1854
- BT 108: as BT 107, Series II, for the period 1855 – 1889.

These collections were searched systematically on-site over several visits c. 2011-4 specifically for records of vessels and crews involved in shipping copper ore to Swansea from Allihies, Co. Cork, Knockmahon/Dungarvan, Co. Waterford and, less systematically, from Arklow and Wicklow ports, Co. Wicklow during the 19<sup>th</sup> C. That research revealed a vast amount of pertinent information, some of which contributed to a study of a specific vessel involved in that trade, the *Ruby*, part owned by Andrew Carberry, a prominent Dungarvan merchant during the 19<sup>th</sup> C.<sup>13</sup> It also revealed the records of the three vessels the subject of this paper, within the BT 107 collection.

That collection (and BT 108) houses the register of shipping organised by port of registration and year in a series of leather-bound volumes<sup>14</sup>, the contents of which are not catalogued necessitating search page by page. Each certificate in those folios is a duplicate of those issued to vessel owners, who were required to always keep their copy on board the vessel. All certificates follow a standardised format (see Fig. 4, as an example):

- The name, residence and occupation of the owner, with ancillary details recorded on the reverse if and as necessary. Vessel ownership could only be recorded in the name of an individual, not that of a corporate entity, and was always expressed as a fraction of 64 shares, full ownership expressed as 64/64<sup>th</sup> shares, half ownership as 32/64<sup>th</sup>, quarter ownership 16/64<sup>th</sup> shares etc. Changes of ownership might either be recorded on the reverse or by the issue of a new certificate (expressed *de novo*) either at the same port of registration or, if the vessel was destined for use elsewhere, at a new port of registration. In all such instances, it was mandatory that the old certificate be surrendered for cancellation. It was quite common for vessels to be issued with two, three or

more certificates over the course of their operational lifetimes.

- The name and port of registration of the vessel; its registered burthen<sup>15</sup>; the name of the master of the vessel; and, if the first registration of the vessel, the place, date, and name of the builder of the vessel (such construction information was not repeated on second or subsequent certificates).
- Technical details of the vessel: number of masts; if decked; its length, breadth and depth, the latter two dimensions measured amidship; how it was rigged (i.e., the manner in which sails were attached to the vessel); whether or not it bore a bowsprit and figurehead and various other details, not least the material from which it was constructed.
- Place, dates, and names of officials by whom the certificate had been issued.
- Supplementary details, such as changes of ownership, or the master of the vessel, were recorded on the reverse of the certificate. Manuscript notations might be recorded on either side of the certificate. These mostly related to cancellation of the certificate and the fate of the vessel.

A sample search of Lloyds Registers<sup>16</sup> for the years 1830-1, 1841, 1844, 1853, 1855 and 1857 was made for any of the three vessels, without success, which suggests that none of the vessels were insured against loss or damage.

## COPPER COAST SHIPBUILDING 1827 – 1853: THE VESSELS.

The following sections describe each of the three vessels now known to have been built along the Copper Coast between 1827 and 1853, commencing with the oldest, the *Saint James*, built in Stradbally in 1827, the *Miner* built in Knockmahon in 1840 and finally the *Cygnnet*, built in Kilmurrin in 1853. It is not known whether these three vessels were the only such vessels ever constructed at these locations – or perhaps stand representative of others for which records either no longer exist or have yet to be discovered.

### *Saint James*: built 1827.

Although first registered in the port of Waterford in May 1828, the vessel was constructed in Stradbally, in 1827, as certified by its builder, William Carr. This and other details are noted on its first registration certificate (Fig. 3; and see transcription of key details).

Key registration details transcribed from images in Figure 3:

#### **Registration 1:** Waterford – Certificate 7/1828

- Built by William Carr in Stradbally, per his certificate dated December 5, 1827.
- Registered in Port of Waterford May 30, 1828. Registration number: 7/1828.
- Owner: Jane Towel, widow, of Stradbally
- Master: John Curreen (sic)
- Hooker rigged, with running bowsprit, carvel built, counter sterned. One half deck and one mast. Stem to stern, 35' 9"; maximum beam, 11' 11"; depth in hold 6' 7". No galleries and no figure head.
- Registered burthen: 19 84/94 tons.

#### **Registration 2:** Waterford – Certificate 7/1829

- First registration cancelled and registered *de novo* May 11, 1829, Waterford; Registration number 7/1829.
  - Change of ownership: Andrew Carberry, Merchant, Dungarvan, 32/64<sup>th</sup> shares; John Curreen, Mariner, Dungarvan, 32/64<sup>th</sup>
  - Master: John Curreen
- Change of ownership (noted on reverse of Registration 2): 14 May 1834.
- Andrew Carberry sold his 32/64<sup>th</sup> share in the vessel to John Curreen by "bill of sale" dated April 3, 1834.
  - Vessel "*broken up many years ago*" per note on reverse dated June 22, 1869.

