
Dublin Port Post 2040 Dialogue – Paper 3

THE SHAPING OF DUBLIN PORT IN THE NINETEENTH CENTURY

28th September 2020

Although it is not certain, a new port may need to be built on the east coast of Ireland by 2040. Building such a port is a huge undertaking and requires careful consideration from two distinct perspectives.

Firstly, the need for the proposed new port must be established. Secondly, the location, design, cost and environmental impacts of the proposed new port need to be determined.

These perspectives are not mutually independent and they cannot be considered sequentially; they have to be considered in tandem with feedback between them. If costs and environmental impacts are unfeasibly high, then need can be trumped.

The decision to build new port facilities is ultimately a binary choice. However, deep thinking is required to ensure the correct choice is made. This is as true today, as we consider the long-term future of Dublin Port, as it was in centuries past when choices had to be made as to how Dublin would be provided with the port infrastructure it needed.

Dublin Port's first port authority, the *Ballast Office Committee*, was established in 1707 and its main contribution was to initiate the near century long project to build the Great South Wall.

The construction of the Great South Wall commenced in 1716 with the building of wooden pile structures to provide a physical barrier to prevent the movement

of sand from Sandymount strand into the port's entrance channel and also to provide shelter for ships.

The stone wall, as we know it today, was built in stages. Between 1748 and 1759 a section from what is now the Pigeon House Harbour was built back to Ringsend. Between 1760 and 1767 the Poolbeg Lighthouse was constructed and work on building the stone wall westwards to what became the Pigeon House Harbour continued until 1784. The still-standing Pigeon House Hotel was completed in 1793.

The situation in Dublin Port in 2020 is comparable to that in 1800. Today we are looking to decide what port facilities should be built on the east coast of Ireland to meet the needs of the city 20 years from now in 2040.

In 1800, construction of the Great South Wall had been completed and consideration was being given to the additional works needed to make Dublin Port more easily and safely accessible. This challenge was explicit in the name of Dublin Port's second port authority, *The Corporation for Preserving and Improving the Port of Dublin*, which had been established in 1786. This corporation was known colloquially as the *Ballast Board*.

The Ballast Board was established during the era of canal building in Ireland and, while the Great South Wall was being built, the Royal and Grand canals were also being constructed to link Dublin, city and port, to the Shannon. The canals greatly increased the hinterland of the port and the continued improvement of Dublin Port was a matter of national importance to the extent that, in 1800, the *Directors General of Inland Navigation* were given statutory responsibility for improving the port.

For a period of more than 20 years from 1800, the next major port project (after the completion of the Great South Wall) was considered, debated, planned and, ultimately, realised by the construction of the North Bull Wall, between 1819 and 1824.

It is not at all unusual for large construction projects to have long gestation periods and, even by the standards of today, the North Bull Wall was a large project.

In the UK, the building of a third runway at Heathrow was proposed in 2003 and today, 17 years later, is still the subject of debate and controversy. In Southampton, the British Transport Docks Board purchased lands at Dibden Bay in 1967 to provide capacity for the future expansion of the Port of Southampton. This expansion

was ultimately ruled out in 2003 following a public enquiry which sat for 120 days and lasted over a year – 36 years from concept to refusal.

In Germany, the Berlin Brandenburg Airport is finally due to open this year some 29 years after the corporation to develop the new airport was established and 14 years since construction work commenced. Elsewhere in Germany, the Port of Hamburg's project to deepen the River Elbe commenced in 2019, 17 years after it was first proposed.

In the Netherlands, the Maasvlakte 2 project to expand the Port of Rotterdam was originally proposed in 1969 and completed 43 years later in 2012.

Similarly long timescales apply to major construction projects and developments in Ireland

Dublin Port Tunnel

11 years from the proposal to build the tunnel (in the Dublin Transport Initiative report of 1995) to the tunnel opening in 2006.

Eastern Bypass

49 years since first suggested in a 1971 study report by An Foras Forbartha, *Transportation in Dublin*; unlikely to be built within the period of Dublin Port Company's Masterplan 2040, if ever.

Corrib gas

19 years from discovery to gas coming ashore.

Dublin Gateway

31 years from a first application in 1979 (by Dublin Port & Docks Board) for a Harbour Works Order for an eastern expansion of the port opposite Clontarf to An Bord Pleanála refusing permission for the Dublin Gateway project in 2010.