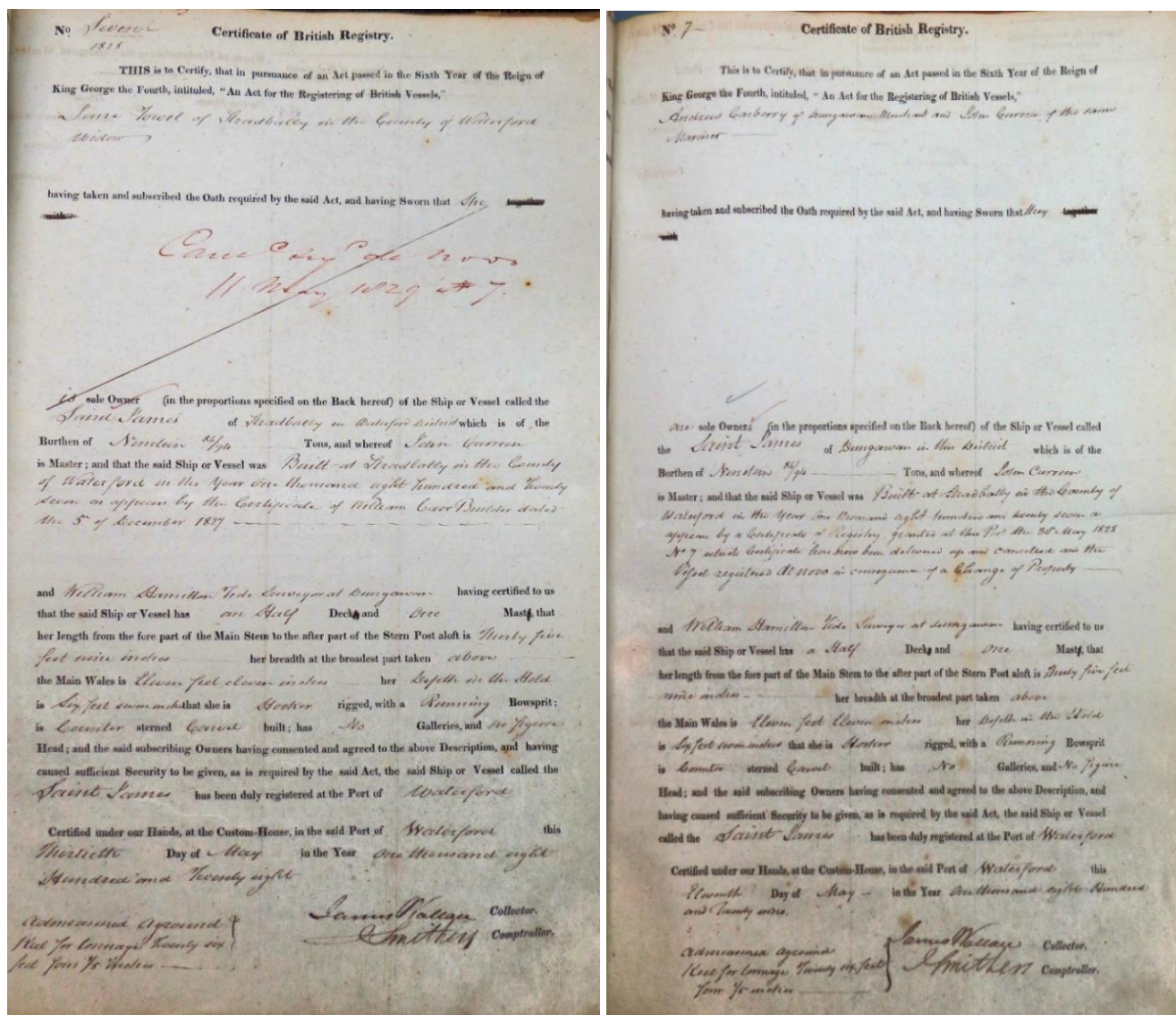
The builder's certificate does not state where precisely in Stradbally the vessel was constructed. It is, however, reasonable to surmise that was almost certainly in Stradbally Cove (Fig. 4), a site almost ideal for such purposes, as it stands apart

from the cliffs which define the coastline immediately to the east and west. The cove is moderately well sheltered, although exposed to south southwesterly gales; it is floored by a very shallow shelving, sandy beach; and it has direct road access at its inland end.

This was quite a modest size and type of vessel, with a registered burthen of just under 20 tons, the intended use of which is not recorded on either certificate.

Admittedly tenuous circumstantial evidence derived from the business interests of its first master and later full owner, John Curreen (? – 1838), as well as that of the prominent Dungarvan merchant Andrew Carberry (1788 – 1866), suggest that it was most likely used for coastal trading, transporting various types of goods along the coast between Dungarvan and harbours and coves to the east and west. The draught of the vessel is unknown but presumably quite shallow so that it could be "beached" quite easily to load and off-load cargoes direct on to beaches and carts, as well as mooring alongside quays and piers. The nature of those cargoes is again unknown, although it is reasonable to surmise that it reflected the trading and occupational interests of its owners, which, in the case of Andrew Carberry, were quite extensive, most notably centred on coal, grain, lime and timber – see, for example Slaters Trade Directory, 1846<sup>17</sup>.

The loss of a different vessel, the schooner *St. John* on Nov. 19<sup>th</sup>, 1838, as it was approaching Dungarvan port laden with coal from Swansea<sup>18</sup>, in which John Curreen, Master, was one of eight sailors who lost their lives, indicates that he was involved directly in the Knockmahon/Dungarvan to Swansea copper ore-coal trading route. His participation in that trade suggests that he may well have applied the *Saint James* to that business also, in addition to many other potential coastal trading applications. If that were indeed the case, then it is unlikely that such a small vessel would have been used for cross-channel voyages to and from Swansea.



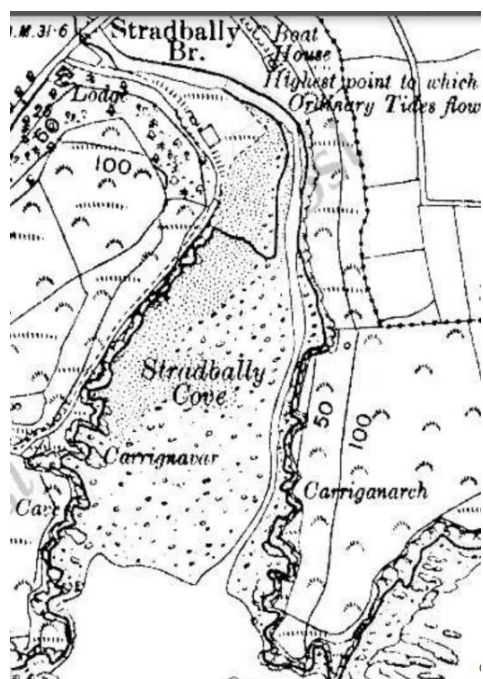
**Figure 3.** The Registration Certificates for the *Saint James*. **Left: Registration 1** - issued to Jane Towel of Stradbally, certificate 7/1828 issued May 30, 1828 in the Port of Waterford. **Right: Registration 2** - issued *de novo* May 11, 1829, in the Port of Waterford, to Andrew Carberry and John Curreen, both of Dungarvan, certificate 7/1829. Both images reproduced by kind permission of The National Archives, London, England.

Stradbally, Boatstrand and Annestown. The relatively small size of the vessel, and its presumably quite shallow draft, would have made it ideally suited to beaching on a sandy beach at high tide while fully laden; off-loading its cargo at low tide; and then refloat and depart on an incoming high tide. Weight is lent to that admittedly speculative conjecture through the known business interests of its one-time co-owner, Andrew Carberry.

Instead, it is far more likely that it may have been used to transport coal from Dungarvan to Stage Cove, and copper ore in the reverse direction, as it would have been able to berth directly alongside the small jetty which had been constructed in the cove pre-1840 (see Morris et. al. 2005<sup>19</sup>; and discussion of Figs. 6 and 7 under *Miner* following).

There is another, or perhaps additional trading application: transporting coal and limestone to the lime kilns constructed along the Copper Coast at





**Figure 4.** Stradbally Cove, as depicted on the early 20<sup>th</sup> C, 2<sup>nd</sup> edition, 6 inch scale OSi map (left); and a 2000 aerial photograph view of the cove, with the village of Stradbally at the top of the image. Both images reproduced by kind permission of Ordnance Survey Ireland, permit number MP 007021.

### **MINER: built 1840.**

The *Miner* was built in Knockmahon during 1840 but, unusually, it was first registered in Dublin, rather than in Waterford, the nearest and most logical registration port (Fig. 5), in the name of Richard Purdy, Agent to the Mining Company of Ireland which operated the Knockmahon copper mines from about 1825 to 1888. That company had its headquarters in Dublin, perhaps accounting for the choice of initial Port of Registration.

Key registration details transcribed from certificates reproduced in Figure 5:

#### **Registration 1:** Dublin – Certificate Registration number 30/1840

- Built by Timothy Daly, in Knockmahon, per his certificate dated August 12, 1840.
- Registered in Port of Dublin, Sept 3, 1840.

- Owner: Richard Purdy, Agent of the Mining Company of Ireland, and the other members of the said company; 64/64<sup>th</sup> shares (**NB.** As vessels could only be registered in the name(s) of individuals, Purdy was so named in his capacity as Agent, but very clearly on behalf of MCI, not on behalf of himself).
- Master: John Connel (sic)
- Sloop rigged, with running bowsprit, carvel built, square sterned. One deck and one mast. Stem to stern, 36.6'; maximum beam, 12.6'; depth in hold 6.6'. No galleries and no figure head.
- Registered burthen: 22 tons.

#### **Registration 2:** Waterford – Certificate Registration number 10/1843

- First registration cancelled and registered *de novo* May 23, 1843, Port of Waterford.
- Change of ownership: **Michael Mahony**, of Dungarvan, Merchant; 64/64<sup>th</sup> shares
- Master: Patrick Morrissy. Changed in Cork to John Bourke, Jan. 24, 1844.

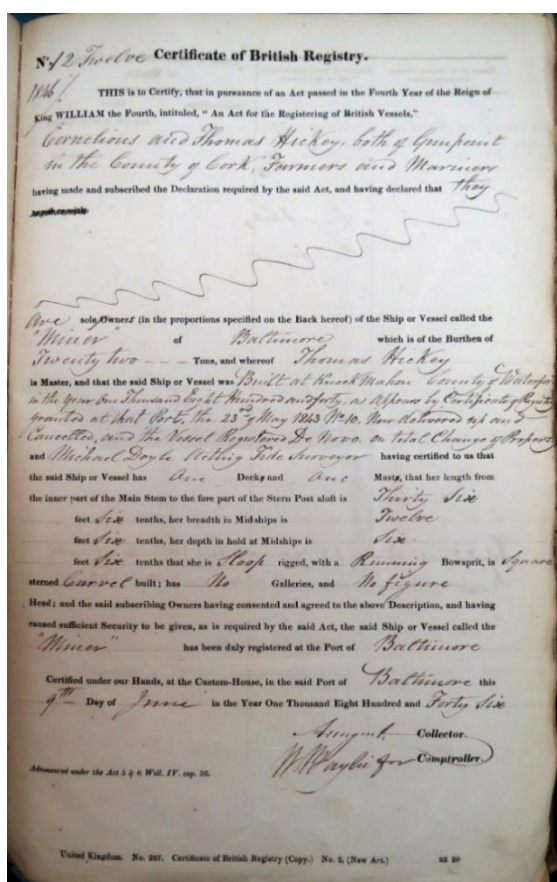
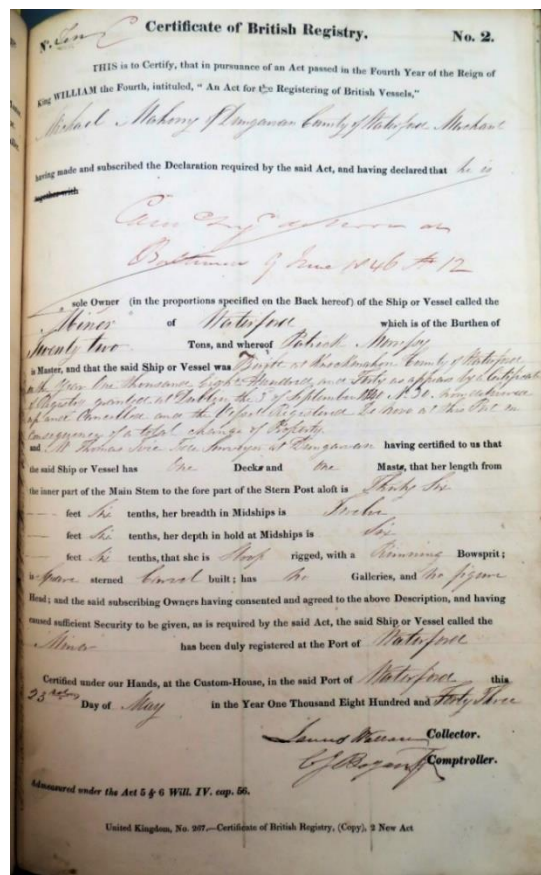
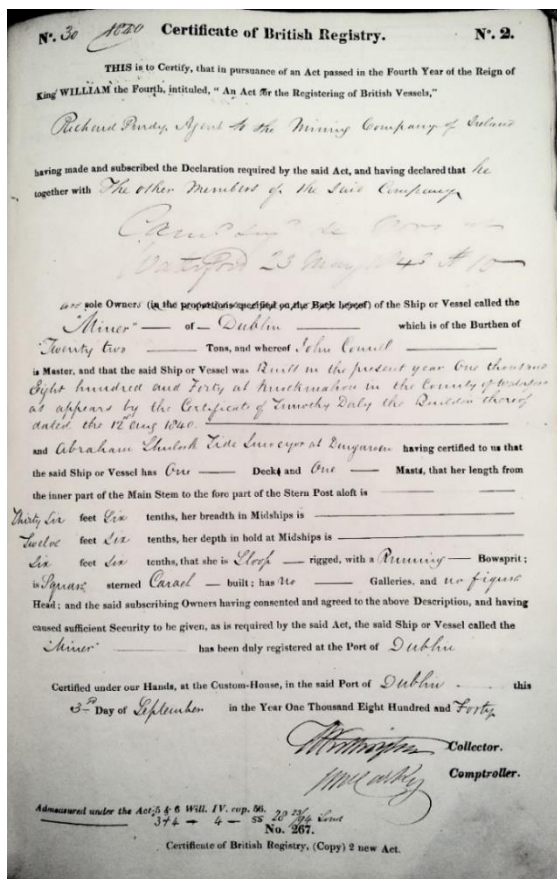