Galway Bypass

21 years since first proposed in 1999; multiple legal challenges culminating in an EU Court of Justice ruling in 2013; €600m approved by cabinet in 2018; currently awaiting an An Bord Pleanála oral hearing.

Irish Glass Bottle site

14 years since its sale to DDDA at a price of €16.5m per acre; construction works are yet to commence.

Dublin waste to energy plant

20 years from its being proposed in 1997 to its opening in 2017.

What is true today both in Ireland and internationally was true more than 200 years ago when the Directors General undertook public consultation on plans to improve Dublin Port. The problems of Dublin Port were ultimately resolved in 1824 when the project to construct the North Bull Wall was completed at a cost of £103,055.

The consultation process was informed by the publication of an 84 page document comprising reports and correspondence by experts (including Thomas Hyde Page of the Royal Engineers, Captain William Bligh, Captain Daniel Corneille and John Rennie). The foreword to this document set out the objectives of the public consultation very clearly:

The Directors General of Inland Navigation in Ireland, to whom, in Pursuance of the Act of the 40th Year of His Majesty's Reign, the Improvement of the Harbour of Dublin is committed, have caused the following Reports to be printed, with a Map annexed to each, upon which is delineated a sketch of the Works proposed by the several Reports to be constructed for the Purpose. The Sketch will elucidate the Report, and give a general Idea of the Design. Any Person wishing for more accurate Information may consult the Plans at large at the Navigation-House, No. 19 Merrion-Street, with the Reports of Borings, Soundings, and Experiments made respecting the Bar and other Parts of the Harbour.

The Directors General request to be favoured with the Information and Opinion which the Reader may be enabled to form upon these Plans, from scientific, practical, or local Knowledge upon the Subject, with the Foundation of any Objections which he shall make, and his Ideas for the Improvement of that Plan which principally meets his Approbation.

There was a number of options for improving Dublin Port and the way forward was not clear. The challenges faced by the Directors General (and by the Ballast Board) are redolent of the more recent challenges to build the new Children's Hospital in Dublin where issues of the co-location of facilities (paediatric, maternity and adult) had to be considered alongside the decision on the location for the new hospital (including at the Mater, at the Connolly Hospital in Blanchardstown and at St. James's Hospital). There were many different expert views but a choice had to be and, ultimately, was made.

The approach taken by the Directors General was to bring together the considered and varying views of different experts, shown in a series of six maps, and request feedback. The reports of the four experts included a retrospective analysis by John Rennie of earlier proposals from the previous century (notably by Captain John Perry).

The proposals of Thomas Hyde Page are shown in Map 1 and these are described by Page in a letter to the Directors General dated 7th September 1800, around the time that Captain William Bligh arrived in Dublin.

Page's main concern was with the safety of ships particularly during bad weather when ships had to wait for the tide in order to get across the bar and into Dublin Port. He proposed the creation of deep water anchorages at Dalkey Sound and at Sandycove. He suggested using loose rocks in the area (*pierres perdues*) to create rough breakwaters from Dalkey Island into Killiney Bay and also on a line joining Dalkey Island with Lamb Island and on to Maiden Island. At Sandycove, Page suggested that two piers be built in the relatively deep water close to the shore to provide a sheltered anchorage.

Given that this was the era of canal building, there had been proposals for new canals to link the Liffey both to the south of the bay at Dalkey or Sandycove and to the north at Ireland's Eye and Page mentions proposals by Councillor William Vavafour, William Jessop (an engineer on the Grand Canal Docks project) and Thomas Rogers (in an 1800 pamphlet).

Page suggested that the pier at Sandycove could be constructed so as to give access to a ship canal which would provide a connection to the Grand Canal.

On the north side of the bay, Page took a similar approach and described the development of a safe anchorage between Howth Head and Ireland's Eye by the building of two breakwaters. Again he suggested that a canal could be run back to the city, this time linking into new docks he had proposed to be built in the North Lotts, plans for which he had earlier prepared for the Royal Canal Company.

Page additionally supported previous suggestions of the Directors General to build a training wall from the North Lotts and pointed to the possibility of this wall and other shorter walls inducing tidal scour which could deepen the channel.

Finally, Page suggested constructing a small island to the east of the Poolbeg Lighthouse to, again, beneficially direct the channel into the port.

While Page was conscious of the expense of his various suggestions, notably the piers at Sandycove, he believed them to be justified in order to prevent loss of life at sea:

... but whether or not the expense might be justified by commercial considerations, the country would have certain cause to rejoice, if thereby our brave seamen were preserved from the dreadful consequences of shipwreck.