Figure 5. The three Registration Certificates for the *Miner* issued in 1840, 1843 and 1846:

**Above left: Registration 1:** first issued to Richard Purdy, agent for the Mining Company of Ireland, at the Port of Dublin, certificate 30/1840 dated Sept. 3, 1840.

**Above: Registration 2:** issued *de novo* to Michael Mahony at the Port of Waterford, certificate 10/1843, dated May 23, 1843.

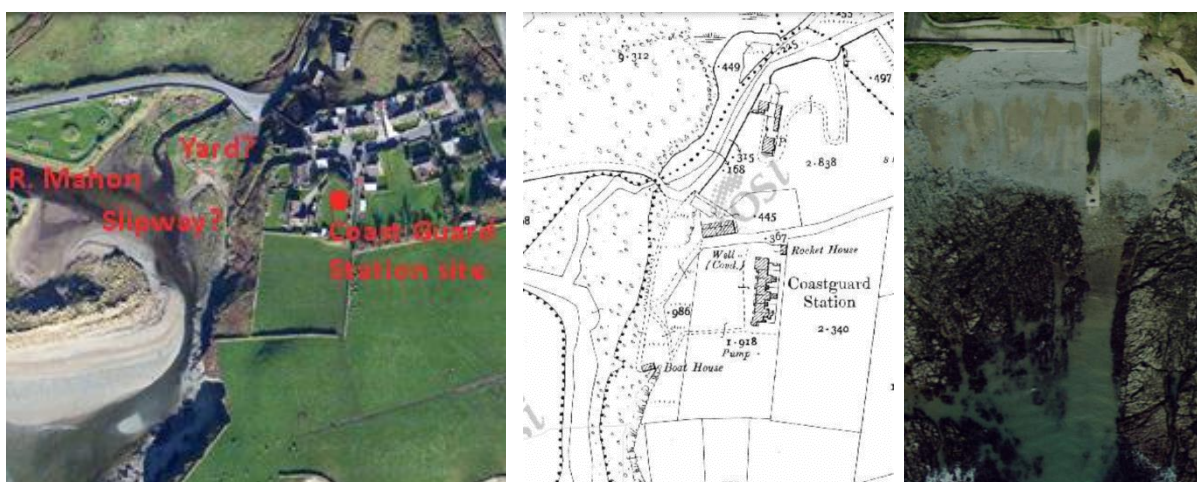
**Left: Registration 3:** issued *de novo* to Cornelius and Thomas Hickey at the Port of Baltimore, certificate 12/1846, dated June 9, 1846. All three images reproduced by kind permission of the National Archives, London, England.

**Registration 3:** Baltimore – Certificate Registration number 12/1846

- Second registration cancelled and registered *de novo* June 9, 1846, Port of Baltimore.
- Change of ownership: Cornelius and Thomas Hickey, both farmers and mariners of Gunpoint, Co. Cork; 32/64<sup>th</sup> shares each.
- Master: Thomas Hickey.
- Vessel and certificate lost about 1847, per note on reverse dated April 27, 1869.



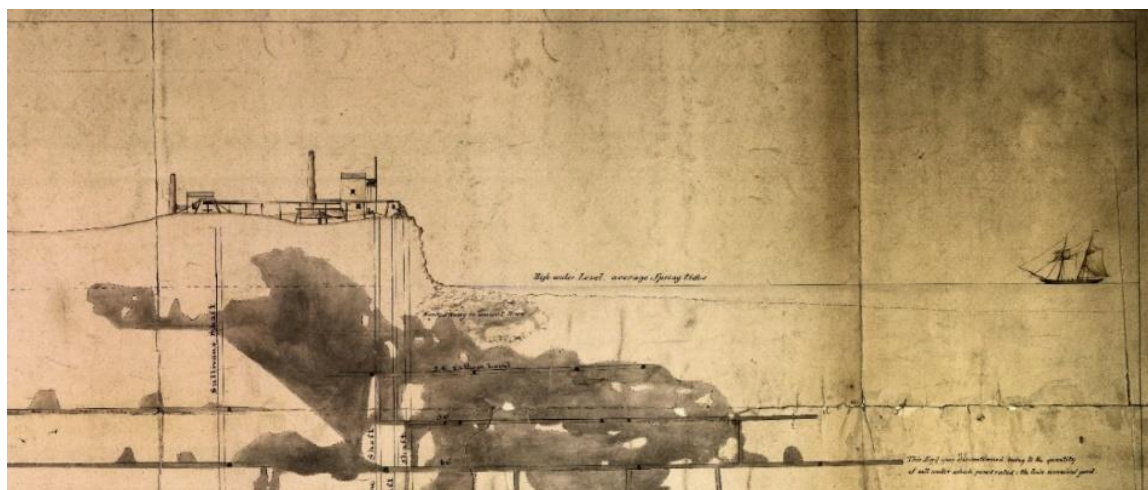
**Figure 6.** An annotated, Digital Globe 2011-2013, aerial view of the cliffs which define most of the western part of the coastline of Knockmahon townland, contrasting with the sandy beach west of the River Mahon in Templevrick townland, Bunmahon. Note the only two possible vessel construction sites in this townland: Stage Cove, and the “Yard ?” just below the site of the old Coast Guard station. Images, Figures 6 and 7, reproduced by kind permission of Ordnance Survey Ireland, permit number MP 007021.



**Figure 7.** Three detail views of two possible vessel construction sites in Knockmahon townland. **Left and centre** – an OSi First edition 6 inch scale map of 1840-1, and a Digital Globe 2011-2013 aerial view of the beach area immediately below the old Coastguard Station (destroyed by the IRA in 1921), now partly covered by a gravel surface car park (Yard?), and a slipway connecting it to the River Mahon. **Right** – a 2013-2018 aerial view of the pebbly beach and very narrow channel through the rocky foreshore in Stage Cove. See Morris et. al., 2005<sup>20</sup> for an interpretation of how coal and copper ore was conveyed between wooden jetties in the cove, and the Copper Yard on the cliff top.

The prominent cleft in the rocky foreshore, providing access to the pebbly beach immediately below the Copper Yard in Stage Cove, might have provided a barely suitable site on a very exposed coastline (Figs. 6 and 7). In marked contrast, the sandy beach area just east of the River Mahon, just below what was the old Coastguard Station, provides a far more likely construction site (Figs. 6 and 7). That small section of beach, now used as a car park and for boat storage, accords with all the favourable criteria noted at Stradbally and it even includes a distinctive slipway from ground level down to the river - perhaps a much-modified remnant of the slipway down which the *Miner* was launched in 1840.

While shallow draft schooners could quite easily moor alongside the quays in Dungarvan to offload coal or take on a cargo of copper ore for delivery to Swansea, that was most certainly not the case at Knockmahon, immediately adjacent to the copper mines (Fig. 8). There, much of the coastline is defined by cliffs and a rocky foreshore which might only be approached under the most benign of weather conditions, necessitating schooners or similar size vessels to anchor offshore (Fig. 8). How then was coal and ore transported to and from the mines either to vessels anchored just offshore or via trans-shipment at Dungarvan?



**Figure 8.** A clip from a longitudinal section of the Stage Mine, Knockmahon, mine workings by W. W. Smyth, dated 1845. Note the vignette of the mine buildings atop the cliffs; the steep cliffs and rocky foreshore; and a top-sail schooner anchored offshore. Original drawing: GSI *Goldmine* archive, <https://secure.decc.gov.ie/goldmine/docpage.html?id1=8262019&id2=9552792&id3=9554710> (accessed Dec. 1, 2021).

The initial ownership of the *Miner* leaves little doubt that its intended use was to service the copper ore – coal shipping requirements of the Mining Company of Ireland. But in exactly what capacity is unknown. It is, however, unlikely that it was intended to be used to ship ore direct from Knockmahon to Swansea, or coal on return voyages, as it was a relatively small vessel – at a registered burthen of only 22 tons, it might, at best, only be able to carry about 25-30 tons of copper ore.

Morris et.al., as part of a very detailed study of the Tankardstown mineral tramway in 2005<sup>21</sup>, postulate that ore and coal were conveyed to and from the mines by way of lighters, or smaller vessels, which shuttled between one or other of two wooden jetties in Stage Cove, just below the mines' storage yard, to the vessels anchored offshore – or on to Dungarvan. It is beyond reasonable doubt that the appropriately named *Miner* was involved in the ship to shore coal-copper transfer operations, as it was owned by the mining company which operated the mines, and limited indirect evidence discussed above suggests that the *Saint James* may also have been involved in such operations also. It is unknown whether the *Miner* continued to service copper ore and coal transshipment activities after its change of ownership in 1843. However, the change of Master in Cork, in 1844, suggests that its coastal

trading was orientated along the southwest coast which would perhaps explain why it was eventually re-registered in Baltimore, Co. Cork in 1846.

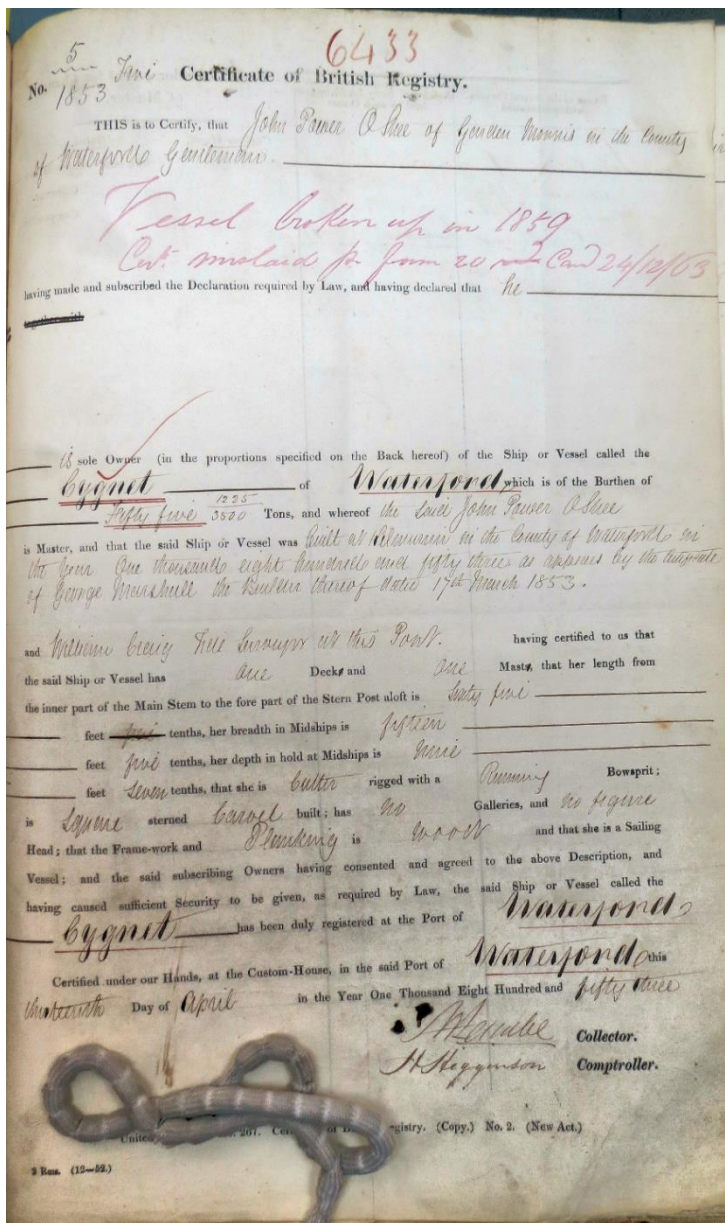
**CYGNET:** built 1853.