Subsequent to describing his proposals, Page provided two sets of cost estimates.

The first set of estimates is dated 23rd September 1800 for works in Dalkey and Sandycove to a total cost of £1.5m.

Improvement of the anchorage at Dalkey Sound	£246,979
Pier A at Sandycove	£189,706
Pier B at Sandycove	£1,014,600
Total	£1,451,285

In presenting these estimates, Page was again clearly conscious of the scale of what he was proposing and noted the following below his table of costs:

N.B. Notwithstanding the magnitude of this Estimate, the object is worth the expenditure, and if it should appear that by preventing shipwreck in the Bay of Dublin, there would be an annual saving of many lives, and property to an immense amount, the United Parliament of England and Ireland would not hesitate in voting at least one hundred thousand pounds a year towards the progressive improvement of the Navigation.

Page’s second set of cost estimates are dated 29th November 1800 and related primarily to proposed works at Ireland’s Eye, in Howth and in the channel itself in Dublin Port.

Piers at Ireland’s Eye (850 yards) and Howth (800 yards)	£86,400
North Wall / Bank of the Liffey (7,000 yards)	£168,000
Raise the bar to create an island half a mile long	£79,200
Total	£333,600

None of the above cost estimates addressed the cost of building either of the ship canals or the cost of building new docks at North Lotts.

It is clear from Page’s letters that many of the ideas he suggested were current at the time and there seems to have been an orthodox view on the efficacy of building canals and docks to solve the problems of Dublin Port.

Had this approach been followed, solving the problems of Dublin Port would have been very much more expensive than ultimately proved necessary.

Map 1 — The works proposed by Thomas Hyde Page



As Page corresponded with the Directors General, Captain William Bligh was surveying Dublin Bay on behalf of the Admiralty at the request of the Lord Lieutenant, Marquis Cornwallis.

In addition to completing his detailed survey in the winter of 1800, Bligh sent a report dated 12th January 1801 to the Directors General based on this survey in which he looked at the possibility of making improvements to Dublin Bay, Dun Laoghaire, Bullock, Dalkey and Howth.

When he came to describing the improvements that were possible, and which he recommended, Bligh was very clear that the prime objective of providing solutions to the problems of Dublin Port for the benefit of Dublin City could best be achieved by focussing on the harbour as it was:

There is to be attended to, as the principal part of our design, the welfare of the City, and it is my opinion, that should not be lost, even if a better harbour could be found in its neighbourhood; this however is not the case, and therefore the result of all my observations will, I hope, remove its difficulties as much as can be done, and promote its convenience.

While Bligh recognised the benefits of providing safe anchorages in Dun Laoghaire and at Howth, he roundly dismissed the idea of building canals and he also dismissed the possibility that the channel in Dublin Port could be improved by anything other than manual labour:

It is necessary for me too, to premise that I consider all schemes as visionary, which pretend to cleanse Dublin Harbour by any artificial means except bodily labour, and any other ways for ships going to Dublin to take but the present channel. I impress it strongly as a principle, that a canal and the Liffey would destroy each other, as both would be too burthensome to keep up, and that the general bias would at last go in favor of the latter. The Canal would then become only a lateral advantage, and it would be very doubtful if all the conveyances through it would ever repay the expense of making it, or even be sufficient to keep it clear, and at all useful for the few purposes it would be applied to.

Where Page seemed to consider any level of expense to be justified to provide a safer harbour, Bligh's focus was on making the most of what was there. Bligh took the constraints of the bar as they were as a given and focussed, instead, on providing a better channel to the port's berths. He suggested building a sea wall parallel to the Great South Wall. The purpose of this new wall was twofold:

This wall is for two purposes, one of which is to confine the sediment of the Liffey to itself, and limit the labour in keeping it clear; the other to avoid whatever comes from Ballybough and Clontarf.

While Bligh believed that his wall would cause the stream to take out a great part of the mud of the river, he said that manual labour would be needed to level the river bed to make it safe for ships to rest on without being damaged. In Bligh's words, *It is the harbour to be complained of and not the bar.*

Bligh was an expert mariner and his report deals in great detail with wind, currents and tidal conditions, with the nature of the sea bed and with the responsibilities of ships masters to safely work within these known conditions.

Where Bligh was adamant in his opinion of what should not be done (i.e. building canals) and was dismissive of any solution that might propose to reduce the bar in Dublin, he believed that the limitations of Dublin Port needed to be accepted for what they were and that what could be done to improve the situation by way of a limited construction and manual labour should be done.