Unlike both preceding vessels, for which their intended use is a matter of interpretation, for this, the largest vessel yet discovered to have been built on the Copper Coast, a contemporaneous report published in the *Waterford News* on April 29<sup>th</sup> 1853 leaves no doubt as to its ownership (John Power O’Shee), the profession of its builder (George Marshall) and intended use – as a pleasure yacht:

*“.. one of the most beautiful and graceful yachts that ever graced the noble Suir. She is the property of John Power O’Shee, Esq., J.P., of Gardenmorris, in this county. This beautiful specimen of home-made naval architecture was built at Bunmahon by native artizans – not regular shipbuilders – under the supervision of an experienced yacht builder from Dublin.”*

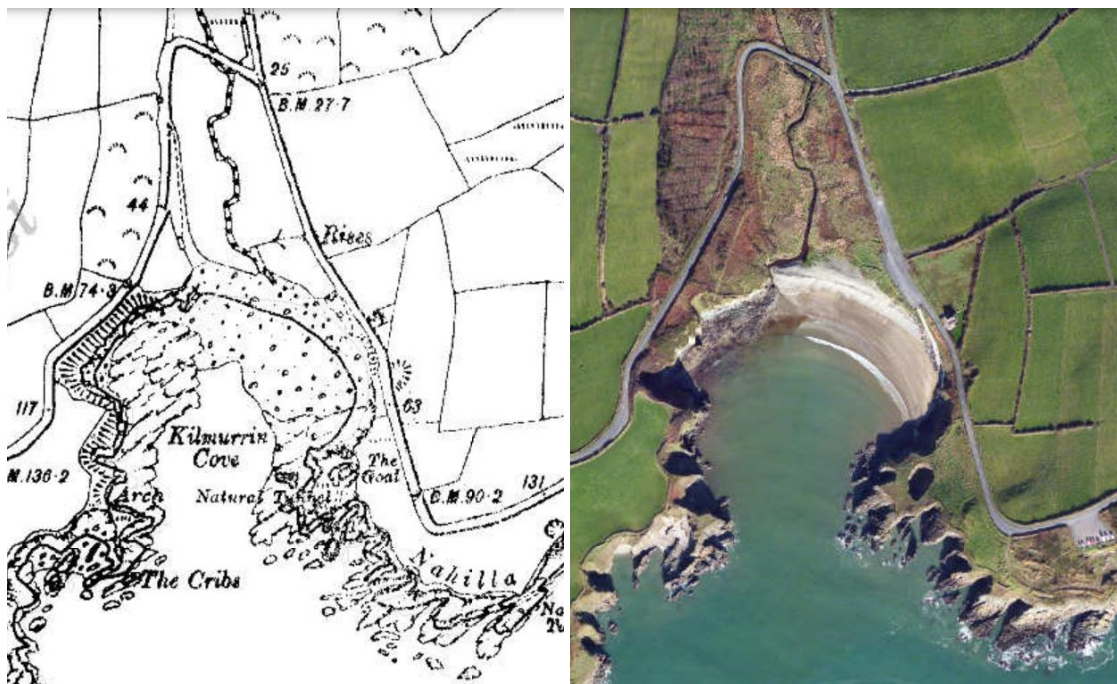
Key registration details transcribed from certificates reproduced in Figure. 9:

- Built at Kilmurrin (presumably Kilmurrin Cove, NOT Bunmahon as noted in the *Waterford News* report) by George Marshall per his certificate dated March 17, 1853.
- Registered in Waterford Port April 13, 1853
- Owner and Master: John Power O’Shee of Garden Morris, Gentleman, 64/64<sup>th</sup> shares.
- Cutter rigged, with a running bowsprit, no figure head. Square sterned, carvel built. One deck, one mast. Stem to stern: 65’ 5”; beam 15’ 5”, hold depth 9’ 7”.
- Burthen: 55 1225/3500 tons.



**Figure 9.** The Registration Certificate, number 5/1853, for the **Cygnet**, registered in the Port of Waterford, April 13, 1853.

Kilmurrin Cove is as equally well sheltered as Stradbally Cove and, like it, offers all the same advantages to facilitate vessel construction – a sandy, gently shelving beach with direct road access and, other than under conditions of exceptionally heavy wave conditions, open access to the sea for launching (Fig. 10).



**Figure 10.** A second edition, early 20<sup>th</sup> C OSi 6 inch scale map and Digital Globe 2011-2013 aerial photograph view of Kilmurrin Cove, showing the shallow shelving sandy beach and direct road access along its eastern margin. Kill and Gardenmorris are located about 4km due north of this cove, up the road which passes north out of the top edge of both images. Both images reproduced by kind permission of Ordnance Survey Ireland, permit number MP 007021.

As the Waterford News report indicates very clearly, the *Cygnets* was built to be used by John Power O'Shee as a yacht, i.e., as a pleasure craft, rather than to service any form of commercial activity, an intended usage which explains the otherwise unlikely combination of a Gentlemen and member of the Landed Gentry serving in the much humbler occupation of a ship's "Master". The vessel was launched in Kilmurrin Cove on April 26<sup>th</sup>, 1853, and sailed immediately for Waterford Harbour, where it arrived that evening<sup>22</sup>.

Subsequent newspaper reports between 1854 and 1858 document its various voyages, all of which seem to have been limited to passages between Waterford and Dunmore East, where it occupied annual "stem to stern" moorings there over the summer months<sup>23</sup>, only to return to Waterford Harbour each autumn. Other than in 1854, its annual usage seems to have been very limited. That year the *Cygnets* arrived in Dunmore East on June 23<sup>rd</sup> under the command of John P. O'Shee,

presumably to take up its annual summer moorings. Later, in August, O'Shee is noted as one of many guests who had taken up residence in the Hotel, Dunmore East, ahead of a regatta, variously described as either the "Waterford Harbour" or "Dunmore" Regatta, which was scheduled to be held September 5<sup>th</sup> – 7<sup>th</sup> and for which O'Shee was to serve as one of several stewards<sup>24</sup>. The *Cygnets* was entered in a £20 race on Sept. 7<sup>th</sup> which consisted of two circuits of a course from Dunmore Bay to Fileskirt - Hook Tower - Loftus Hall and back to Dunmore<sup>25</sup>. Although the *Cygnets* crossed the line in first place, on handicap it was placed second. It subsequently returned to Waterford Harbour on September 23<sup>rd</sup> to take up its winter moorings<sup>26</sup>. Subsequent accounts in 1855, 1856 and 1858 suggest a similar very limited annual usage, apart from noting that it was in Waterford Harbour in April 1858 refitting for the season<sup>27</sup>.