Bligh's pragmatism and the limitations of his perspective are evident in the closing words of his report:

The object is to provide a remedy, if we can, for the present evil, and to prevent if possible its recurrence; but when we go out of the beaten path, out of the usual track, beyond the known, tried, proved, practical remedy, we should always bear in mind, this most important truth, "that nothing is so dangerous as too ready an indulgence of vain hopes; too rash a resort to a plausible theory, which although at a glance, it may be inviting to the sight; may be found by experience to be delusion in the feeling and defective in its general foundation."

Nothing but palpable experience can be depended on.

In contrast to the expansive and expensive works proposed by Page and Bligh's very conservative and limited approach, there was a simpler and ultimately successful solution to the problems of Dublin Port. This was to build the North Bull Wall as we know it today and this had been recommended by the Ballast Board to the Directors General. The approach was put forward by two members of the Ballast Board, George Macquay and Leland Crosthwaite. Their solution was not novel, having been suggested 15 years previously in 1786 by an engineer from Newcastle, William Chapman.

On 28th August 1801, the Directors General requested the Ballast Board to send them details of...

the plan which you would recommend to be carried into execution upon this idea, with every circumstance respecting the depths of waters and shoals, the tides and currents, and their effects both upon the flood and upon the ebb, that the whole may be laid before able engineers for their opinion.

In making this request, the Directors General sent a copy of Bligh's report to the port authority.

In its response of 13th October 1801, the Ballast Board showed a very clear appreciation of how the building of a north wall would impound a large volume of water which, as the tide ebbs, could be directed in a concentrated flow towards the bar thereby scouring it to provide a deeper entrance channel. More particularly, the Ballast Board's letter to the Directors General shows a deep understanding of the dynamic interaction between the wall they proposed to build (the North Bull Wall) and the Great South Wall (referred to below as *the works on the south side*):

The Corporation will just here observe, that it has been their object to interfere as little as possible with nature in the plan they have proposed, where its efforts appear to be usefully directed, but on the contrary, and this they doubt not, an examination of the charts of the harbour will point out, to give it all due assistance; and further, that the work now recommended will receive protection and security from the works on the south side, which in their turn will receive the like advantages from the proposed work; each by this means not only carrying its own objects, but adding in a considerable degree to the value and security of the other.

On the same day as the Directors General asked the Ballast Board for details of the approach proposed by Macquay and Crosthwaite, they also wrote to Captain Daniel Corneille for his opinion of the Ballast Board's idea. Corneille submitted his report on 7th September 1801 and, based on his investigations and surveys, concluded that:

... I am persuaded that the idea suggested by the Corporation, of erecting a pier or embankment from the Point of Clontarf Sheds, to the Spit Buoy would materially improve the entrance into the Harbour of Dublin.

Corneille's interpretation of the port authority's suggested approach involved the construction of two walls as marked in red in Map 3. Although he didn't produce detailed costings at that stage, he did provide estimates of £16 10s 4d per foot for the longer breakwater marked A and £25 14s 0d for breakwater B.

For its part, the Ballast Board had noted in its response to the Directors General that:

The works already executed by the Corporation, have so exhausted their funds as to leave them inadequate to the undertaking of that now recommended; should the means, however, of executing it, or any other works which they may consider likely to benefit the harbour, be put into their hands, they will endeavour to administer them in the most useful manner.

Corneille made a subsequent submission to the Directors General in 1802 which refined his ideas based on additional experiments and investigations he had carried out. His refined concept is shown in Map 6 of the Directors General's consultation document. It is a curved wall 7,260 feet long which Corneille estimated could be built for £24 per foot to give a total cost of £174,240.

The fourth main contributor to the Directors General's consultation document was John Rennie. Rennie was an eminent engineer and was subsequently responsible for the construction of Howth Harbour and Dun Laoghaire Harbour.

When challenged in 1802 to contribute to the topic of how to solve the problem of Dublin Port, Rennie observed that:

The improvement of Dublin Harbour is perhaps one of the most difficult subjects which has ever come under the consideration of the Civil Engineer, and therefore it ought to be treated with great caution and judgement. Many and various are the projects which have been brought forward for that purpose, and each project seems to have considered all plans improper except his own. How far I may fall into the same error when the general subject of the improvement of Dublin Harbour comes before me, must be left to the judgement of others to determine.

Rennie examined a similar set of options to those considered by the Page. However, he dismissed the idea of going to any expense to develop anchorages in both Dalkey and Howth.

Rennie noted that the extent of sand in Dublin Bay and the smallness of the Liffey and Dodder combined to make Dublin such a poor harbour. Rennie further noted that immense sums of money had been spent on the Great South Wall, enabled... *by the liberality of the late Irish Parliament* and he went on to say that unless the port can be improved... *the spirited inhabitants of Dublin will be prevented from sharing the commercial advantages of the British empire.*

Map 2 — Captain William Bligh's proposed solutions



Map 3 — Captain Daniel Corneille's first proposed approach to implementing the solution proposed by the Ballast Board



Map 6 — Captain Daniel Corneille's final proposal



Rennie reviewed the history of the efforts to improve Dublin Port since 1707 and described a 1725 proposal by Captain John Perry to build a harbour at Sutton Creek and link it back to the Liffey at Ringsend by building a canal.

Rennie noted that the Ballast Office Committee had rejected Perry's plan in 1726 and continued, at great expense, to complete the Great South Wall. He compared a 1725 survey by Gabriel Stokes (which indicated that there was 1½ to 2 feet of water at the bar) to Bligh's survey of 1800 (which indicated 5 to 5½ feet on low water on an ordinary spring tide) and remarked, somewhat dismissively, that... *this is all the advantage that seems to have been gained on the Bar by the expenditure of upwards of £200,000.*

Before proceeding to outline his preferred options for the resolution of Dublin Port's problems, Rennie simultaneously dismissed the solution proposed by the Ballast Board while also describing the essence of the Ballast Board's ultimately successful solution:

From the little good that has been produced by the extensive works already executed in improving the depth of water on the Bar in Dublin Harbour, I cannot say I have any very sanguine hopes of much good being produced by any works which can be added at a moderate expense. The scouring away of bars is but an uncertain operation at the best, and can only be done by bringing additional water to act on them, or by confining the action of what water there is to a narrower channel.

Rennie finally settled on a set of proposals based largely on the prevailing wisdom of building canals including Perry's plan of 1725. Rennie presented five sets of cost estimates including three options for canals – Perry's Sutton creek idea and two options for canals on the south of Dublin Bay, one to Dun Laoghaire and the other to Sandycove.

Rennie’s canals were to be 20 feet deep, 160 feet wide at the surface with a bed width of 80 feet.

1	North Pier and embanking the South Bull	£252,384
2	Extensions to the Great South Wall (770 yards) and the new North Pier (1,100 yards)	£403,488
Total for works in Dublin Port		£655,872
3	Canal from North Lotts to Sutton	£657,157
4	Canal from Grand Canal Docks to Dun Laoghaire	£489,734
5	Canal from Grand Canal Docks to Sandycove	£705,054

Based on correspondence with Captain Joseph Huddart, Rennie ultimately settled on Dun Laoghaire over Sandycove.

Notwithstanding Rennie’s reaction to the £200,000 cost of constructing the Great South Wall, he suggested works to a cost many multiples of this amount.

It is not evident that the consultation process initiated by the Directors General resulted in any useful consensus.

Two experts (Page and Rennie) identified very expensive sets of options which were heavily influenced by the canal orthodoxy of the day.

A third expert (Bligh) dismissed the idea of building any canal and instead focussed on a limited set of options which sought to make the best of a bad lot by accepting the limitations of the bar and making the most of the shallow channel in the port.