John Power O'SHEE died on July 5<sup>th</sup>, 1859<sup>28</sup>, although only just over a month later, on August 12<sup>th</sup>, the *Cygnets* sailed from Waterford to Dunmore<sup>29</sup> and then on to Queenstown (Cobh) on what may well have been its final voyage, presumably under the authority of its new owner, Nicholas Power O'SHEE. The registration certificate (Fig. 9) notes that it was broken up in 1859,

possibly in Cobh if that was indeed its final destination, although it was not until 1861 that a newspaper report notes that it had been condemned and broken up<sup>30</sup>.

There are several quite enigmatic dimensions to the history of this vessel.

Why, when construction of vessels such as the *Cygnnet* could easily have been undertaken by contemporaneous shipbuilders in Waterford or Abbeyside, did O'Shee instead choose to have it constructed in a relatively isolated cove such as Kilmurrin? Was his decision based on such prosaic issues as the most competitive quotation or yacht construction experience? Or might it have been for more personal and/or philanthropic reasons? Kilmurrin is only c. 4km due south of Gardenmorris (Fig. 1), within easy reach for him to have visited the site daily, or at least frequently, to review progress on the construction of his yacht; and/or it might have facilitated supply of suitable timber from his estate. His reasons might however have been of a more philanthropic nature – to provide employment in the immediate aftermath of the Great Famine. That possibility is consistent with his contributions to efforts to construct a Catholic Church in Knockmahon in 1854; making substantial provision for his illegitimate son Patrick O'Shee<sup>31</sup>; and, not least, by inclusion in his will of quite handsome bequests to two of his local employees - £1,000 to his steward Patrick Butler and, most notably, £500 to his dairy maid, Nancy Murphy<sup>32</sup>.

Why did O'Shee consider acquiring a yacht at all? Unlike his brother and successor, Nicholas Power O'Shee, who was seemingly quite a committed yachtsman, as evidenced by his membership of three yacht clubs in 1857 (Royal Harwich, Essex; Royal Thames and Royal Victoria, Hyde, Isle of Wight), and owner of a substantial yacht (the schooner *Anonyma*, 64 tons), John P. O'Shee was neither a member of a yacht club, nor even listed as an owner of a yacht<sup>33</sup>. This, in combination with the very limited use he made of it suggests that his interest in sailing was quite marginal - his purpose perhaps instead focussing upon employment aspects during its construction, maintenance and very limited operation.

Most enigmatic of all is why it was deemed necessary to condemn and break up a seemingly very lightly used and well-maintained vessel which was only 6 years old. His will does not mention the yacht so, unless he left some other form of instructions to his brother regarding its fate, then that decision was presumably left to the discretion of the latter. The vessel was certainly sufficiently sea-worthy to undertake its last recorded voyage to Queenstown (Cobh) in August 1859, at the same time as Nicholas returned to Cowes, Isle of Wight on his yacht *Anonyma*<sup>34</sup>. If not, it would have been more logical for it to have been condemned and broken up in Waterford. This raises the totally speculative suspicion that it may have been condemned and broken up as a mark of respect to the memory of John Power O'Shee – akin to the custom of Viking kings being buried in their longships.

## CONCLUSION

This paper provides the first published record of shipbuilding as an industrial activity undertaken along the Copper Coast during the first part of the 19<sup>th</sup> Century. The documentary evidence cited describes the construction of three small/modest size vessels, in 1827 (the *Saint James*), 1840 (*Miner*) and 1853 (*Cygnnet*), in reasonably well sheltered coves/locations at Stradbally, Knockmahon and Kilmurrin respectively. These locations shared similar physical characteristics which facilitated such construction: shallow, shelving sandy beaches or riverbanks, direct access to the sea for launching and inland to roads for ease of access by craftsmen and supply of construction materials and equipment.

The *Saint James* and the *Miner* were constructed to serve commercial coastal trading applications, the latter in connection with copper ore and coal shipping applications to and from the copper mines at Knockmahon, a trade with which the *Saint James* may have been involved also. In marked contrast, the *Cygnnet* was constructed to serve as a pleasure yacht only. Notwithstanding their intended use, the one-time existence of these vessels demonstrates that appropriate ship building skills and construction sites existed in the region, and it is thus conceivable that the

construction and/or repair of many more small vessels at these locations might yet remain to be discovered.

## ACKNOWLEDGEMENTS

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## REFERENCES and END NOTES.

<sup>1</sup> The noun “ship(s)”, as applied to sailing vessels, is here used in a loose sense to refer to all wooden construction vessels, no matter their size, rig configuration and registered tonnage, and not just to “ships” in the stricter sense. The latter term was applied technically to large sailing vessels with 3 or more masts, square rigged on all masts.

<sup>2</sup> Irish, B. 2001. *Shipbuilding in Waterford, 1820-1882*. 2001. Wordwell Ltd. Bray Co. Wicklow, 273pp (re-published 2005), p. 8. p. 2-3, 11. See also Chapter 3, pp.69-111, which describes in detail the range of crafts and skills involved during the 19<sup>th</sup> C, including apprenticeships.

<sup>3</sup> Idem.

<sup>4</sup> Waterford Mail, Jan. 23, 1830: testimony presented by Dungarvan merchant Andrew Carberry to a hearing on the imminent expiry of the Fishing Laws.

<sup>5</sup> Pigot and Company Directory, 1824. Dungarvan, pp. 265-6: <https://www.failteromhat.com/pigot.htm> (accessed Oct. 27, 2021).

<sup>6</sup> Slater’s Commercial Directory of Ireland, 1846. Munster, Dungarvan, pp. 230-232: <https://www.failteromhat.com/slater.php> (accessed Oct. 28, 2021).

<sup>7</sup> Evans, C. and Miskell, L. 2020. *Swansea Copper*. Johns Hopkins University Press, Baltimore, 229pp.

<sup>8</sup> Irish, B. 2001, *ibid*, pp. 2-3, 11. See also Chapter 3, pp.69-111, which describes in detail the range of crafts and skills involved during the 19<sup>th</sup> C, including apprenticeships.

<sup>9</sup> Irish, B. 2001, *ibid*, pp.7-8.

<sup>10</sup> Irish, B, 2001, *ibid*, pp.80-82.

<sup>11</sup> <https://www.nationalarchives.gov.uk/>

<sup>12</sup> A full list of collections is recorded at this link: [https://discovery.nationalarchives.gov.uk/results/r?\\_q=\(seame+n%20records\)+OR+\(crew%20list\)&\\_hb=tna&\\_d=BT&Refine+departments=Refine](https://discovery.nationalarchives.gov.uk/results/r?_q=(seame+n%20records)+OR+(crew%20list)&_hb=tna&_d=BT&Refine+departments=Refine) (accessed Nov. 25, 2021).

<sup>13</sup> Morris, J. and Cowman, D. 2014. The Dungarvan ore ships: Part 1, the example of the coaster, Ruby. *Decies, Journal of the Waterford Archaeological and Historical Society*, No. 70, pp. 35-64.

<sup>14</sup> See the BT 107 home page at: <https://discovery.nationalarchives.gov.uk/details/r/C3148>.

<sup>15</sup> The ‘Registered Tonnage or Burthen’ of a 19<sup>th</sup> C vessel is a measure of volume, not weight, a term which ultimately derives from the volume of a ‘tun’, a thirteenth-century barrel of wine which weighed about 2,240 pounds, or 1,020 kg: [http://en.wikipedia.org/wiki/Builder%27s\\_Old\\_Measurement](http://en.wikipedia.org/wiki/Builder%27s_Old_Measurement) (accessed 1 December 2021). The various tonnage revisions essentially reflect revised methods to calculate a more accurate assessment of the cargo carrying capacity of a vessel. Up to 1837, this was based upon calculations derived from the external measurements of the vessel, but from 1837 onward, reflecting changes enacted in 1835 (Merchant Vessels Act, 1835, Act 5&6, Wm IV, Cap. 56.), the system presents a

measure of the internal cargo carrying capacity. This was modified yet again in 1854 with the introduction of the ‘Moorson System’ which, by deducting internal space not available for transporting cargo or passengers, differentiated between ‘gross’ and ‘net’ tonnage.

<sup>16</sup> Lloyds Registers of Ships/Shipping was published annually from 1760 onward. It lists vessels by name in alphabetical order, summary information about the type of vessel, its class (an assessment of the quality of its construction), burthen, builder, owner, age and port of registration. Digitised copies for many years from 1768 onward are available on-line at: <https://archive.org/details/@Irfhec?&sort=-publicdate&page=3> (accessed Dec. 20, 2021).

<sup>17</sup> Slater’s Directory, 1846, *ibid*.

<sup>18</sup> Waterford Chronicle, Nov. 24 1838.

<sup>19</sup> Morris, J.H., Tietzsch-Tyler, D. and Scanlon, R. 2005. The Knockmahon-Tankardstown Mineral Tramway, Bunmahon, Co. Waterford. The Journal of the Mining Heritage Trust of Ireland, Number 5, pp. 53-74. Free download at: [https://www.mhti.org/uploads/2/3/6/6/23664026/the\\_knockmahon\\_tankardstown\\_mineral\\_tramway\\_bunmahon\\_co\\_waterford\\_morris\\_et\\_al.\\_2005\\_.pdf](https://www.mhti.org/uploads/2/3/6/6/23664026/the_knockmahon_tankardstown_mineral_tramway_bunmahon_co_waterford_morris_et_al._2005_.pdf) (accessed Dec. 1, 2021).

<sup>20</sup> Idem.

<sup>21</sup> Idem.

<sup>22</sup> Waterford News, April 29, 1853; Waterford Chronicle, April 30, 1853.

<sup>23</sup> Waterford News, June 11, 1858; Waterford Chronicle, June 12, 1858.

<sup>24</sup> Waterford Mail, Aug. 26, 1854

<sup>25</sup> Waterford News, Sept 8, 1854; Waterford Mail and Waterford Chronicle, both Sept 9, 1854.

<sup>26</sup> Waterford News, Sept. 22, 1854.

<sup>27</sup> Waterford News, Apr. 23, 1858.

<sup>28</sup> Waterford District Will Books, 1859, National Archives of Ireland:

<https://search.findmypast.co.uk/record?id=IRE%2FORIGINALWILLREGISTERS%2F007604272%2F00110&parentid=IRE%2FORIG%2FWILL%2FREG%2F22167> (accessed Nov. 21, 2021).

<sup>29</sup> Waterford Mail, Aug. 18, and Aug. 23, 1859.

<sup>30</sup> Waterford News, May 3, 1861.

<sup>31</sup> Patrick O’Shee, Esq., died in Dunmore East on July 5, 1865 and in his will dated Nov. 27, 1863, he left various bequests, amongst them, to his mother, Ellen Walsh, by then in Australia; his brothers Thomas and James O’Shee, sons of Ellen Walsh (father not named); his own son Patrick O’Shee, child of Ellen McElvey of Kill; bequests to the Revds. Thomas McGrath and Roger Power; and £1,000 for the repair of Kill chapel. Such bequests aside, he left all his residuary estate to his uncle, Nicholas Power O’Shee:

[http://www.willcalendars.nationalarchives.ie/reels/cwa/005014887/005014887\\_00144.pdf](http://www.willcalendars.nationalarchives.ie/reels/cwa/005014887/005014887_00144.pdf) and <https://search.findmypast.co.uk/record?id=IRE%2FORIGINALWILL>



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<sup>32</sup> Waterford District Will Books, 1859, National Archives of Ireland:

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<sup>33</sup> Hunts Universal Yacht List for 1857. Hunt and Sons, printers, London, pp. 16-19, 35:

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EpMGhHA](https://www.waterfordmail.com/2018/08/23/waterford-mail-aug-23-1859/) (accessed Nov. 23, 2021)

<sup>34</sup> Waterford Mail, Aug. 23, 1859.