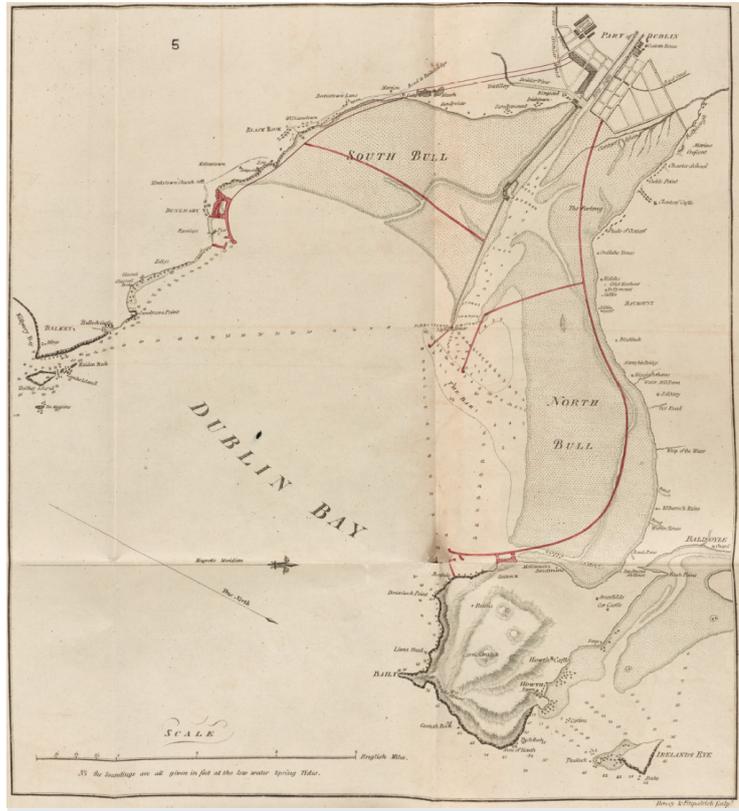
Only the option put forward by the Ballast Board offered an economic (albeit uncosted) and effective possible solution to the problems of Dublin Port. Despite being endorsed by a fourth expert, Captain Corneille, no decision was taken for a considerable time.

It was only in 1818 that the Ballast Board initiated the project to build the North Bull Wall by commissioning Francis Giles to carry out a new survey of the outer harbour and the bar. In May 1819, the Ballast Board approved the project based on a report by George Halpin and Giles.

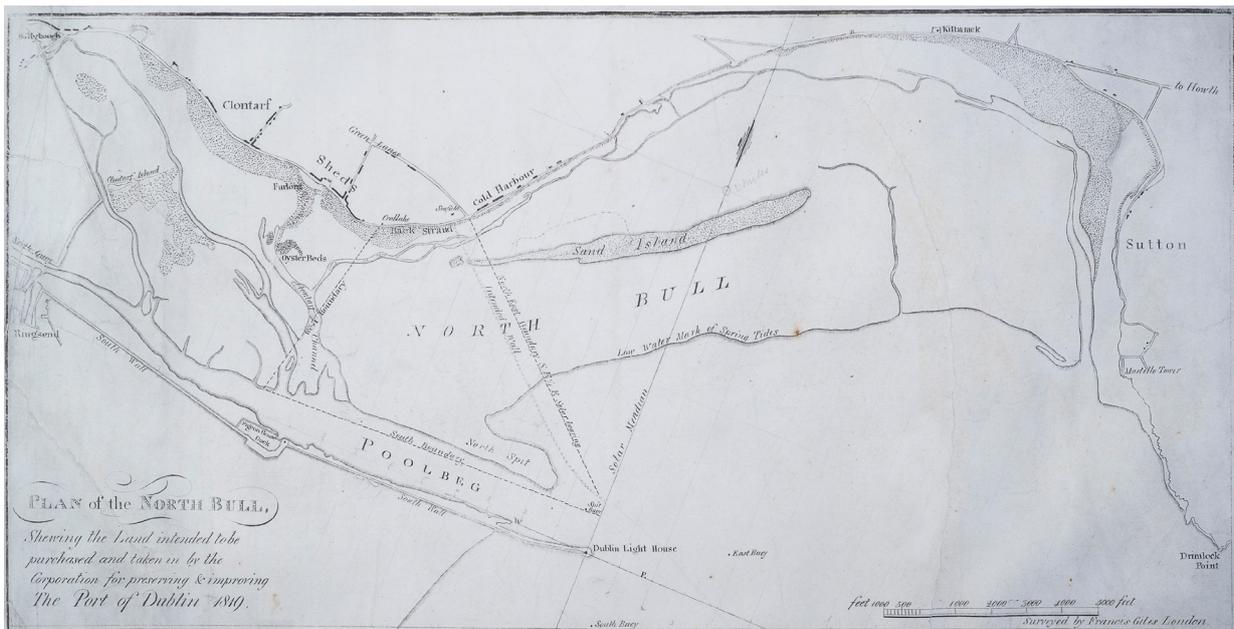
Map 4 — John Rennie’s proposed harbour at Sandycove with a canal linking it to the Grand Canal



Map 5 — John Rennie's final choice of options



Francis Giles' survey of 1819 showing the proposed location for the North Bull Wall



The benefits foreseen by the Ballast Board of assisting nature to deepen the channel came to pass. Over a matter of decades, the problems of Dublin Port were overcome as tidal scour gradually reduced the height of the troublesome bar and the business of Dublin Port prospered within the sheltered waters enclosed by the port’s two sea walls.

In 1881, Isaac John Mann, Assistant Engineer to the Dublin Port and Docks Board, published *River Bars – Notes on their formation and on their treatment by ‘induced tidal scour’, with a description of the successful reduction by this method of the bar at Dublin.*

Mann gave a detailed and wide-ranging description of the nature of bars, wave action, currents and scour. He then described the construction of the Great South Wall and also of the North Bull Wall. Having described the contributions of Page, Bligh, Corneille and Rennie, Mann observed that:

The expensive and elaborate schemes for the improvement of Dublin harbour which have been enumerated, although emanating from some of the highest engineering and nautical authorities of the time, were ultimately superseded by the much simpler expedient of a northern pier or Great North Wall...

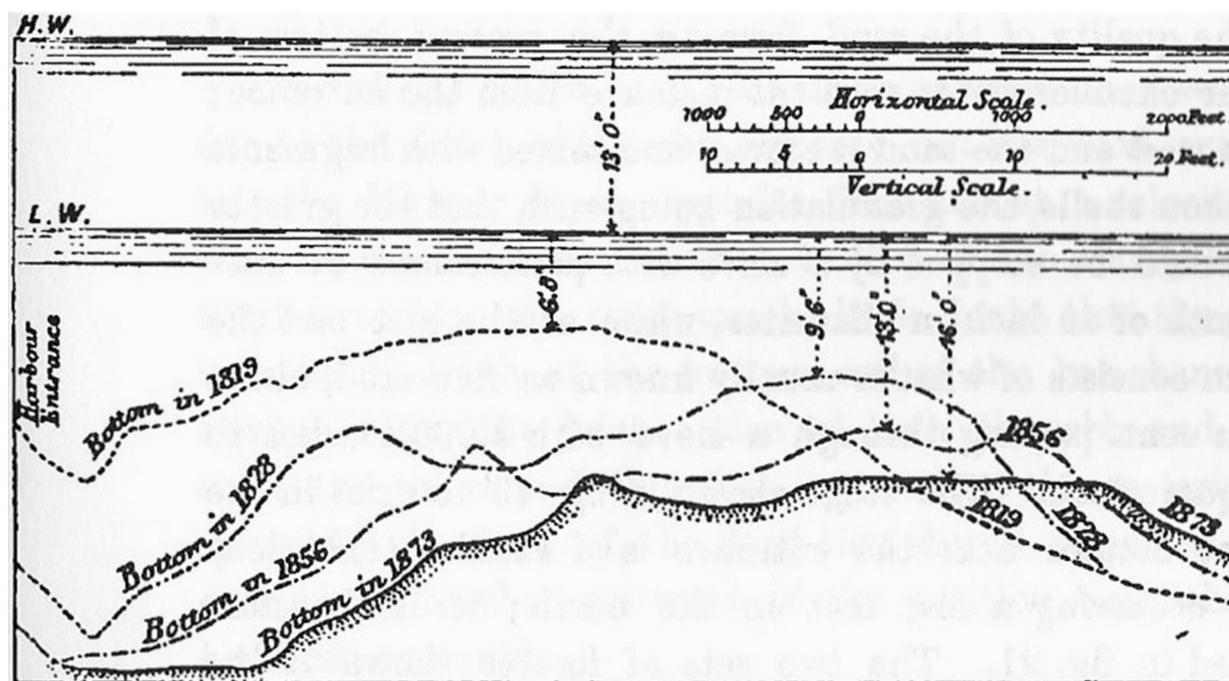
Mann noted that the North Bull Wall had, by August 1822, been built to an initial length of 5,500 feet and, following consultation with Thomas Telford, the length was extended first by 500 feet and subsequently by an additional 300 feet. At each stage the intensity of the scouring effect achieved was assessed and the wall was extended to reduce the gap between the North Bull Wall and the Great South Wall, thereby increasing the force of the water on the ebbing tide.

The progressive lengthening continued until the wall reached its ultimate length of 9,000 feet with the first 5,600 feet above high water at all stages of the tide and the remaining 3,400 only beneath water at high tide.

Mann provided a chart showing the results of surveys carried out in 1819 by Giles and subsequently by others in 1828, 1856 and in 1873. The chart shows how the initial effect of the tidal scour was primarily to push the bar further out to sea but that ultimately, after 54 years, the height of the bar was greatly reduced.

Mann tabulated the increasing depth at the bar noting that it increased at an average rate of two inches per annum between 1819 and 1873 and increased the depth of water available for ships entering the port by 9’ 6” (or almost three metres).

Chart showing the progressive reduction of the bar in Dublin Port between 1819 and 1873, I.J. Mann, 1881



Date	Minimum depth on bar at low water		Interval years	Increase of minimum depth		Rate of increase of minimum depth per year	Depth on bar at standard high water	
	ft.	in.		ft.	in.		ft.	in.
1819	6	6	—	—	—	—	19	6
1822	8	6	3	2	0	8.0	21	6
1828	9	6	6	1	0	2.0	22	6
1838	10	6	10	1	0	1.20	23	6
1866	13	0	18	3	6	1.66	26	0
1873	16	0	17	3	0	2.11	29	0

Total increase of minimum depth between 1819 and 1873,—9 ft. 6 inches.
Average rate of increase a little over two inches per annum.

Mann also remarked on the cost of the wall noting how cheap it was by comparison with many of the alternative schemes which had previously been proposed:

In the present instance, it can be safely affirmed that no modern method would have answered the purpose more effectively or with smaller cost than the method adopted. The building of the wall occupied nearly five years, being commenced in 1819 and completed as it now stands in 1824; the total cost was £103,055, or, on the average, rather more than £11. 10s. per foot forward.

Finally, Mann provided a table showing the increase in the business of Dublin Port over the 70 years from 1805 to 1875 by reference to the average aggregate tonnage of ship arrivals. Whereas the 2.2% average annual increase may not, at first sight, seem large, the compounding impact of this rate of increase over 70 years resulted in a near fivefold increase in the business of the port.

Average annual tonnage entering the port in five-year periods.		Increments
1801–5	346,225	
1806–10	357,947	11,722
1811–15	371,574	13,627
1816–20	340,017	31,557
1821–25	366,472	26,455
1826–30	472,189	105,717
1831–35	525,308	53,119
1836–40	552,379	27,071
1841–45	596,822	44,443
1846–50	765,329	168,507
1851–55	874,532	109,203
1856–60	950,715	76,183
1861–65	1,215,149	264,434
1866–70	1,447,502	232,353
1871–75	1,618,876	171,374

The long-term planning challenges which the Ballast Board and the Directors General of Inland Navigation grappled with from 1800 required them to consider a wide range of schemes, some very much more expensive than the scheme favoured by the port authority and ultimately constructed by them. The Directors General relied on the opinions of external experts among whom there were opposing opinions.

The judgement of the port authority at the time, the Ballast Board, seems to have carried insufficient weight.

Although the approach suggested from those who were most familiar with Dublin Port ultimately proved to be the optimum one, and even though one expert agreed with this approach, nothing happened to address the known problems in Dublin Port for 16 years.

During that time, ships continued to come to grief and lives were lost, notably on 19th November 1807 when two ships (*Prince of Wales* and *Rochdale*) were driven ashore at Blackrock and Seapoint in extreme weather and nearly 400 lives were lost. This tragedy was decisive in the decision to build Dun Laoghaire Harbour as a harbour of refuge.

There are parallels between what happened in Dublin Port in the early nineteenth century and the challenges faced by the port today.

Where Dublin Port Company is proceeding with the development of Dublin Port to its ultimate capacity by 2040 and is beginning to consider what additional port facilities might be constructed to meet growth in demand thereafter, others vocally favour the commencement of a project to entirely relocate the port away from Dublin Bay to some other location on the east coast.

In the early 1800s, those proposing alternative development options to that favoured by Dublin Port Company's predecessor, the Ballast Board, at least tried to estimate the costs of what they were proposing and this greatly facilitated the public consultation initiated by the Directors General of Inland Navigation. Although the consultation appears to have been indecisive, the best and most cost efficient solution was ultimately implemented.

Today, incredibly, it seems that cost is no obstacle to what would be the largest megaproject ever undertaken in the country and at a time when the national debt is soaring from €200 billion towards €230 billion as a result of the coronavirus pandemic.

There are lessons to be learned from history.

Dublin Port Company has prepared and will publish designs and costings for the enormous suggested project to move Dublin Port. Just as higher cost and unsuitable solutions were considered and discounted in the early 1800s before the correct solution was decided on and implemented, it is important now, 20 years before new port facilities might be needed in 2040, to look at alternative suggestions, however unrealistic they might be, and ensure that correct choices are made.